Descriptors: COST ESTIMATION; EXPERIMENTAL DATA; INSOLATION; INSTALLATION; MARSHALL ISLANDS; RESIDENTIAL BUILDINGS; SOLAR COLLECTORS; THERMAL EFFICIENCY
Broader Terms: APPLIANCES; BUILDINGS; DATA; EFFICIENCY; EQUIPMENT; HEATERS; INFORMATION; ISLANDS; MICRONESIA; NUMERICAL DATA; OCEANIA; SOLAR EQUIPMENT; TESTING; WATER HEATERS
Subject Categories: 140907* -- Solar Thermal Utilization -- Water Heating

10/5/600 (Item 300 from file: 103)
01678385 INS-85-027133; ERA-11-006307; EDB-86-005305
400376
Title: Concentrations of /sup 207/Bi and /sup 210/Pb-/sup 210/Bi-/sup 210/Po disequilibrium in fish
Author(s): Noshkin, V.E.; Wong, K.M.; Eagle, R.J.; Jokela, T.A.
Affiliation: Lawrence Livermore National Lab., CA
Source: Pac. Sci. (United States) v 38:4. Coden: PASCA
Publication Date: Oct 1984 p 350-355
Contract Number (DOE): W-7405-ENG-48
Document Type: Journal Article; Numerical data
Language: English
Journal Announcement: EDB8512
Subfile: ERA (Energy Research Abstracts); INS (US Atomindex input).
Country of Origin: United States
Abstract: Radioactive /sup 207/Bi, produced during nuclear testing at the Pacific Proving Grounds, concentrates in the muscle tissue and organs of goatfish and certain pelagic lagoon fish from Bikini and Enewetak Atolls. It is reasonable to expect that fish capable of accumulating /sup 207/Bi could also be efficient accumulators of other bismuth isotopes - namely /sup 210/Bi, the daughter of naturally occurring /sup 210/Pb. Therefore, /sup 210/Bi and consequently /sup 210/Po, the decay product of /sup 210/Bi, would be expected in notable excess over the precursor /sup 210/Pb in specific tissues. To test this assumption, we compared concentrations of /sup 210/Pb, /sup 210/Bi, and /sup 210/Po in muscle, liver, and bone separated from some reef species from the Marshall Islands. Concentrations of /sup 210/Bi in muscle and liver were found to exceed those of its precursor by factors of 2 to 15. The excess /sup 210/Bi in some species, however, is not from the environmental sources (either food or water) from which /sup 207/Bi is derived. The data suggest that the excess /sup 210/Bi may be translocated to muscle and liver tissue following the decay of /sup 210/Pb in bone.
Major Descriptors: *BISMUTH 207 -- BIOLOGICAL ACCUMULATION; *BISMUTH 210 -- BIOLOGICAL ACCUMULATION; *FISHES -- CONTAMINATION; *LEAD 210 -- BIOLOGICAL ACCUMULATION; *POLONIUM 210 -- BIOLOGICAL ACCUMULATION
Descriptors: CONCENTRATION RATIO; DAUGHTER PRODUCTS; EXPERIMENTAL DATA; LIVER; MARSHALL ISLANDS; MUSCLES; NUCLEAR EXPLOSIONS; RADIOECOLOGICAL CONCENTRATION; SKELETON; TRANSLOCATION
Broader Terms: ALPHA DECAY RADIOISOTOPES; ANIMALS; AQUATIC ORGANISMS; BETA DECAY RADIOISOTOPES; BETA-MINUS DECAY RADIOISOTOPES; BETA-PLUS DECAY RADIOISOTOPES; BISMUTH ISOTOPES; BODY; DATA; DAYS LIVING RADIOISOTOPES; DIGESTIVE SYSTEM; ECOLOGICAL CONCENTRATION; ELECTRON CAPTURE RADIOISOTOPES; EVEN-EVEN NUCLEI; EXPLOSIONS; GLANDS; HEAVY NUCLEI; INFORMATION; ISLANDS; ISOTOPES; LEAD ISOTOPES; MICRONESIA; NUCLEI; NUMERICAL DATA; OCEANIA; ODD-EVEN NUCLEI; ODD-ODD NUCLEI; ORGANS; POLONIUM ISOTOPES; RADIOISOTOPES; VERTEBRATES; YEARS LIVING RADIOISOTOPES
Subject Categories: 520302* -- Environment, Aquatic -- Radioactive Materials Monitoring & Transport -- Aquatic Ecosystems & Food Chains -- (-1987)
INIS Subject Categories: C2210* -- Radionuclide Ecology -- Terrestrial Ecosystems

10/5/601 (Item 301 from file: 103)
01678154 ERA-11-006180; EDB-86-005074
Author(s): Hall, W.C.
Title: Operation GREENHOUSE. Scientific Director's report. Annex 1.1. Prompt-gamma-ray measurements. Part 4. Installation drawings. Nuclear

explosions 1951
Corporate Source: Kaman Tempo, Santa Barbara, CA (USA)
Publication Date: 31 Oct 1984 p 99
Report Number(s): AD-A-995276/3/XAB
Document Type: Report
Language: English
Journal Announcement: EDB8510
Availability: NTIS, PC A05/MF A01.
Subfile: ERA (Energy Research Abstracts).
Country of Origin: United States
Country of Publication: United States
Abstract: This report consists of drawings and tabular data pertinent to the various measurements performed in Operation GREENHOUSE. The drawings represent the plans for the cable installations, recorder stations, power and signal lines, and other equipment used in the measurement of prompt gamma rays, alpha, transit time, neutron intensity (Tenex), and thermal radiation.
Major Descriptors: *ALPHA PARTICLES -- MONITORING; *GREENHOUSE PROJECT; *NEUTRONS -- MONITORING; *NUCLEAR EXPLOSIONS -- MONITORING; *NUCLEAR WEAPONS -- TESTING; *PROMPT GAMMA RADIATION -- MONITORING; *THERMAL RADIATION -- MONITORING
Broader Terms: BARYONS; CHARGED PARTICLES; ELECTROMAGNETIC RADIATION; ELEMENTARY PARTICLES; EXPLOSIONS; FERMIONS; GAMMA RADIATION; HADRONS; IONIZING RADIATIONS; NUCLEAR EXPLOSIONS; NUCLEONS; RADIATIONS; WEAPONS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)
440101 -- Radiation Instrumentation -- General Detectors or Monitors & Radiometric Instruments

10/5/602 (Item 302 from file: 103)
01678153 ERA-11-006179; EDB-86-005073
Author(s): Werner, L.B.; Sinnreich, S.R.
Title: Operation GREENHOUSE. Scientific Director's report of atomic weapon tests at Eniwetok, 1951. Annex 6.7. Contamination-decontamination studies
Corporate Source: Naval Radiological Defense Lab., San Francisco, CA (USA)
Publication Date: Aug 1951 p 199
Report Number(s): AD-A-995259/9/XAB
Document Type: Report
Language: English
Journal Announcement: EDB8510
Availability: NTIS, PC A09/MF A01.
Subfile: ERA (Energy Research Abstracts).
Country of Origin: United States
Country of Publication: United States
Abstract: This 1951 NTPR report describes experiments conducted in Operation Greenhouse at Eniwetok on certain processes and materials associated with contamination and decontamination phenomena. For this type of contaminating event, in which surfaces are contaminated by being carried by aircraft through an atomic cloud, information was obtained which will assist in development of effective protective measures and recovery measures from contaminating atomic detonations. The contaminant which was deposited on surfaces mounted on drone planes was shown to be nonuniform under various contaminating conditions, both as to distribution and composition. Data have been obtained on the relative importance of such surface characteristics as roughness, porosity, retentivity, and contact angle. The relative behavior of various chemical agents as decontaminants was determined and use of industrial cleaning methods employing chemical additives to effect decontamination was investigated.

Major Descriptors: *AIRCRAFT -- CONTAMINATION; *AIRCRAFT -- DECONTAMINATION ; *ENIWETOK -- GREENHOUSE PROJECT; *GREENHOUSE PROJECT -- CONTAMINATION ; *GREENHOUSE PROJECT -- DECONTAMINATION; *NUCLEAR WEAPONS -- TESTING
Descriptors: ADDITIVES; CLEANING; DISTRIBUTION; POROSITY; RECOVERY; SURFACE PROPERTIES

Broader Terms: CLEANING; EXPLOSIONS; ISLANDS; MARSHALL ISLANDS; MICRONESIA; NUCLEAR EXPLOSIONS; OCEANIA; WEAPONS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)
400702 -- Radiochemistry & Nuclear Chemistry -- Properties of Radioactive Materials

10/5/603 (Item 303 from file: 103)
01678152 ERA-11-006177; EDB-86-005072
Author(s): Tochilin, E.; Howland, P.
Title: Operation GREENHOUSE. Scientific Director's report of atomic weapon tests at Eniwetok, 1951. Annex 6.5. Interpretation of survey-meter data
Corporate Source: Naval Radiological Defense Lab., San Francisco, CA (USA)
Publication Date: Aug 1951 p 119
Report Number(s): AD-A-995257/3/XAB
Document Type: Report
Language: English
Journal Announcement: EDB8510
Availability: NTIS, PC A06/MF A01.
Subfile: ERA (Energy Research Abstracts).
Country of Origin: United States
Country of Publication: United States
Abstract: This is the Scientific Director's Report of Atomic Weapon Test at Enuivetok, 1951. Under laboratory conditions, a study of survey-instrument response to fission-product activity was made. This study involved a knowledge of beta-ray energy, gamma-ray energy, and beta-ray and gamma-ray dose rates associated with fission-product radiation fields. Fission-product activity was collected on aluminum plaques which were flown through the radioactive cloud following each of four bursts. These plaques were flown to the Laboratory for the work done. Beta-ray dose rates were determined with specially constructed beta-ray surface chambers previously calibrated with beta-ray isotopes. Using aluminum absorbers, beta-ray absorption curves were run and compared with similar absorption measurements obtained using known beta-ray isotopes. Gamma-ray dose rates were obtained by shielding out the beta-ray contribution. The response of various types of commercially available G-M counters and ion-chamber counters to fission-product beta-ray and gamma-ray was studied. Changes in beta-ray energy were studied for the period from 44.6 to 215.7 hr. It was found that the beta-ray absorption curve could be reproduced by a high-energy and low-energy component of beta radiation. Laboratory determination of effective gamma-ray energies using half-value-layer measurements by means of aluminum, copper, and lead filters showed the energy to be dependent upon the absorber used.
Major Descriptors: *BETA PARTICLES -- SURVEY MONITORS; *ENIWETOK -- GREENHOUSE PROJECT; *GAMMA RADIATION -- SURVEY MONITORS; *GREENHOUSE PROJECT -- SURVEY MONITORS; *NUCLEAR WEAPONS -- TESTING; *SURVEY MONITORS -- PERFORMANCE
Descriptors: FILTERS
Broader Terms: CHARGED PARTICLES; ELECTROMAGNETIC RADIATION; EXPLOSIONS; IONIZING RADIATIONS; ISLANDS; MARSHALL ISLANDS; MEASURING INSTRUMENTS; MICRONESIA; MONITORS; NUCLEAR EXPLOSIONS; OCEANIA; RADIATION MONITORS; RADIATIONS; WEAPONS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/604 (Item 304 from file: 103)
01678151 ERA-11-006176; EDB-86-005071
Title: Operation HARDTACK I B.1.4. Commander Task Group 7.3. Administrative Plan Number 1-58. Revised
Corporate Source: Joint Task Force Seven, Washington, DC (USA)
Publication Date: 5 May 1958 p 96
Report Number(s): AD-A-995256/5/XAB
Document Type: Report
Language: English

Journal Announcement: EDB8510
Availability: NTIS, PC A05/MF A01.
Subfile: ERA (Energy Research Abstracts).
Country of Origin: United States
Country of Publication: United States
Abstract: This 1958 administrative plan outlines the logistical and administrative functions of Task Group 7.3 and supporting ships during the build up, operational, and roll-up phases of Operation HARDTACK nuclear explosion testing in the Marshall Islands. Certain logistical procedures are also described.
Major Descriptors: *HARDTACK PROJECT -- ADMINISTRATIVE PROCEDURES; *NUCLEAR WEAPONS -- TESTING
Descriptors: MARSHALL ISLANDS
Broader Terms: EXPLOSIONS; ISLANDS; MICRONESIA; NUCLEAR EXPLOSIONS; OCEANIA; WEAPONS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/605 (Item 305 from file: 103)
01678150 ERA-11-006175; EDB-86-005070
Title: Radiological safety procedures for Eniwetok Proving Grounds. Hardtack I B.5.2
Corporate Source: USAEC Albuquerque Operations Office, NM
Publication Date: 1957 p 22
Report Number(s): AD-A-995255/7/XAB
Document Type: Report
Language: English
Journal Announcement: EDB8510
Availability: NTIS, PC A02/MF A01.
Subfile: ERA (Energy Research Abstracts).
Country of Origin: United States
Country of Publication: United States
Abstract: This 1957 NTPR Standard Operating Procedure defines responsibilities and establishes criteria and procedures for the conduct of radiological safety at the Eniwetok Proving Ground during test and non-test periods.
Major Descriptors: *ENIWETOK -- HARDTACK PROJECT; *HARDTACK PROJECT -- RADIATION PROTECTION; *NUCLEAR WEAPONS -- TEST FACILITIES; *RADIATION PROTECTION -- ADMINISTRATIVE PROCEDURES
Descriptors: RADIOLOGY; SAFETY
Broader Terms: EXPLOSIONS; ISLANDS; MARSHALL ISLANDS; MEDICINE; MICRONESIA; NUCLEAR EXPLOSIONS; NUCLEAR MEDICINE; OCEANIA; WEAPONS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)
655001 -- Medical Physics -- Radiation Protection Standards

10/5/606 (Item 306 from file: 103)
01678149 ERA-11-006174; EDB-86-005069
Title: Operation GREENHOUSE. Final report, May 1950-May 1951
Corporate Source: Task Group 3.4, APO San Francisco, CA (USA)
Publication Date: May 1951 p 104
Report Number(s): AD-A-995252/4/XAB
Document Type: Report
Language: English
Journal Announcement: EDB8510
Availability: NTIS, PC A06/MF A01.
Subfile: ERA (Energy Research Abstracts).
Country of Origin: United States
Country of Publication: United States
Abstract: The prime responsibility of Task Group 3.4 was the positioning of manned and unmanned aircraft as specified by the scientific programs in order to observe and record phenomena associated with the atomic blast. Directly related functions included the development and operation of adequate air base facilities at Kwajalein and Eniwetok, the installation, maintenance, and operation of the airborne and some of the surface instrumentation, in support of the scientific task group,

the development of procedures, and the training of personnel. Included also was the responsibility for installation and operation of communications and electronics systems for monitoring and displaying the air situation, for air warning and control, and for navigational aids. Corollary and support functions included the operation of air surveillance and limited air defense, the provision for administrative and proficiency flying for all JOINT TASK FORCE THREE personnel, the operation of an air intra-island transport using liaison aircraft and helicopters, and in conjunction with Task Group 3.3. a Search and Rescue activity. Additional responsibilities involved the provision for weather reconnaissance, analysis and forecasting, and for documentary film coverage for all JOINT TASK FORCE THREE activities.
Major Descriptors: *ELECTRONIC EQUIPMENT; *GREENHOUSE PROJECT; *MILITARY FACILITIES; *NUCLEAR EXPLOSIONS -- MONITORING; *NUCLEAR WEAPONS -- TESTING
Descriptors: HELICOPTERS; SURVEILLANCE; WEATHER
Broader Terms: AIRCRAFT; EQUIPMENT; EXPLOSIONS; NUCLEAR EXPLOSIONS; WEAPONS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/607 (Item 307 from file: 103)
01678148 ERA-11-006173; EDB-86-005068
Author(s): Mitchell, E.F.
Title: Operation GREENHOUSE. Scientific Director's report. Annex 5.1. Evaluation of ground radiac
Corporate Source: Signal Corps Engineering Labs., Fort Monmouth, NJ (USA)
Publication Date: May 1952 p 245
Report Number(s): AD-A-995251/6/XAB
Document Type: Report
Language: English
Journal Announcement: EDB8510
Availability: NTIS, PC A11/MF A01.
Subfile: ERA (Energy Research Abstracts).
Country of Origin: United States
Country of Publication: United States
Abstract: Prior to Operation Sandstone at 1948, radiac equipment had been designed for laboratory and plant use. After Sandstone, the Department of Defense (DoD) and the Atomic Energy Commission (AEC) developed a great variety of radiac expressly for military and civil-defense appplications. It is extremely difficult to simulate conditions existing at the time of, and soon after, an atomic explosion; therefore, it is very difficult to evaluate radiac completely in the laboratory or in the field without an atomic explosion. Only by testing at an atomic proving ground is it possible to determine the true worth of service equipment. The work reported in this volume includes analyses in stateside laboratories and experiments at Eniwetok during the spring of 1951. Twenty-one types of dosimeters, sixteen types of survey meters, and one mobile radiological field laboratory, and four laundry-monitoring arrangements were tested. These included equipment development by, or under the sponsorship of the Army Signal Corps, the Army Chemical Corps, the AEC, and the Bureau of Ships of the Navy. Conclusions are reached and recommendations are made with regard to adequacy of the equipment, adequacy and feasibility of existing military characteristics, direction of future developments, and necessity for future tests and improved test methods.
Major Descriptors: *ELECTRONIC EQUIPMENT -- BLAST EFFECTS; *ELECTRONIC EQUIPMENT -- PHYSICAL RADIATION EFFECTS; *GREENHOUSE PROJECT; *NUCLEAR EXPLOSIONS -- BLAST EFFECTS; *NUCLEAR EXPLOSIONS -- PHYSICAL RADIATION EFFECTS; *NUCLEAR WEAPONS -- TESTING; *RADIATION DETECTORS -- BLAST EFFECTS; *RADIATION DETECTORS -- PHYSICAL RADIATION EFFECTS
Descriptors: GROUND LEVEL; SURVEYS
Broader Terms: EQUIPMENT; EXPLOSIONS; LEVELS; MEASURING INSTRUMENTS; NUCLEAR EXPLOSIONS; RADIATION EFFECTS; WEAPONS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)
440200 -- Radiation Effects on Instrument Components, Instruments, or

Electronic Systems

10/5/608 (Item 308 from file: 103)
01678147 ERA-11-006172; EDB-86-005067
Author(s): Alger, R.S.; Dyson, J.P.; Levy, R.A.; McQuilling, D.W.
Title: Operation GREENHOUSE. Scientific Director's report. Annex 5.1 - Annex a. Alkali halide and phosphate glass radiological casualty dosimeters
Corporate Source: Naval Radiological Defense Lab., San Francisco, CA (USA)
Publication Date: Jul 1951 p 40
Report Number(s): AD-A-995250/8/XAB
Document Type: Report
Language: English
Journal Announcement: EDB8510
Availability: NTIS, PC A03/MF A01.
Subfile: ERA (Energy Research Abstracts).
Country of Origin: United States
Country of Publication: United States
Abstract: Photochemical reactions induced by ionizing radiations can produce color centers in alkali halide crystals and fluorescent centers in silver-bearing phosphate glasses. These reactions are being investigated as a basis for casualty-badge radiation dosimeters. Potassium bromide and potassium chloride crystals were satisfactorily sensitized by heating in a combined atmosphere of alkali vapor and hydrogen. Doses of 25 r of cobalt 60 gamma rays were detected by the visible color changes in sensitized KBr and KCl. The sensitivity of the phosphate glass is comparable to the crystals; however, a reading device is needed for the fluorescent measurements. The crystals and glasses are strongly energy dependent for x-ray energies below about 150-kV effective. In a test atomic bomb detonation the crystals and glasses were exposed to total dosages of 17 to 4,460 r at varying dosage rates. In general, there was a good agreement among the dosage readings for samples of a given material but the readings for different materials varied from 0.81 to 2.3 times the readings obtained with National Bureau of Standards (NBS) film badges.
Major Descriptors: *GREENHOUSE PROJECT; *NUCLEAR EXPLOSIONS -- DOSIMETRY; *NUCLEAR WEAPONS -- TESTING; *RPL DOSEMETERS -- PERFORMANCE
Descriptors: ALKALI METAL COMPOUNDS; BROMIDES; CRYSTALS; FLUORESCENCE; HALIDES; HYDROGEN; PHOSPHATE GLASS; PHOTOCHEMICAL REACTIONS; POTASSIUM COMPOUNDS; VAPORS
Broader Terms: ALKALI METAL COMPOUNDS; BROMINE COMPOUNDS; CHEMICAL REACTIONS; DOSEMETERS; ELEMENTS; EXPLOSIONS; FLUIDS; GASES; GLASS; HALIDES; HALOGEN COMPOUNDS; LUMINESCENCE; LUMINESCENT DOSEMETERS; MEASURING INSTRUMENTS; NONMETALS; NUCLEAR EXPLOSIONS; WEAPONS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)
440101 -- Radiation Instrumentation -- General Detectors or Monitors & Radiometric Instruments

10/5/609 (Item 309 from file: 103)
01678146 ERA-11-006171; EDB-86-005066
Author(s): Leroy, G.V.
Title: Operation GREENHOUSE. Scientific Director's report. Annex 2.10. Miscellaneous studies of dosimeters
Corporate Source: Chicago Univ., IL (USA)
Publication Date: Nov 1951 p 29
Report Number(s): AD-A-995248/2/XAB
Document Type: Report
Language: English
Journal Announcement: EDB8510
Availability: NTIS, PC A03/MF A01.
Subfile: ERA (Energy Research Abstracts).
Country of Origin: United States
Country of Publication: United States
Abstract: Glomerella, corn, and Vycor glass were used in an attempt to

measure the dose of mixed nuclear radiation from an atomic bomb. Samples were placed in steel pipe stations located 300 to 800 yd from the tower on Easy Shot. Reasonable and consistent estimates of dose were obtained, but it is not possible to consider them more than approximations. Activated potassium bromide crystals and photoluminescent glass were exposed in unit-density phantoms at Easy Shot. These materials have been proposed for use as personnel dosimeters. Both were energy-dependent, but with this limitation, they were satisfactory dosimeters.
Major Descriptors: *GREENHOUSE PROJECT; *NUCLEAR EXPLOSIONS -- DOSEMETERS; *NUCLEAR EXPLOSIONS -- DOSIMETRY; *NUCLEAR WEAPONS -- TESTING
Descriptors: BROMIDES; CRYSTALS; GLASS; PHOTOLUMINESCENCE; POTASSIUM COMPOUNDS
Broader Terms: ALKALI METAL COMPOUNDS; BROMINE COMPOUNDS; EXPLOSIONS; HALIDES; HALOGEN COMPOUNDS; LUMINESCENCE; MEASURING INSTRUMENTS; NUCLEAR EXPLOSIONS; WEAPONS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)
440101 -- Radiation Instrumentation -- General Detectors or Monitors & Radiometric Instruments
655003 -- Medical Physics -- Dosimetry

10/5/610 (Item 310 from file: 103)
01678136 ERA-11-006178; EDB-86-005056
Author(s): Spain, P.W.
Title: Operation GREENHOUSE. Scientific Director's report of atomic weapon tests at Eniwetok, 1951. Annex 9.5. Base facilities
Corporate Source: USAEC Albuquerque Operations Office, NM
Publication Date: Sep 1951 p 99
Report Number(s): AD-A-995258/1/XAB
Document Type: Report
Language: English
Journal Announcement: EDB8510
Availability: NTIS, PC A05/MF A01.
Subfile: ERA (Energy Research Abstracts).
Country of Origin: United States
Country of Publication: United States
Abstract: This 1951 NTPR report describes an AECM (Architecture, Engineering, Construction and Maintenance) contract for the Eniwetok test site. Reconnaissance of Eniwetok Atoll was undertaken in October 1948 to determine the conditions at the site which would affect the construction of all facilities for a semipermanent proving ground. Based on this reconnaissance, an engineering report was prepared which proposed methods and costs of construction of the minimum facilities then proposed as necessary. Mobilization for construction began in February 1949, and construction started in July 1949. Support of the scientific and technical personnel and operations began in December 1951 and was essentially completed at the end of the Operation Greenhouse in June 1951. The contractor was able to successfully construct and furnish all items and services requested. At the end of Operation Greenhouse, the facilities were rolled-up and placed in maintenance status until such time as build-up begins for a future operation.
Major Descriptors: *ENIWETOK -- GREENHOUSE PROJECT; *GREENHOUSE PROJECT -- TEST FACILITIES; *NUCLEAR WEAPONS -- TEST FACILITIES
Descriptors: CONSTRUCTION
Broader Terms: EXPLOSIONS; ISLANDS; MARSHALL ISLANDS; MICRONESIA; NUCLEAR EXPLOSIONS; OCEANIA; WEAPONS
Subject Categories: 450200* -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives

10/5/611 (Item 311 from file: 103)
01671055 INS-85-025369; ERA-11-001438; EDB-85-177836
Title: Pediatrics in the Marshall Islands
Author(s): Dungy, C.I.; Morgan, B.C.; Adams, W.H.
Affiliation: Univ. of California, Irvine

Source: Clin. Pediatr. (Philadelphia) (United States) v 23:1. Coden: CPEDA
Publication Date: Jan 1984 p 29-32
Contract Number (DOE): AC02-76CH00016
Document Type: Journal Article
Language: English
Journal Announcement: EDB8510
Subfile: ERA (Energy Research Abstracts); INS (US Atomindex input).
Country of Origin: United States
Abstract: The delivery of health care to children living on isolated island communities presents unique challenges to health professionals. An evolved method of providing longitudinal services to infants and children residing on islands of the Marshall Island chain - a central Pacific portion of the Micronesian archipelago - is presented. The difficulties associated with provision of comprehensive health care in a vast ocean area are discussed.
Major Descriptors: *CHILDREN -- MEDICAL SURVEILLANCE; *INFANTS -- MEDICAL SURVEILLANCE; *MARSHALL ISLANDS -- HEALTH SERVICES
Descriptors: DIAGNOSIS; FALLOUT; MEDICAL EXAMINATIONS; RADIATION INJURIES; THERAPY
Broader Terms: AGE GROUPS; BIOLOGICAL EFFECTS; BIOLOGICAL RADIATION EFFECTS ; CHILDREN; INJURIES; ISLANDS; MICRONESIA; OCEANIA; RADIATION EFFECTS; SOCIAL SERVICES; SURVEILLANCE
Subject Categories: 560161* -- Radionuclide Effects, Kinetics, & Toxicology -- Man
INIS Subject Categories: C2110* -- Radioisotope effects, kinetics & toxicology in man

10/5/612 (Item 312 from file: 103)
01666511 EDB-85-173292
Title: DOE and aid stand-alone photovoltaic activities: a status report
Author(s): Bifano, W.J.; Ratajczak, A.F.
Affiliation: National Aeronautics and Space Administration, Lewis Research Center, Cleveland, Ohio
Source: Proc. Annu. Meet. - Am. Sect. Int. Sol. Energy Soc. (United States) v 6. Coden: PMSID
Publication Date: Jun 1983 p 579-583
Document Type: Journal Article
Language: English
Journal Announcement: EDB8511
Country of Origin: United States
Abstract: The NASA Lewis Research Center (LeRC) is managing stand-alone photovoltaic (PV) system activities sponsored by the U.S. Department of Energy (DOE) and the U.S. Agency for International Development (AID). The DOE project includes village PV power demonstration projects in Gabon (four sites) and the Marshall Islands, PV-powered medical refrigerators in six countries, PV system microprocessor control development activities and PV-hybrid system assessments. The AID project includes a large village system in Tunisia, a water pumping/grain grinding project in Upper Volta, five medical clinics in four countries, PV-powered medical refrigerator field tests in eighteen countries and one PV-powered remote earth station application. This paper reviews these PV activities and summarizes significant findings to date.
Major Descriptors: *PHOTOVOLTAIC POWER PLANTS -- DEMONSTRATION PROGRAMS; *PHOTOVOLTAIC POWER SUPPLIES -- DEMONSTRATION PROGRAMS
Descriptors: GABON; MARSHALL ISLANDS; NASA; TUNISIA; US DOE
Broader Terms: AFRICA; DEVELOPING COUNTRIES; ELECTRONIC EQUIPMENT; EQUIPMENT; ISLANDS; MICRONESIA; NATIONAL ORGANIZATIONS; OCEANIA; POWER PLANTS; POWER SUPPLIES; SOLAR EQUIPMENT; SOLAR POWER PLANTS; US ORGANIZATIONS
Subject Categories: 140600* -- Solar Energy -- Photovoltaic Power Systems

10/5/613 (Item 313 from file: 103)
01666488 EDB-85-173269
Title: Status of DOE and AID stand-alone photovoltaic system field tests

Author(s): Bifano, W.J.; DeLombard, R.; Ratajczak, A.F.; Scudder, L.R.
Affiliation: National Aeronautics and Space Administration, Lewis Research Center, Cleveland, Ohio
Conference Title: 17. IEEE photovoltaic specialists conference
Conference Location: Orlando, FL, USA Conference Date: 1 May 1984
Source: Conf. Rec. IEEE Photovoltaic Spec. Conf. (United States) Coden: CRCND
Publication Date: May 1984 p 1159-1167
Report Number(s): CONF-840561-
Document Type: Journal Article; Conference literature
Language: English
Journal Announcement: EDB8511
Country of Origin: United States
Abstract: The NASA Lewis Research Center (LeRC) is managing stand-alone photovoltaic (PV) system projects sponsored by the U.S. Department of Energy (DOE) and the U.S. Agency for International Development (AID). The DOE project includes village PV power demonstration projects in Gabon (four sites) and the Marshall Islands, and PV-powered vaccine refrigerator systems in six countries. The AID project includes a large village power system, a farmhouse system and two water pumping-irrigation systems in Tunisia, a water pumping/grain grinding system in Upper Volta, five medical clinic systems in four countries, PV-powered vaccine refrigerator systems in 18 countries and a PVpowered remote earth station in Indonesia. This paper reviews these PV projects and summarizes significant findings to date.
Major Descriptors: *PHOTOVOLTAIC POWER SUPPLIES -- DEMONSTRATION PROGRAMS; *US DOE -- DEMONSTRATION PROGRAMS
Descriptors: GABON; INDONESIA; NASA; REMOTE AREAS; RESEARCH PROGRAMS
Broader Terms: AFRICA; ASIA; DEVELOPING COUNTRIES; ELECTRONIC EQUIPMENT; EQUIPMENT; ISLANDS; NATIONAL ORGANIZATIONS; POWER SUPPLIES; SOLAR EQUIPMENT; US ORGANIZATIONS
Subject Categories: 140600* -- Solar Energy -- Photovoltaic Power Systems

10/5/614 (Item 314 from file: 103)
01661368 ERA-10-052694; EDB-85-168148
Author(s): Schwab, W.C.; Davis, A.S.; Haggerty, J.A.; Ling, T.H.; Commeau, J.A.
Title: Geologic reconnaissance and geochemical analysis of ferromanganese crusts of the Ratak Chain, Marshall Islands
Corporate Source: Geological Survey, Woods Hole, MA (USA) Geological Survey, Menlo Park, CA (USA) Tulsa Univ., OK (USA)
Publication Date: 1984 p 6
Report Number(s): USGS-OFR-85-18
Order Number: TI86900054
Document Type: Report
Language: English
Journal Announcement: EDB8510
Availability: US Geological Survey, Box 25425, Lakewood, CO 80225.
Subfile: ERA (Energy Research Abstracts).
Country of Origin: United States
Country of Publication: United States
Abstract: The objective was to study the distribution and composition of ferromanganese-oxide crusts in the Marshall Islands area. A total of 5410 km of 12-kHz and 3.5-kHz seismic-reflection data, and 730 km of 80-in/sup 3/ to 148-in/sup 3/ airgun seismic-reflection data were collected. This report describes the types of samples collected and tabulates the results of our preliminary geochemical analyses of the ferromanganese-oxide crusts. 11 refs., 1 fig., 2 tabs.
Major Descriptors: *MARSHALL ISLANDS -- GEOCHEMICAL SURVEYS; *SEA BED -- IRON OXIDES; *SEA BED -- MANGANESE OXIDES
Descriptors: PACIFIC OCEAN
Broader Terms: CHALCOGENIDES; IRON COMPOUNDS; ISLANDS; MANGANESE COMPOUNDS; MICRONESIA; OCEANIA; OXIDES; OXYGEN COMPOUNDS; SEAS; SURFACE WATERS; SURVEYS; TRANSITION ELEMENT COMPOUNDS
Subject Categories: 580400* -- Geochemistry -- (-1989)

5003852

10/5/615 (Item 315 from file: 103)
01661104 INS-85-023907; ERA-10-052607; EDB-85-167884
Title: Radionuclides in plankton from the South Pacific Basin
Author(s): Marsh, K.V.; Buddemeier, R.W.; Vogt, J.R. (ed.)
Affiliation: Lawrence Livermore National Lab., CA
Title: Nuclear methods in environmental and energy research: proceedings of fifth international conference
Corporate Source: Missouri Univ., Columbia (USA)
Conference Title: 5. international conference on nuclear methods in environmental and energy research
Conference Location: Mayaguez, Puerto Rico Conference Date: 2 Apr 1984
Publication Date: Apr 1984 p 331-339
Report Number(s): CONF-840408-
Order Number: DE84017348
Contract Number (DOE): W-7405-ENG-48
Document Type: Analytic of a Report; Conference literature
Language: English
Journal Announcement: EDB8511
Availability: NTIS, PC A99/MF A01; 1.
Subfile: ERA (Energy Research Abstracts); INS (US Atomindex input).
Country of Origin: United States
Country of Publication: United States
Abstract: An investigation has been initiated of the utility of marine plankton as bioconcentrating samplers of low-level marine radioactivity in the southern hemisphere. A literature review has shown that both freshwater and marine plankton have trace element and radionuclide concentration factors (relative to water) of up to 10/sup 4/. In 1956 and 1958 considerable work was done on the accumulation and distribution of a variety of fission and activation products produced by nuclear tests in the Marshall Islands. Since then, studies, have largely been confined to a few radionuclides, and most of the work in the last twenty years has been done in the northern hemisphere. The authors participated in Operations Deepfreeze 1981 and 1982, collecting a total of 48 plankton samples from the USCGC Glacier on its Antarctic cruises. Battelle Pacific Northwest Laboratories sampled air, water, rain, and fallout. The authors were able to measure concentrations in plankton of the naturally-occurring radionuclides /sup 7/Be, /sup 40/K, and the U and Th series, and they believe that they have detected low levels of /sup 144/Ce and /sup 95/Nb in seven samples ranging as far south as 68/sup 0/. Biological identification of the plankton suggests a possible correlation between radionuclide concentration and the protozoa content of the samples. 7 references, 5 figures, 1 table.
Major Descriptors: *BERYLLIUM 7 -- BIOLOGICAL ACCUMULATION; *BERYLLIUM 7 -- RADIOECOLOGICAL CONCENTRATION; *CERIUM 144 -- BIOLOGICAL ACCUMULATION; *CERIUM 144 -- RADIOECOLOGICAL CONCENTRATION; *NIOBIUM 95 -- BIOLOGICAL ACCUMULATION; *NIOBIUM 95 -- RADIOECOLOGICAL CONCENTRATION; *POTASSIUM 40 -- BIOLOGICAL ACCUMULATION; *POTASSIUM 40 -- RADIOECOLOGICAL CONCENTRATION; *THORIUM -- BIOLOGICAL ACCUMULATION; *THORIUM -- RADIOECOLOGICAL CONCENTRATION; *URANIUM -- BIOLOGICAL ACCUMULATION; *URANIUM -- RADIOECOLOGICAL CONCENTRATION
Descriptors: MARSHALL ISLANDS; NUCLEAR EXPLOSIONS; PACIFIC OCEAN; PLANKTON; WATER POLLUTION
Broader Terms: ACTINIDES; ALKALI METAL ISOTOPES; ALKALINE EARTH ISOTOPES; AQUATIC ORGANISMS; BERYLLIUM ISOTOPES; BETA DECAY RADIOISOTOPES; BETA-MINUS DECAY RADIOISOTOPES; BETA-PLUS DECAY RADIOISOTOPES; CERIUM ISOTOPES; DAYS LIVING RADIOISOTOPES; ECOLOGICAL CONCENTRATION; ELECTRON CAPTURE RADIOISOTOPES; ELEMENTS; EVEN-EVEN NUCLEI; EVEN-ODD NUCLEI; EXPLOSIONS; INTERMEDIATE MASS NUCLEI; ISLANDS; ISOMERIC TRANSITION ISOTOPES; ISOTOPES; LIGHT NUCLEI; METALS; MICRONESIA; NIOBIUM ISOTOPES; NUCLEI; OCEANIA; ODD-EVEN NUCLEI; ODD-ODD NUCLEI; POLLUTION; POTASSIUM ISOTOPES; RADIOISOTOPES; RARE EARTH ISOTOPES; RARE EARTH NUCLEI; SEAS; SURFACE WATERS; YEARS LIVING RADIOISOTOPES
Subject Categories: 560174* -- Radiation Effects -- Nuclide Kinetics & Toxicology -- Microorganisms -- (-1987)
INIS Subject Categories: C2120* -- Radioisotope effects, kinetics, & toxicology in animals, plants & microorganisms

10/5/616 (Item 316 from file: 103)
01660356 FRG-84-08762; EDB-85-167136
Title: Preparing a book on radiation for the people of the Marshall Islands
Author(s): Wachholz, B.W.; Bair, W.J.; Healy, J.W.; Kaul, A.; Neider, R.; Pensko, J.; Stieve, F.E.; Brunner, H. (eds.)
Title: Radiation - risk - protection. Vol. 3
Conference Title: 6. congress of the International Radiation Protection Association
Conference Location: Berlin, F.R. Germany Conference Date: 7 May 1984
Publisher: Verl. TUEV Rheinland,Koeln, Germany, F.R.
Publication Date: 1984 p 1277-1280
Report Number(s): CONF-840512-Vol.3
Document Type: Analytic of a Book; Conference literature
Language: English
Journal Announcement: EDB8508
Country of Origin: United States
Country of Publication: Germany, Federal Republic of
Abstract: None
Major Descriptors: *BIKINI -- CONTAMINATION; *ENIWETOK -- CONTAMINATION; *NUCLEAR EXPLOSIONS -- FALLOUT DEPOSITS
Descriptors: ATMOSPHERIC EXPLOSIONS; DOSE RATES; ENVIRONMENT; FOOD CHAINS; HUMAN POPULATIONS; INFORMATION; MARSHALL ISLANDS; RADIATION HAZARDS; RADIATION MONITORING; SOILS
Broader Terms: EXPLOSIONS; FALLOUT; HAZARDS; HEALTH HAZARDS; ISLANDS; MARSHALL ISLANDS; MICRONESIA; MONITORING; OCEANIA; POPULATIONS
Subject Categories: 510300* -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- (-1989)
450202 -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)
290600 -- Energy Planning & Policy -- Nuclear Energy
560151 -- Radiation Effects on Animals -- Man

10/5/617 (Item 317 from file: 103)
01652282 INS-85-022532; ERA-10-050000; EDB-85-159061
Title: Pituitary tumors following fallout radiation exposure
Author(s): Adams, W.H.; Harper, J.A.; Rittmaster, R.S.; Grimson, R.C.
Affiliation: Brookhaven National Lab., Upton, NY
(Marshall Islands)
Source: JAMA, J. Am. Med. Assoc. (United States) v 252:5. Coden: JAMAA
Publication Date: 3 Aug 1984 p 664-666
Document Type: Journal Article; Numerical data
Language: English
Journal Announcement: EDB8509
Subfile: ERA (Energy Research Abstracts); INS (US Atomindex input).
Country of Origin: United States
Abstract: Two pituitary tumors were diagnosed in a small population of Marshallese accidentally exposed to radioactive fallout in 1954. Endocrinologic findings in the exposed population, are reported and the possible relation of the tumors to radiation exposure and thyroid disease is discussed.
Major Descriptors: *NEOPLASMS -- RADIOINDUCTION; *PITUITARY GLAND -- DELAYED RADIATION EFFECTS; *THYROID -- BIOLOGICAL FUNCTIONS; *THYROID -- DELAYED RADIATION EFFECTS
Descriptors: EPIDEMIOLOGY; EXPERIMENTAL DATA; FALLOUT; NUCLEAR EXPLOSIONS; RADIATION DOSES; RISK ASSESSMENT; TSH
Broader Terms: BIOLOGICAL EFFECTS; BIOLOGICAL RADIATION EFFECTS; BODY; DATA; DISEASES; DOSES; ENDOCRINE GLANDS; EXPLOSIONS; FUNCTIONS; GLANDS; HORMONES; INFORMATION; NUMERICAL DATA; ORGANS; PEPTIDE HORMONES; PITUITARY HORMONES; RADIATION EFFECTS
Subject Categories: 560151* -- Radiation Effects on Animals -- Man
560161 -- Radionuclide Effects, Kinetics, & Toxicology -- Man
INIS Subject Categories: C1500* -- Effects of External Radiation on Man
C2110 -- Radioisotope effects, kinetics & toxicology in man

10/5/618 (Item 318 from file: 103)
01652255 AIX-16-030679; ERA-10-049965; EDB-85-159034

Title: Dosimetry methods and results for the former residents of Bikini atoll
Author(s): Greenhouse, N.A. (Brookhaven National Lab., Upton, NY (USA))
Title: Proceedings of the second Asian regional congress on radiation protection, Manila, Philippines, 5-9 November 1979
Corporate Source: Philippine Association for Radiation Protection, Manila
Conference Title: 2. Asian regional congress on radiation protection
Conference Location: Manila, Philippines Conference Date: 5 Nov 1979
Publication Date: 1979 p 38
Report Number(s): CONF-791122-Absts.; INIS-mf-9485
Order Number: DE82904129
Note: Published in abstract form only
Document Type: Analytic of a Report; Conference literature
Language: English
Journal Announcement: EDB8509
Availability: NTIS (US Sales Only), PC A04/MF A01.
Subfile: ERA (Energy Research Abstracts).
Country of Origin: United States
Country of Publication: Philippines
Abstract: None
Major Descriptors: *BIKINI -- RADIOMETRIC SURVEYS; *HUMAN POPULATIONS -- RADIATION DOSES
Descriptors: AERIAL MONITORING; CESIUM 137; PERSONNEL MONITORING
Broader Terms: ALKALI METAL ISOTOPES; BETA DECAY RADIOISOTOPES; BETA-MINUS DECAY RADIOISOTOPES; CESIUM ISOTOPES; DOSES; GEOPHYSICAL SURVEYS; ISLANDS; ISOTOPES; MARSHALL ISLANDS; MICRONESIA; MONITORING; NUCLEI; OCEANIA; ODD-EVEN NUCLEI; POPULATIONS; RADIATION MONITORING; RADIOISOTOPES; SURVEYS; YEARS LIVING RADIOISOTOPES
Subject Categories: 560151* -- Radiation Effects on Animals -- Man
510300 -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- (-1989)
INIS Subject Categories: C5500* -- Personnel Dosimetry & Monitoring

10/5/619 (Item 319 from file: 103)
01642585 EDB-85-149363
Author(s): Barnes, M.
Title: Some statistical lessons learned in Eniwetok
Corporate Source: Pacific Northwest Labs., Richland, WA (USA)
Publication Date: Apr 1979 p 6
Report Number(s): PNL-SA-7655
Order Number: DE85017662
Contract Number (DOE): AC06-76RL01830
Document Type: Report
Language: English
Journal Announcement: ERA8510
Availability: NTIS, PC A02/MF A01.
Subfile: ERA (Energy Research Abstracts); NTS (NTIS).
Country of Origin: United States
Country of Publication: United States
Abstract: The report discusses some statistical design and analysis aspects of the cleanup of transuranic contamination on the Eniwetok Atoll. The importance of clear, complete definitions not only of statistical variables, but also of decision guidelines is stressed. Also discussed is the fact that definitions and decisions often cannot be made on a statistical basis, but are of necessity matters of policy. 1 ref. (ACR)
Major Descriptors: *STATISTICS -- DECISION MAKING
Descriptors: DECONTAMINATION; ENIWETOK
Broader Terms: CLEANING; ISLANDS; MARSHALL ISLANDS; MATHEMATICS; MICRONESIA ; OCEANIA
Subject Categories: 510301* -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- Soil -- (-1987)

10/5/620 (Item 320 from file: 103)
01640700 AIX-16-058781; EDB-85-147478
Title: Nuclear activities and the Pacific islanders
Author(s): Dyke, J. Van (Environment and Policy Inst., Honolulu, Hawaii

(USA)); Smith, K.R. (Resource Systems Inst., Honolulu, Hawaii (USA)); Siwatibau, S. (University of the South Pacific, Suva, Fiji)
Conference Title: Conference on nuclear-electric power in the Asia-Pacific region
Conference Location: Honolulu, HI, USA Conference Date: 23 Jan 1983
Source: Energy (Oxford) (United Kingdom) v 9:9-10. Coden: ENEYD
Publication Date: Sep-Oct 1984 p 733-750
Report Number(s): CONF-830181-
Document Type: Journal Article; Conference literature
Language: English
Journal Announcement: EDB8508
Country of Origin: United States
Abstract: Although to outsiders the Pacific islands may seem far removed from the center of activities and controversies related to nuclear energy, this area has had more direct and negative experiences with nuclear issues than any other area in the world. These experiences have led to a deep-rooted skepticism of all nuclear activities in which distinctions between civilian and military activities, weapons and power, and low- and high-level waste bear little relation to the important Pacific concerns. Antinuclear sentiments are intimately linked to anticolonialism, growing regionalism and emerging cultural pride. Opposition and concern have been expressed in a number of international, regional, national and nongovernmental forums. In this climate, arguments about the relative safety of various waste disposal operations and other nuclear activities are not likely to be meaningful.
Major Descriptors: *MARSHALL ISLANDS -- NUCLEAR ENERGY; *MARSHALL ISLANDS -- NUCLEAR POWER; *PACIFIC OCEAN -- NUCLEAR ENERGY; *PACIFIC OCEAN -- NUCLEAR POWER
Descriptors: BIOLOGICAL RADIATION EFFECTS; GOVERNMENT POLICIES; HUMAN POPULATIONS; NUCLEAR EXPLOSIONS; POLITICAL ASPECTS; POPULATION RELOCATION; PUBLIC OPINION; RADIOACTIVE WASTE DISPOSAL; SOCIOLOGY
Broader Terms: BIOLOGICAL EFFECTS; ENERGY; EXPLOSIONS; INSTITUTIONAL FACTORS; ISLANDS; MANAGEMENT; MICRONESIA; OCEANIA; POPULATIONS; POWER; RADIATION EFFECTS; SEAS; SURFACE WATERS; WASTE DISPOSAL; WASTE MANAGEMENT
Subject Categories: 290600* -- Energy Planning & Policy -- Nuclear Energy
INIS Subject Categories: F1400* -- Social Impact of Nuclear Science & Technology

10/5/621 (Item 321 from file: 103)
01634700 EDB-85-141477
Title: Technical papers presented at a DOE meeting on criteria for cleanup of transuranium elements in soil
Corporate Source: USDOE Assistant Secretary for Defense Programs, Washington, DC USDOE Assistant Secretary for Environmental Protection, Safety and Emergency Preparedness, Washington, DC
Conference Title: DOE meeting on criteria for clean-up of transuranium in elements and soil
Conference Location: Germantown, MD, USA Conference Date: 17 Jan 1984
Publication Date: Sep 1984 p 233
Report Number(s): CONF-840168-
Order Number: DE85015564
Note: Portions of this document are illegible in microfiche products
Document Type: Report; Conference literature
Language: English
Journal Announcement: ERA8509
Availability: NTIS, PC A11/MF A01; 1.
Subfile: ERA (Energy Research Abstracts); NTS (NTIS); INS (US Atomindex input).
Country of Origin: United States
Country of Publication: United States
Abstract: Transuranium element soil contamination cleanup experience gained from nuclear weapons accidents and cleanup at Eniwetok Atoll was reviewed. Presentations have been individually abstracted for inclusion in the data base. (ACR)

Major Descriptors: *DECONTAMINATION -- MEETINGS; *SOILS -- DECONTAMINATION
Descriptors: CONTAMINATION; LEADING ABSTRACT; NUCLEAR WEAPONS; RADIATION ACCIDENTS; TRANSURANIUM ELEMENTS
Broader Terms: ABSTRACTS; ACCIDENTS; CLEANING; DOCUMENT TYPES; ELEMENTS; WEAPONS
Subject Categories: 510301* -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- Soil -- (-1987)
INIS Subject Categories: B3110* -- Radioactive materials monitoring & transport

10/5/622 (Item 322 from file: 103)
01634409 EDB-85-141186
Author(s): Holden, F.R.; Skow, R.K.; Owings, A.F.; Evans, E.C.; Worsham, M.L.
Title: Radioactive contamination of ventilation supply system, USS Crittenden, from Baker Explosion, Operation Crossroads. Final report
Corporate Source: Naval Radiological Defense Lab., San Francisco, CA (USA)
Publication Date: 14 Feb 1950 p 39
Report Number(s): AD-A-995283/9/XAB; USNRDL-551
Document Type: Report
Language: English
Journal Announcement: ERA8508
Availability: NTIS, PC A03/MF A01.
Subfile: ERA (Energy Research Abstracts).
Country of Origin: United States
Country of Publication: United States
Abstract: Dust in the ventilation system of the after-engine room of the USS Crittenden was contaminated by the base surge from the Baker explosion at Operation Crossroads. Although all ventilation system openings on target ships were sealed prior to the Baker explosion, there was damage to the cover on the system for the after-engine room of the USS Crittenden. The damage to the cover consisted of an opening approximately six square inches in area. The dust in the contaminated ventilation system was recovered and the amount and composition of the radioactive constituents were measured. The radioactive contamination as a funciton of particle size of the dust was also determined. One and one half years after the Baker explosion, fission products equivalent to 115 microcuries of radioactivity were recovered from the dust. It was calculated from radiochemical analysis and fission product decay schemes that approximately 370 curies entered the ventilation system from the base surge. The corresponding alpha activity was 0.43 microcurie. It was also found that 18% of the dust by weight was of respirable particle sizes (less than five microns) and that it carried about 160 curies of the total radioactivity.
Major Descriptors: *CROSSROADS PROJECT -- NUCLEAR EXPLOSIONS; *NUCLEAR EXPLOSIONS -- RADIOACTIVE EFFLUENTS; *SHIPS -- CONTAMINATION
Descriptors: ENGINES; FISSION PRODUCTS; OPENINGS; PARTICLE SIZE; RESPIRATION; SURGES; VENTILATION; WEIGHT
Broader Terms: EXPLOSIONS; ISOTOPES; MATERIALS; NUCLEAR EXPLOSIONS; RADIOACTIVE MATERIALS; RADIOACTIVE WASTES; SIZE; WASTES
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/623 (Item 323 from file: 103)
01634408 EDB-85-141185
Title: Report of Project 1-M-54 on thirty service men exposed to residual radiation at Operation castle
Corporate Source: Joint Task Force 132, Washington, DC (USA)
Publication Date: 1 Aug 1984 p 55
Report Number(s): AD-A-995241/7/XAB
Note: Extracted version of report dated 5 Jul 54
Document Type: Report
Language: English
Journal Announcement: ERA8508
Availability: NTIS, PC A04/MF A01.

Subfile: ERA (Energy Research Abstracts).
Country of Origin: United States
Country of Publication: United States
Abstract: This 1954 report is part of the NTPR (Nuclear Test Personnel Review) Program. Following the detonation at Bikini Atoll, thirty service men who had been exposed to debris from the 1 March detonation were returned to Tripler Army Hospital at Honolulu where the Tripler facilities and professional staff could be used. The clinical observations on the thirty patients were completed by 15 May and the patients were discharged to duty on 17 May. Special emphasis was placed upon examination of the lens of the eyes so as to establish a firm base-line to aid in the evaluation.
Major Descriptors: *CASTLE PROJECT -- NUCLEAR EXPLOSIONS; *MILITARY PERSONNEL -- RADIATION DOSES; *NUCLEAR EXPLOSIONS -- BIOLOGICAL RADIATION EFFECTS
Descriptors: CATARACTS; HEMATOLOGY; PATIENTS; RADIOACTIVE MATERIALS
Broader Terms: BIOLOGICAL EFFECTS; DISEASES; DOSES; EXPLOSIONS; MATERIALS; MEDICINE; NUCLEAR EXPLOSIONS; PERSONNEL; RADIATION EFFECTS; SENSE ORGANS DISEASES
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)
560151 -- Radiation Effects on Animals -- Man

10/5/624 (Item 324 from file: 103)
01634407 EDB-85-141184
Title: Operation Crossroads official report, Task Unit 1.52
Corporate Source: Task Unit 1.52, APO San Francisco, CA (USA)
Publication Date: 1945 p 152
Report Number(s): AD-A-995239/1/XAB
Document Type: Report
Language: English
Journal Announcement: ERA8508
Availability: NTIS, PC A08/MF A01.
Subfile: ERA (Energy Research Abstracts).
Country of Origin: United States
Country of Publication: United States
Abstract: The report of the Army Air Forces' photographic coverage of the world's fourth and fifth atomic bombs tests at Bikini Atoll is better told by the Motion Picture TASK GROUP ONE POINT FIVE, or by perusal of the 6,000 still photographs on file. This report present facts and figures accumulated during seven months of preparation for two tests and two days operation, in the hope that it may acquaint the planner of future missions with some of the factors involved. This report contain brief narrative and technical reports, a Film catalogue, and many photographs taken during Crossroads Operation.
Major Descriptors: *CROSSROADS PROJECT; *NUCLEAR WEAPONS -- TESTING
Descriptors: CATALOGS
Broader Terms: DOCUMENT TYPES; EXPLOSIONS; NUCLEAR EXPLOSIONS; WEAPONS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/625 (Item 325 from file: 103)
01610436 EDB-85-117217
Author(s): Lessard, E.T.; Miltenberger, R.P.; Conrad, R.A.; Musoline, S.V.; Naidu, J.R.; Moorthy, A.; Schopfer, C.J.
Title: Thyroid absorbed dose for people at Rongelap, Utirik, and Sifo on March 1, 1954
Corporate Source: Brookhaven National Lab., Upton, NY (USA)
Publication Date: Mar 1985 p 84
Report Number(s): BNL-51882
Order Number: DE85014695
Contract Number (DOE): AC02-76CH00016
Document Type: Report
Language: English
Journal Announcement: ERA8508
Availability: NTIS, PC A05/MF A01.

Subfile: ERA (Energy Research Abstracts); NTS (NTIS); INS (US Atomindex input).
Country of Origin: United States
Country of Publication: United States
Abstract: A study was undertaken to reexamine thyroid absorbed dose estimates for people accidentally exposed to fallout at Rongelap, Sifo, and Utirik Islands from the Pacific weapon test known as Operation Castle BRAVO. The study included: (1) reevaluation of radiochemical analysis, to relate results from pooled urine to intake, retention, and excretion functions; (2) analysis of neutron-irradiation studies of archival soil samples, to estimate areal activities of the iodine isotopes; (3) analysis of source term, weather data, and meteorological functions used in predicting atmospheric diffusion and fallout deposition, to estimate airborne concentrations of the iodine isotopes; and (4) reevaluation of radioactive fallout, which contaminated a Japanese fishing vessel in the vicinity of Rongelap Island on March 1, 1954, to determine fallout components. The conclusions of the acute exposure study were that the population mean thyroid absorbed doses were 21 gray (2100 rad) at Rongelap, 6.7 gray (670 rad) at Sifo, and 2.8 gray (280 rad) at Utirik. The overall thyroid cancer risk we estimated was in agreement with results published on the Japanese exposed at Nagasaki and Hiroshima. We now postulate that the major route for intake of fallout was by direct ingestion of food prepared and consumed outdoors. 66 refs., 13 figs., 25 tabs.
Major Descriptors: *BRAVO EVENT -- FALLOUT; *HUMAN POPULATIONS -- DELAYED RADIATION EFFECTS; *HUMAN POPULATIONS -- RADIATION DOSES
Descriptors: AIR; DRINKING WATER; FOOD; IODINE 129; IODINE 131; NEOPLASMS; RADIOACTIVITY; RADIOECOLOGICAL CONCENTRATION; SOILS; THYROID
Broader Terms: BETA DECAY RADIOISOTOPES; BETA-MINUS DECAY RADIOISOTOPES; BIOLOGICAL EFFECTS; BIOLOGICAL RADIATION EFFECTS; BODY; CASTLE PROJECT; DAYS LIVING RADIOISOTOPES; DISEASES; DOSES; ECOLOGICAL CONCENTRATION; ENDOCRINE GLANDS; EXPLOSIONS; FLUIDS; GASES; GLANDS; HYDROGEN COMPOUNDS ; INTERMEDIATE MASS NUCLEI; INTERNAL CONVERSION RADIOISOTOPES; IODINE ISOTOPES; ISOTOPES; NUCLEAR EXPLOSIONS; NUCLEI; ODD-EVEN NUCLEI; ORGANS ; OXYGEN COMPOUNDS; POPULATIONS; RADIATION EFFECTS; RADIOISOTOPES; SURFACE EXPLOSIONS; WATER; YEARS LIVING RADIOISOTOPES
Subject Categories: 560161* -- Radionuclide Effects, Kinetics, & Toxicology -- Man
510302 -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- Terrestrial Ecosystems & Food Chains -- (-1987)
INIS Subject Categories: C2110* -- Radioisotope effects, kinetics & toxicology in man
C2210 -- Radionuclide Ecology -- Terrestrial Ecosystems

10/5/626 (Item 326 from file: 103)
01608946 EDB-85-115727
Author(s): Weitz, R.; Thomas, C.; Klemm, J.; Stuart, J.; Knowles, M.
Title: Analysis of radiation exposure for naval units of Operation CROSSROADS. Volume 1. Basic report. Technical report
Corporate Source: Science Applications International Corp., McLean, VA (USA)
Publication Date: 3 Mar 1982 p 170
Report Number(s): AD-A-152702/7/XAB; SAI-84-1567-VOL-1
Note: See Also Volume 2, AD-B090 882L
Document Type: Report
Language: English
Journal Announcement: ERA8507
Availability: NTIS, PC A08/MF A01.
Subfile: ERA (Energy Research Abstracts).
Country of Origin: United States
Country of Publication: United States
Abstract: External radiation doses are reconstructed for crews of support and target ships of Joint Task Force One at Operation CROSSROADS, 1946. Volume I describes the reconstruction methodology, which consists of modeling the radiation environment, to include the radioactivity of lagoon water, target ships, and support ship contamination; retracing

ship paths through this environment; and calculating the doses to shipboard personnel. The USS RECLAIMER, a support ship, is selected as a representative ship to demonstrate this methodology. Doses for all other ships are summarized. Volume II (Appendix A) details the results for target ship personnel. Volume III (Appendix B) details the results for support ship personnel. Calculated doses for more than 36,000 personnel aboard support ships while at Bikini range from zero to 1.7 rem. Of those approximately 34,000 are less than 0.5 rem. From the models provided, doses due to target ship reboarding and doses accrued after departure from Bikini can be calculated, based on the individual circumstances of exposure.
Major Descriptors: *CROSSROADS PROJECT -- NUCLEAR EXPLOSIONS; *NUCLEAR EXPLOSIONS -- RADIATION DOSES; *SHIPS -- PERSONNEL MONITORING
Descriptors: CONTAMINATION; RADIATION EFFECTS; SHIELDING
Broader Terms: DOSES; EXPLOSIONS; MONITORING; NUCLEAR EXPLOSIONS; RADIATION MONITORING
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/627 (Item 327 from file: 103)
01608945 ERA-10-034682; EDB-85-115726
Author(s): Thomas, C.; Goetz, J.; Stuart, J.; Klemm, J.
Title: Analysis of radiation exposure for naval personnel at Operation Ivy. Technical report
Corporate Source: Science Applications International Corp., McLean, VA (USA)
Publication Date: 15 Mar 1983 p 74
Report Number(s): AD-A-152190/5/XAB; SAI-84/1110
Document Type: Report
Language: English
Journal Announcement: EDB8506
Availability: NTIS, PC A04/MF A01.
Subfile: ERA (Energy Research Abstracts).
Country of Origin: United States
Country of Publication: United States
Abstract: The radiological environments are reconstructed for eighteen ships and the residence islands of Enewetak, Kwajalein, and Bikini Atolls that received fallout following Shots MIKE and KING during Operation IVY (November 1952). Secondary (late-time) fallout from Shot MIKE was the primary contributor to the low-level radiation encountered on the majority of the ships and atolls; only the M/V HORIZON received primary (early-time) fallout from this event. Fallout from Shot KING was minimal. From the reconstructed operations and radiological environments, equivalent personnel film badge doses are calculated and compared with available dosimetry data for fourteen of the ships. Calculated doses for the majority of the ships are in good agreement with the film badge data; however, for three of the participating destroyers (DDEs), calculated doses are significantly lower than the dosimetry data indicates. Calculated mean doses for typical shipboard personnel range from a high of 0.062 rem on the HORIZON to a low of 0.001 rem on the SPENCER F. BAIRD; for island-based personnel, calculated mean doses are less than 0.06 rem.
Major Descriptors: *IVY PROJECT; *MILITARY PERSONNEL -- RADIATION DOSES; *NUCLEAR EXPLOSIONS -- FALLOUT; *NUCLEAR EXPLOSIONS -- PERSONNEL MONITORING
Descriptors: DOSE RATES; DOSIMETRY; RADIATION EFFECTS; SHIELDING; SHIPS
Broader Terms: DOSES; EXPLOSIONS; MONITORING; NUCLEAR EXPLOSIONS; PERSONNEL; RADIATION MONITORING
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)
560151 -- Radiation Effects on Animals -- Man

10/5/628 (Item 328 from file: 103)
01600154 EDB-85-106934
Author(s): Robinette, C.D.; Jablon, S.; Preston, T.L.
Title: Studies of participants in nuclear tests. Final report, 1 September

1978-31 October 1984
Corporate Source: National Research Council, Washington, DC (USA)
Publication Date: May 1985 p 102
Report Number(s): DOE/EV/01577-1
Order Number: DE85013516
Contract Number (DOE): AI08-78EV01577
Note: Portions of this document are illegible in microfiche products
Document Type: Report
Language: English
Journal Announcement: ERA8507
Availability: NTIS, PC A06/MF A01; 1.
Subfile: ERA (Energy Research Abstracts); NTS (NTIS); INS (US Atomindex input).
Country of Origin: United States
Country of Publication: United States
Abstract: A study of mortality, by cause of death, was done on a cohort of 46,186 participants in one or more of five test series. The series studied were UPSHOT-KNOTHOLE (1953) and PLUMBBOB (1957) at the Nevada Test Site, and GREENHOUSE (1951), CASTLE (1954), and REDWING (1956) which were conducted at the Pacific Proving Ground at Enewetak and Bikini. The participants were traced individually by the use of Veterans Administration records. For the participants in each series, the number of deaths attributed to particular causes was compared with the number expected to occur at US cause- and age-specific mortality rates. A total of 5113 deaths from all causes was ascertained; this was 11.1% of the number of participants. The number was, however, only 83.5% of the number expected at US mortality rates. Mortality from leukemia among the 3554 participants at SMOKY - 10 deaths below age 85 - were 2.5 times the expected number. When the leukemia deaths are compared to other deaths in all six data sets, the differences among the series are not significant. No cancer other than leukemia was ascertained to have occurred in significant excess among SMOKY participants and the number of deaths from other cancers (67) was less than the number expected at population rates (83.8). The total body of evidence cannot convincingly either affirm or deny that the higher than statistically expected incidence of leukemia among SMOKY participants (or of prostate cancer among REDWING participants) is the result of radiation exposure incident to the tests. 19 refs., 27 tabs.
Major Descriptors: *MILITARY PERSONNEL -- DELAYED RADIATION EFFECTS
Descriptors: BIKINI; CASTLE PROJECT; ENIWETOK; GREENHOUSE PROJECT; LEUKEMIA ; MORTALITY; NEVADA TEST SITE; NUCLEAR EXPLOSIONS; SMOKY EVENT; UPSHOT PROJECT
Broader Terms: ATMOSPHERIC EXPLOSIONS; BIOLOGICAL EFFECTS; BIOLOGICAL RADIATION EFFECTS; DISEASES; EXPLOSIONS; HEMIC DISEASES; ISLANDS; MARSHALL ISLANDS; MICRONESIA; NATIONAL ORGANIZATIONS; NEOPLASMS; NUCLEAR EXPLOSIONS; OCEANIA; PERSONNEL; PLUMBBOB PROJECT; RADIATION EFFECTS; US DOE; US ORGANIZATIONS
Subject Categories: 560151* -- Radiation Effects on Animals -- Man
INIS Subject Categories: C1500* -- Effects of External Radiation on Man

10/5/629 (Item 329 from file: 103)
01599355 AIX-16-050004; EDB-85-106135
Title: Redistribution of fallout radionuclides in Enewetak Atoll lagoon sediments by callianassid bioturbation
Author(s): McMurtry, G.M.; Schneider, R.C. (Hawaii Univ., Honolulu (USA). Hawaii Inst. of Geophysics); Colin, P.L. (Hawaii Inst. of Marine Biology, Honolulu (USA)); Buddemeier, R.W. (California Univ., Livermore (USA). Lawrence Livermore Lab.); Suchanek, T.H. (Fairleigh Dickinson Univ., St. Croix, Virgin Islands (USA). West Indies Lab.)
Source: Nature (London) (United Kingdom) v 313:6004. Coden: NATUA
Publication Date: 21 Feb 1985 p 674-677
Document Type: Journal Article; Numerical data
Language: English
Journal Announcement: EDB8507
Country of Origin: United States
Abstract: The lagoon sediments of Enewetak Atoll in the Marshall Islands

contain a large selection of fallout radionuclides as a result of 43 nuclear weapon tests conducted there between 1948 and 1958. The authors report elevated fallout radionuclide concentrations buried more deeply in the lagoon sediments and evidence of burrowing into the sediment by several species of callianassid ghost shrimp (Crustacea: Thalassinidea) which has displaced highly radioactive sediment. The burrowing activities of callianassids, which are ubiquitous on the lagoon floor, facilitate radionuclide redistribution and complicate the fallout radionuclide inventory of the lagoon.
Major Descriptors: *FALLOUT DEPOSITS -- RADIOECOLOGY; *MARSHALL ISLANDS -- FALLOUT DEPOSITS; *RADIONUCLIDE MIGRATION -- MATHEMATICAL MODELS
Descriptors: CRUSTACEANS; DISTRIBUTION; EXPERIMENTAL DATA; FALLOUT; RADIOACTIVITY; RADIOISOTOPES; SEDIMENTS; SHRIMP
Broader Terms: ANIMALS; AQUATIC ORGANISMS; ARTHROPODS; CRUSTACEANS; DATA; DECAPODS; ECOLOGY; ENVIRONMENTAL TRANSPORT; FALLOUT; INFORMATION; INVERTEBRATES; ISLANDS; ISOTOPES; MASS TRANSFER; MICRONESIA; NUMERICAL DATA; OCEANIA
Subject Categories: 520302* -- Environment, Aquatic -- Radioactive Materials Monitoring & Transport -- Aquatic Ecosystems & Food Chains -- (-1987)
INIS Subject Categories: C2220* -- Radionuclide Ecology -- Aquatic Ecosystems

10/5/630 (Item 330 from file: 103)
01590176 EDB-85-096955
Author(s): Thomas, C.; Weitz, R.; Gminder, R.; Goetz, J.; Stuart, J.
Title: Analysis of radiation exposure for naval personnel at Operation GREENHOUSE. Technical report
Corporate Source: Science Applications International Corp., McLean, VA (USA)
Publication Date: 30 Jul 1982 p 130
Report Number(s): AD-A-151621/0/XAB; SAI-84/1062
Document Type: Report
Language: English
Journal Announcement: ERA8505
Availability: NTIS, PC A07/MF A01.
Subfile: ERA (Energy Research Abstracts).
Country of Origin: United States
Country of Publication: United States
Abstract: The radiological environments are reconstructed for seven ships and the residence islands of Eniwetok Atoll that received fallout during operation GREENHOUSE (April-May 1951) as a result of Shots DOG, EASY, and ITEM. From the reconstructed operations and radiological environments, equivalent personnel film-badge doses are calculated and compared with actual film-badge data available for six of the ships. Considering the increased time spent topside by badged personnel as opposed to an average crewmember, correlation between calculations and dosimetry is good. Average shipboard doses range from a low of 0.13 rem for the crew of the USNS LT. ROBERT CRAIG to a high of 1.14 rem for the crew of the USNS SGT. CHARLES E. MOWER. Average doses on the residence islands of Eniwetok Atoll range from 2.75 rem to 3.10 rem.
Major Descriptors: *GREENHOUSE PROJECT -- PERSONNEL MONITORING; *NUCLEAR EXPLOSIONS -- PERSONNEL MONITORING; *PERSONNEL MONITORING -- FILM DOSIMETRY
Descriptors: ENIWETOK; RADIATION EFFECTS; SHIELDING; SHIPS
Broader Terms: DOSIMETRY; EXPLOSIONS; ISLANDS; MARSHALL ISLANDS; MICRONESIA ; MONITORING; NUCLEAR EXPLOSIONS; OCEANIA; RADIATION MONITORING
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/631 (Item 331 from file: 103)
01590175 EDB-85-096954
Title: Operation Crossroads. Atomic bomb tests Able and Baker conducted at Bikini Atoll, Marshall Islands on 1 July 1946 and 25 July 1946. Volume 3. Appendix v: pictorial review. History of Director of Ship Material report

Corporate Source: Joint Task Force One, Washington, DC (USA)
Publication Date: 1946 p 114
Report Number(s): AD-473910/8/XAB; XRD-191
Note: See also Volume 1, AD-473 909
Document Type: Report
Language: English
Journal Announcement: ERA8505
Availability: NTIS, PC A06/MF A01.
Subfile: ERA (Energy Research Abstracts).
Country of Origin: United States
Country of Publication: United States
Abstract: None
Major Descriptors: *CROSSROADS PROJECT -- HISTORICAL ASPECTS; *NUCLEAR EXPLOSIONS -- UNDERWATER EXPLOSIONS
Descriptors: ANIMALS; MILITARY PERSONNEL; RADIATION EFFECTS; TARGETS
Broader Terms: EXPLOSIONS; NUCLEAR EXPLOSIONS; PERSONNEL
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/632 (Item 332 from file: 103)
01590174 EDB-85-096953
Title: Operation Crossroads. Atomic bomb tests Able and Baker conducted at Bikini Atoll, Marshall Islands on 1 July 1946 and 25 July 1946. Volume 1. History of Director of Ship Material report
Corporate Source: Joint Task Force One, Washington, DC (USA)
Publication Date: 1946 p 156
Report Number(s): AD-473909/0/XAB; XRD-189
Note: See also Volume 3, AD-473 910
Document Type: Report
Language: English
Journal Announcement: ERA8505
Availability: NTIS, PC A08/MF A01.
Subfile: ERA (Energy Research Abstracts).
Country of Origin: United States
Country of Publication: United States
Abstract: The purpose of this history is to provide a general, nontechnical introduction to the voluminous technical reports evolving from Operation Crossroads. There are many reasons for such a history but it is enough to say here that any assessment of results in a large test operation must take into account in some manner how the results were obtained. The history, therefore, provides a chronological account of the effort, extending over a period of eight months, which the groups under the Director of Ship Material, as well as some other closely related groups, put forth to obtain the results that lie behind the technical reports.
Major Descriptors: *CROSSROADS PROJECT -- HISTORICAL ASPECTS; *NUCLEAR EXPLOSIONS -- UNDERWATER EXPLOSIONS
Descriptors: ARMOR; AVIATION FUELS; BARGES; DAMAGE; METALLURGY; RADIOACTIVITY; REVIEWS; SAFETY; SHIPS; SUBMARINES; VULNERABILITY
Broader Terms: DOCUMENT TYPES; EXPLOSIONS; FUELS; NUCLEAR EXPLOSIONS; SHIPS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/633 (Item 333 from file: 103)
01581166 EDB-85-087944
Title: Technical photography
Corporate Source: Edgerton, Germeshausen and Grier, Inc., Boston, MA (USA)
Publication Date: Jul 1954 p 101
Report Number(s): AD-363641/2/XAB
Note: Report on Operation IVY (U)
Document Type: Report
Language: English
Journal Announcement: ERA8505
Availability: NTIS, PC A06/MF A01.
Subfile: ERA (Energy Research Abstracts).

Country of Origin: United States
Country of Publication: United States
Abstract: The following photographic activities on Operation Ivy were carried out: (1) Determine fireball yield from high-speed cameras and Rapatronics. (2) Record cloud-rise and -drift phenomena. (3) Determine luminous emittance of the fireball. (4) Determine time to the minimum by means of Bhangmeters. (5) Determine position of burst for King shot. (6) Record mortar and gun bursts for J-10. (+7) Record water wave from Mike shot. (8) Record smoke rocket trails on King shot. (9) Record the television monitor screen on Mike shot from M-1 hr to zero time. (10) In addition, an experimental GMX-9 camera, an experimental Telescopic Rapatronic camera, and an image-converter camera were tested.
Major Descriptors: *IVY PROJECT -- PHOTOGRAPHY
Descriptors: NUCLEAR FIREBALLS; RADIOACTIVE CLOUDS; SMOKES; WATER WAVES
Broader Terms: AEROSOLS; CLOUDS; COLLOIDS; DISPERSIONS; EXPLOSIONS; FIREBALLS; GRAVITY WAVES; NUCLEAR EXPLOSIONS; RESIDUES; SOLS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/634 (Item 334 from file: 103)
01581165 EDB-85-087943
Author(s): Browne, C.I.
Title: Heavy nuclides in bomb debris
Corporate Source: Los Alamos Scientific Lab., NM (USA)
Publication Date: Mar 1953 p 88
Report Number(s): AD-363638/8/XAB
Document Type: Report
Language: English
Journal Announcement: ERA8505
Availability: NTIS, PC A05/MF A01.
Subfile: ERA (Energy Research Abstracts).
Country of Origin: United States
Country of Publication: United States
Abstract: This report presents the results of the work of personnel of the Argonne National Laboratory, the Los Alamos Scientific Laboratory, and the University of California Radiation Laboratory on the heavy nuclides formed in the detonation of the Mike bomb of Operation Ivy. Many problems in the identification of the atomic number and mass number of the activities found in the debris have not yet been solved and, indeed, may well require another year of work on the debris before firm assignments are obtained. This report offers an interim statement of the conclusions which are available as a result of the primary work on the debris.
Major Descriptors: *HEAVY NUCLEI -- NUCLEOSYNTHESIS; *IVY PROJECT -- HEAVY NUCLEI
Broader Terms: EXPLOSIONS; NUCLEAR EXPLOSIONS; NUCLEI; SYNTHESIS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/635 (Item 335 from file: 103)
01581164 EDB-85-087942
Author(s): Thaler, W.J.
Title: Pressure-time measurements in deep water
Corporate Source: Office of Naval Research, Arlington, VA (USA)
Publication Date: Jan 1953 p 46
Report Number(s): AD-363622/2/XAB
Note: Report on Operation Ivy, Project 6.7a
Document Type: Report
Language: English
Journal Announcement: ERA8505
Availability: NTIS, PC A03/MF A01.
Subfile: ERA (Energy Research Abstracts).
Country of Origin: United States
Country of Publication: United States
Abstract: The objectives of Project 6.7a were (1) to obtain the pressure-time history of the underwater pressures as a function of

range in deep water from the Mike shot of Operation Ivy and (2) to attempt a correlation of these data with the basic problem of air-earth-water coupling of blast waves and possible effects to be expected on underwater ordnance. At the conclusion of the Mike shot, none of the instrumentation was recovered. Therefore no positive results are available. The following possible explanations of the loss of the instrumentation are presented: (1) The water column thrown up from the Mike shot (assuming a 10-Mt yield over a free water surface) would have had a radius of 9160 ft. The accompanying inward motion of the water in the adjacent area would extend considerably farther out. The tuna can and may have gone up the spout. Discussions with authorities in this field have led the Project Officer to believe that this is the most plausible explanation for the loss of equipment. (2) The underwater pressures were so great at the ranges in question that the tuna cans were ruptured below the water line and sank.
Major Descriptors: *IVY PROJECT -- UNDERWATER EXPLOSIONS; *UNDERWATER EXPLOSIONS -- PRESSURE EFFECTS
Descriptors: TIME DEPENDENCE
Broader Terms: EXPLOSIONS; NUCLEAR EXPLOSIONS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/636 (Item 336 from file: 103)
01581163 EDB-85-087941
Author(s): Storm, E.; Bemis, E. Jr.; Malik, J.S.
Title: Gamma radiation as a function of distance
Corporate Source: Los Alamos Scientific Lab., NM (USA)
Publication Date: Jul 1955 p 20
Report Number(s): AD-363577/8/XAB
Note: Report on Operation Ivy, Project 5.1 (U). Supersedes Rept. No. WT-643 (Prelim)
Document Type: Report
Language: English
Journal Announcement: ERA8505
Availability: NTIS, PC A02/MF A01.
Subfile: ERA (Energy Research Abstracts).
Country of Origin: United States
Country of Publication: United States
Abstract: Film measurements of gamma-ray exposure vs distance were made on both Mike and King. The results show that gamma radiation from large-yield devices cannot be scaled directly from measurements of nominal-size devices, and that the effect of the shock wave and the cloud rise must be taken into consideration. For the 550-kt King shot, the gamma-ray exposures were about 1.5 to 1.7 times those expected by scaling directly from a nominal device. For the 10-Mt Mike sot, measured values were 30 to 80 times those expected from scaling.
Major Descriptors: *GAMMA RADIATION -- RADIATION DOSES; *GAMMA RADIATION -- SCALING LAWS; *IVY PROJECT -- GAMMA RADIATION
Descriptors: DISTANCE
Broader Terms: DOSES; ELECTROMAGNETIC RADIATION; EXPLOSIONS; IONIZING RADIATIONS; NUCLEAR EXPLOSIONS; RADIATIONS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/637 (Item 337 from file: 103)
01573329 EDB-85-080106
Title: Comparison of radionuclide concentrations in 1956 and 1973 Enewetak beach material
Author(s): Cohen, N.; Rahon, T.E.; Hirshfield, H.
Affiliation: New York Univ. Medical Center, NY
Source: Health Phys. (United Kingdom) v 48:2. Coden: HLTPA
Publication Date: Feb 1985 p 228-230
Document Type: Journal Article
Language: English
Journal Announcement: EDB8505
Country of Origin: United States

Abstract: During the period 1948-1958, approximately 40 nuclear weapons tests were performed on the Enewetak Atoll in the Marshall Islands of the central Pacific Ocean. In 1973, the results of a survey contracted by the US Atomic Energy Commission specified that extensive decontamination of the land areas would be necessary before the people of Enewetak could return to the atoll. During Operation Redwing in 1956, several members of the New York University Departments of Biology and Environmental Medicine visited the atoll and collected water, plankton and beach coral samples to study the distribution of foraminifera among the islands of Enewetak and other nearby atolls. Of the specimens collected, 22 samples of beach material from the highly contaminated northern islands of Enewetak remained intact and were available for study. Analyses of the radionuclide concentrations of these samples have provided interesting information regarding the levels of contamination that existed on Enewetak at that time.
Major Descriptors: *CORALS -- RADIOCHEMICAL ANALYSIS; *FORAMINIFERA -- RADIOCHEMICAL ANALYSIS
Descriptors: AMERICIUM 241; CESIUM 137; COBALT 60; ENIWETOK; EUROPIUM 155; HARDTACK PROJECT; REDWING PROJECT
Broader Terms: ACTINIDE ISOTOPES; ACTINIDE NUCLEI; ALKALI METAL ISOTOPES; ALPHA DECAY RADIOISOTOPES; AMERICIUM ISOTOPES; ANIMALS; BETA DECAY RADIOISOTOPES; BETA-MINUS DECAY RADIOISOTOPES; CESIUM ISOTOPES; CHEMICAL ANALYSIS; CNIDARIA; COBALT ISOTOPES; EUROPIUM ISOTOPES; EXPLOSIONS; HEAVY NUCLEI; INTERMEDIATE MASS NUCLEI; INTERNAL CONVERSION RADIOISOTOPES; INVERTEBRATES; ISLANDS; ISOMERIC TRANSITION ISOTOPES; ISOTOPES; MARSHALL ISLANDS; MICRONESIA; MICROORGANISMS; MINUTES LIVING RADIOISOTOPES; NUCLEAR EXPLOSIONS; NUCLEI; OCEANIA; ODD-EVEN NUCLEI; ODD-ODD NUCLEI; PROTOZOA; QUANTITATIVE CHEMICAL ANALYSIS; RADIOISOTOPES ; RARE EARTH ISOTOPES; RARE EARTH NUCLEI; SARCODINA; YEARS LIVING RADIOISOTOPES
Subject Categories: 510302* -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- Terrestrial Ecosystems & Food Chains -- (-1987)

10/5/638 (Item 338 from file: 103)
01573168 ERA-10-026048; EDB-85-079945
Author(s): Burton, D.E.; Swift, R.P.; Glenn, H.D.; Bryan, J.B.
Title: Blast induced subsidence in the craters of nuclear tests over coral
Corporate Source: Lawrence Livermore National Lab., CA (USA)
Conference Title: 26. U.S. symposium on rock mechanics
Conference Location: Rapid City, SD, USA Conference Date: 26 Jun 1985
Publication Date: Feb 1985 p 9
Report Number(s): UCRL-91639; CONF-850671-4
Order Number: DE85007975
Contract Number (DOE): W-7405-ENG-48
Document Type: Report; Conference literature
Language: English
Journal Announcement: NTS8506
Availability: NTIS, PC A02/MF A01.
Subfile: NTS (NTIS); INS (US Atomindex input); ERA (Energy Research Abstracts).
Country of Origin: United States
Country of Publication: United States
Abstract: The craters from high-yield nuclear tests at the Pacific Proving Grounds are very broad and shallow in comparison with the bowl-shaped craters formed in continental rock at the Nevada Test Site and elsewhere. Attempts to account for the differences quantitatively have been generally unsatisfactory. We have for the first time successfully modeled the Koa Event, a representative coral-atoll test. On the basis of plausible assumptions about the geology and about the constitutive relations for coral, we have shown that the size and shape of the Koa crater can be accounted for by subsidence and liquefaction phenomena. If future studies confirm these assumptions, it will mean that some scaling formulas based on data from the Pacific will have to be revised to avoid overestimating weapons effects in continental geology. 9 refs., 5 figs.

Major Descriptors: *CRATERS -- GROUND SUBSIDENCE; *CRATERS -- SHAPE; *CRATERS -- SIZE; *NUCLEAR WEAPONS -- BLAST EFFECTS
Descriptors: BIKINI; CORALS; CRATERING EXPLOSIONS; ENIWETOK; LIQUEFACTION; PACIFIC OCEAN
Broader Terms: CAVITIES; CNIDARIA; EXPLOSIONS; ISLANDS; MARSHALL ISLANDS; MICRONESIA; OCEANIA; SEAS; SURFACE WATERS; THERMOCHEMICAL PROCESSES; WEAPONS
Subject Categories: 450201* -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives -- Containment
INIS Subject Categories: E1400* -- Nuclear Explosions

10/5/639 (Item 339 from file: 103)
01567253 ERA-10-024317; EDB-85-074028
Title: Effect of shading by the table coral Acropora Hyacinthus on understory corals
Author(s): Stimson, J.
Affiliation: Univ. of Hawaii, Honolulu
(Acropora^ Pocillopora)
Source: Ecology (United States) v 66:1. Coden: ECOLA
Publication Date: Feb 1985 p 40-53
Contract Number (DOE): AC08-76EV00703
Document Type: Journal Article; Numerical data
Language: English
Journal Announcement: EDB8504
Subfile: ERA (Energy Research Abstracts).
Country of Origin: United States
Abstract: Field surveys at Enewetak Atoll, Marshall Islands, show that coral density and diversity is much lower beneath Acropora table corals than in adjacent unshaded areas. Additionally, the understory community is predominantly composed of massive and encrusting species, while branching Acropora and Pocillopora predominate in unshaded areas. Results of experiments in which coral fragments were transferred to the shade of table Acropora and to adjacent unshaded areas show that shading slows the growth and leads to higher mortality of branching species, while massive and encrusting species are unaffected. Light measurements made beneath table Acropora show that illumination and irradiance values fall to levels at which most hermatypic corals do not occur. The fast-growing but fragile table Acropora are abundant in a wide variety of atoll habitats and grow rapidly to form a canopy approx. = 50 cm above the substrate. However, table Acropora also have high mortality rates, so that there is continuous production of unshaded areas. The growth and death of tables thus create local disturbances, and the resulting patchwork of recently shaded and unshaded areas may enhance coral diversity in areas of high coral cover.
Major Descriptors: *CORALS -- COMPETITION; *VISIBLE RADIATION -- BIOLOGICAL EFFECTS
Descriptors: ABUNDANCE; ECOLOGY; ENIWETOK; EXPERIMENTAL DATA; GROWTH; HABITAT; MORTALITY; POPULATION DENSITY; SPECIES DIVERSITY; VARIATIONS
Broader Terms: CNIDARIA; DATA; ELECTROMAGNETIC RADIATION; INFORMATION; ISLANDS; MARSHALL ISLANDS; MICRONESIA; NUMERICAL DATA; OCEANIA; RADIATIONS
Subject Categories: 520100* -- Environment, Aquatic -- Basic Studies -- (-1989)

10/5/640 (Item 340 from file: 103)
01567249 ERA-10-024316; EDB-85-074024
Title: Radiological dose assessments of atolls in the Northern Marshall Islands
Author(s): Robison, W.L.
Affiliation: Lawrence Livermore National Lab., CA
Conference Title: 19. annual meeting of the National Council of Radiation Protection and Measurements
Conference Location: Washington, DC, USA Conference Date: 6 Apr 1983
Source: Proceedings of the National Council on Radiation Protection and Measurements (United States) v 5.

Publication Date: 1 Nov 1983 p 40-82
Report Number(s): CONF-830460-
Contract Number (DOE): W-7405-ENG-48
Document Type: Journal Article; Conference literature; Numerical data
Language: English
Journal Announcement: EDB8503
Subfile: ERA (Energy Research Abstracts).
Country of Origin: United States
Abstract: Methods and models used to estimate the radiation doses to a returning population of the atolls in the Marshall Islands are presented. In this environment natural processes have acted on source-term radionuclides for nearly 30 years. The data bases developed for the models, and the results of the radiological dose analyses at the various atolls are described. The major radionuclides in order of their contribution to the total estimated doses were /sup 137/Cs, /sup 90/Sr, /sup 239/ /sup 240/Pu, /sup 241/Am, and /sup 60/Co. Exposure pathways in order of their contribution to the estimated doses were: terrestrial food chain, external ..gamma.., marine food chain, inhalation, and cistern water and ground water. 56 references, 13 figures, 16 tables.
Major Descriptors: *DRINKING WATER -- CONTAMINATION; *FOOD CHAINS -- CONTAMINATION; *GROUND WATER -- CONTAMINATION; *HUMAN POPULATIONS -- RADIATION DOSES; *MARSHALL ISLANDS -- NUCLEAR EXPLOSIONS
Descriptors: ADULTS; AMERICIUM 241; CESIUM 137; CHILDREN; COBALT 60; DATA COMPILATION; DIET; DOSE EQUIVALENTS; ENVIRONMENTAL EXPOSURE PATHWAY; GAMMA RADIATION; INHALATION; PLUTONIUM 239; PLUTONIUM 240; STRONTIUM 90
Broader Terms: ACTINIDE ISOTOPES; ACTINIDE NUCLEI; AGE GROUPS; ALKALI METAL ISOTOPES; ALKALINE EARTH ISOTOPES; ALPHA DECAY RADIOISOTOPES; AMERICIUM ISOTOPES; BETA DECAY RADIOISOTOPES; BETA-MINUS DECAY RADIOISOTOPES; CESIUM ISOTOPES; COBALT ISOTOPES; DATA; DOSES; ELECTROMAGNETIC RADIATION; EVEN-EVEN NUCLEI; EVEN-ODD NUCLEI; EXPLOSIONS; HEAVY NUCLEI; HYDROGEN COMPOUNDS; INFORMATION; INTAKE; INTERMEDIATE MASS NUCLEI; INTERNAL CONVERSION RADIOISOTOPES; IONIZING RADIATIONS; ISLANDS; ISOMERIC TRANSITION ISOTOPES; ISOTOPES; MICRONESIA; MINUTES LIVING RADIOISOTOPES; NUCLEI; NUMERICAL DATA; OCEANIA; ODD-EVEN NUCLEI; ODD-ODD NUCLEI; OXYGEN COMPOUNDS; PLUTONIUM ISOTOPES; POPULATIONS; RADIATIONS; RADIOISOTOPES; STRONTIUM ISOTOPES; WATER; YEARS LIVING RADIOISOTOPES
Subject Categories: 510302* -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- Terrestrial Ecosystems & Food Chains -- (-1987)
520302 -- Environment, Aquatic -- Radioactive Materials Monitoring & Transport -- Aquatic Ecosystems & Food Chains -- (-1987)
500300 -- Environment, Atmospheric -- Radioactive Materials Monitoring & Transport -- (-1989)

10/5/641 (Item 341 from file: 103)
01562049 EDB-85-068823
Author(s): Bruton, H.C.
Title: Operation Castle. Joint Task Force Seven, Commander Task Group 7.3. Extracted version. Final report, January-May 1954
Corporate Source: Kaman Tempo, Santa Barbara, CA (USA)
Publication Date: 15 Dec 1982 p 375
Report Number(s): AD-A-995202/9/XAB
Note: Extracted version of report dated 1954
Document Type: Report
Language: English
Journal Announcement: ERA8504
Availability: NTIS, PC A16/MF A01.
Subfile: ERA (Energy Research Abstracts).
Country of Origin: United States
Country of Publication: United States
Abstract: None;
Major Descriptors: *CASTLE PROJECT -- NUCLEAR EXPLOSIONS; *NUCLEAR WEAPONS -- TESTING
Descriptors: BIKINI; ENIWETOK; FALLOUT; RADIATION HAZARDS; RADIOACTIVE

MATERIALS; SURFACE EXPLOSIONS
Broader Terms: EXPLOSIONS; HAZARDS; HEALTH HAZARDS; ISLANDS; MARSHALL ISLANDS; MATERIALS; MICRONESIA; NUCLEAR EXPLOSIONS; OCEANIA; WEAPONS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/642 (Item 342 from file: 103)
01554214 EPA-11-001754; EDB-85-060987
Title: Environmental radioactivity
Conference Title: 19. annual meeting of the National Council of Radiation Protection and Measurements
Conference Location: Washington, DC, USA Conference Date: 6 Apr 1983
Publisher: National Council on Radiation Protection and Measurements,Bethesda, MD, USA
Publication Date: 1983 p 284
Report Number(s): CONF-830460-
Document Type: Book
Language: English
Journal Announcement: EDB8503
Availability: National Council on Radiation Protection and Measurements, 7910 Woodmont Ave., Bethesda, MD 20814.
Subfile: EPA (Energy Abstracts for Policy Analysis).
Country of Origin: United States
Country of Publication: United States
Abstract: The theme of the nineteenth annual meeting of the National Council on Radiation Protection was Environmental Radioactivity. Papers were presented on the role of the environment and of natural and man-made sources within it, assessments of radioactivity at test sites in the Marshall Islands and at Three Mile Island, environmental modeling, long-lived radionuclide problems, waste disposal and criteria for dose limits. Reports were presented from active scientific committees of the NCRP including those on 1) Neutron Contamination from Medical Electron Accelerators, 2) Thyroid Cancer Risk, and 3) Priorities for Dose Reduction. Seventeen papers were entered into the Energy Data Base.
Major Descriptors: *RADIATION PROTECTION -- MEETINGS; *RADIOACTIVE WASTE MANAGEMENT -- MEETINGS
Descriptors: ACCELERATORS; DOSE EQUIVALENTS; DOSE LIMITS; FUEL CYCLE; HUMAN POPULATIONS; ICRP; LEADING ABSTRACT; NEOPLASMS; NUCLEAR EXPLOSIONS; NUCLEAR POWER PLANTS; RADIATION DOSES; RADIATION HAZARDS; RADIOACTIVE WASTES; RADIOTHERAPY; RISK ASSESSMENT; THYROID; US NCRP; US NRC; X RADIATION
Broader Terms: ABSTRACTS; BODY; DISEASES; DOCUMENT TYPES; DOSES; ELECTROMAGNETIC RADIATION; ENDOCRINE GLANDS; EXPLOSIONS; GLANDS; HAZARDS; HEALTH HAZARDS; INTERNATIONAL ORGANIZATIONS; IONIZING RADIATIONS; MANAGEMENT; MATERIALS; MEDICINE; NATIONAL ORGANIZATIONS; NUCLEAR FACILITIES; NUCLEAR MEDICINE; ORGANS; POPULATIONS; POWER PLANTS ; RADIATIONS; RADIOACTIVE MATERIALS; RADIOLOGY; SAFETY STANDARDS; STANDARDS; THERAPY; THERMAL POWER PLANTS; US ORGANIZATIONS; WASTE MANAGEMENT; WASTES
Subject Categories: 655001* -- Medical Physics -- Radiation Protection Standards
055000 -- Nuclear Fuels -- Safeguards, Inspection, & Accountability
052002 -- Nuclear Fuels -- Waste Disposal & Storage
053000 -- Nuclear Fuels -- Environmental Aspects
054000 -- Nuclear Fuels -- Health & Safety
500300 -- Environment, Atmospheric -- Radioactive Materials Monitoring & Transport -- (-1989)
510300 -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- (-1989)
520300 -- Environment, Aquatic -- Radioactive Materials Monitoring & Transport -- (1989)
290600 -- Energy Planning & Policy -- Nuclear Energy
510302 -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- Terrestrial Ecosystems & Food Chains -- (-1987)
560151 -- Radiation Effects on Animals -- Man

560161 -- Radionuclide Effects, Kinetics, & Toxicology -- Man

10/5/643 (Item 343 from file: 103)
01552146 ERA-10-021614; EDB-85-058919
Author(s): Fons, W.L.; Butler, C.P.; Bruce, H.D.
Title: Thermal effects on cellulosic materials
Corporate Source: Forest Service, Washington, DC (USA)
Publication Date: 12 Mar 1959 p 30
Report Number(s): AD-465331/7/XAD
Note: Report on Operation Redwing-Project 8.2
Document Type: Report
Language: English
Journal Announcement: EDB8501
Availability: NTIS, PC A03/MF A01.
Country of Origin: United States
Country of Publication: United States
Abstract: The project had as its primary objectives the determination of (1) the minimum thermal-ignition energies for fine kindling fuels and (2) the depth of char in wood as a check on equations developed from laboratory data obtained with a carbon arc. Test specimens of alpha-cellulose paper of various thicknesses, densities, and carbon contents; six common kindling fuels (cotton denim, rayon cloth, newspaper, pine needles, dry grass, and corrugated fiberboard); and three species of wood (maple, willow, balsa) were exposed to the radiation from Shot Cherokee at Sites Dog and George. The specimens were exposed to thermal radiation directly and, also, behind attenuating screens of different transmissions. For different moisture contents, part of the specimens were in containers vented to the atmosphere and part in moisture-proof containers containing a desiccant. Because the bomb burst was not directly over planned target zero, the direct radiation from the entire fireball entered the cells at an appreciable angle, irradiating only a small portion of each specimen at Site George and missing the specimens entirely at Site Dog. For this reason, the depths of char of the wood specimens were without significance. Data were obtained that permitted an estimate of the critical ignition energy for newspaper, pin needles, and ten of the black papers. Analysis of the black-paper data indicates that the minimum thermal energy causing ignition was increased by moisture content and density had more effect on the critical ignition energy of the thick papers than of the thin papers.
Major Descriptors: *NUCLEAR EXPLOSIONS -- THERMAL RADIATION; *PAPER -- RADIATION EFFECTS; *REDWING PROJECT -- THERMAL RADIATION; *TEXTILES -- RADIATION EFFECTS; *WOOD -- RADIATION EFFECTS
Descriptors: COMBUSTION PRODUCTS; DAMAGE; IGNITION
Broader Terms: ELECTROMAGNETIC RADIATION; EXPLOSIONS; RADIATIONS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)
360605 -- Materials -- Radiation Effects

10/5/644 (Item 344 from file: 103)
01552145 ERA-10-021614; EDB-85-058918
Title: Operation Crossroads. Report of the technical director, Volume I
Corporate Source: Joint Task Force One, Washington, DC (USA)
Publication Date: May 1947 p 10
Report Number(s): AD-366583/3/XAD
Note: See also Volume 2, AD-366 584
Document Type: Report
Language: English
Journal Announcement: EDB8501
Availability: NTIS, PC A02/MF A01.
Country of Origin: United States
Country of Publication: United States
Abstract: None
Major Descriptors: *CROSSROADS PROJECT; *NUCLEAR EXPLOSIONS; *NUCLEAR WEAPONS -- TESTING
Broader Terms: EXPLOSIONS; NUCLEAR EXPLOSIONS; WEAPONS

Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/645 (Item 345 from file: 103)
01552144 ERA-10-021614; EDB-85-058917
Author(s): FlorCruz, P.R.; Young, C.G. Jr.; Andrews, T.J.
Title: Measurement of material density with beta densitometer
Corporate Source: Los Alamos Scientific Lab., NM (USA)
Publication Date: Feb 1953 p 38
Report Number(s): AD-363619/8/XAD
Note: Report on Operation Ivy, Project 6.9
Document Type: Report
Language: English
Journal Announcement: EDB8501
Availability: NTIS, PC A03/MF A01.
Country of Origin: United States
Country of Publication: United States
Abstract: The objective of beta-densitometer instrumentation at Ivy Mike shot was, primarily, to measure material density near ground surface as a function of time and, secondarily, to test the latest modifications to previous densitometer models. The results showed (1) that thermal or preshock dust is absent at a ground range of about 23,000 ft (Station 690.02), (2) that it is possible to calculate the overpressure due to air shock alone from the measured density change, provided that preshock turbulence is not excessive, and (3) that the modifications to the densitometer proved to be satisfactory. The calibration and electronic engineering of the Ivy model densitometer were considerably improved over previous models.
Major Descriptors: *IVY PROJECT -- MEASURING INSTRUMENTS; *NUCLEAR EXPLOSIONS -- MEASURING INSTRUMENTS
Descriptors: BETA PARTICLES; DENSITOMETERS
Broader Terms: CHARGED PARTICLES; EXPLOSIONS; MEASURING INSTRUMENTS; NUCLEAR EXPLOSIONS; PHOTOMETERS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/646 (Item 346 from file: 103)
01552143 ERA-10-021614; EDB-85-058916
Author(s): Baker, W.D.
Title: Water-wave motion pictures over shallow water
Corporate Source: Los Alamos Scientific Lab., NM (USA)
Publication Date: Feb 1953 p 44
Report Number(s): AD-363572/9/XAD
Note: Report on Operation Ivy, Project 6.4a
Document Type: Report
Language: English
Journal Announcement: EDB8501
Availability: NTIS, PC A03/MF A01.
Country of Origin: United States
Country of Publication: United States
Abstract: Motion pictures were taken of the waves produced by the Ivy Mike shot. They were taken over shallow water inside the lagoon near some of the islands of the atoll. Records were obtained at Elmer and Yvonne which give arrival times corresponding to an average wave velocity of about 80 ft/sec. The general character of the waves was a long slow rise followed by a long negative phase during which several smaller oscillations were observed. The complete wave train was not observed. The indicated product of wave amplitude (highest to lowest water) times the horizontal distance from zero was 4.5 x 10/sup 5/ sq ft. Since this value was increased by shoaling, the deep-water amplitude was somewhat less, and the product is estimated as 2.7 x 10 to the 5th power sq ft. The results are in agreement with theory, including the predictions of George N. White on the upper limit for the Mike water-wave amplitudes.
Major Descriptors: *IVY PROJECT -- WATER WAVES; *NUCLEAR EXPLOSIONS -- WATER WAVES
Broader Terms: EXPLOSIONS; GRAVITY WAVES; NUCLEAR EXPLOSIONS

Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/647 (Item 347 from file: 103)
01552142 ERA-10-021614; EDB-85-058915
Author(s): Plum, W.B.; Parker, W.J.
Title: Spectral distribution of irradiance with high time resolution
Corporate Source: Naval Radiological Defense Lab., San Francisco, CA (USA)
Publication Date: 25 Jul 1958 p 18
Report Number(s): AD-362108/3/XAD
Note: Report on Operation Redwing - Project 8.1c
Document Type: Report
Language: English
Journal Announcement: EDB8501
Availability: NTIS, PC A02/MF A01.
Country of Origin: United States
Country of Publication: United States
Abstract: A multichannel recording spectrometer with high time resolution in the spectral range of 2,500 to 25,000 A was used to measure the spectral distribution of the irradiance as a function of time received at two locations for Shot Cherokee and at one location for Shot Zuni. Due to a large drop error, the point of detonation occurred outside of the field of view of both instruments on Cherokee. The spectral distribution of the irradiance received at the time of the second maximum for Shot Zuni showed that a large portion of the energy was in the infrared region of the spectrum. The distributions at other times are not reported, since the irradiance levels were much lower than expected because of considerable cloud obscuration of the Fireball.
Major Descriptors: *ATMOSPHERIC EXPLOSIONS; *NUCLEAR EXPLOSIONS -- THERMAL RADIATION; *REDWING PROJECT -- THERMAL RADIATION
Descriptors: SPECTROSCOPY
Broader Terms: ELECTROMAGNETIC RADIATION; EXPLOSIONS; RADIATIONS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/648 (Item 348 from file: 103)
01552141 ERA-10-021614; EDB-85-058914
Author(s): Plum, W.B.; Jenkins, R.J.
Title: Measurement of irradiance at high time resolution
Corporate Source: Naval Radiological Defense Lab., San Francisco, CA (USA)
Publication Date: 30 Apr 1958 p 30
Report Number(s): AD-357966/1/XAD
Note: Report on Operation Redwing--Project 8.1b
Document Type: Report
Language: English
Journal Announcement: EDB8501
Availability: NTIS, PC A03/MF A01.
Country of Origin: United States
Country of Publication: United States
Abstract: Irradiance versus time was recorded for two multimegaton detonations. Data on the Cherokee shot was not obtained due to the large drop error. Satisfactory performance was obtained from the instrumentation on the Zuni shot; times to first maximum, minimum, and second maximum were obtained as well as the total thermal energy distribution through time. The values recorded for Zuni appear to confirm the practicability of scaling from small to large yields in the various scaling laws. The relative amplitudes of the first and second pulses is reversed for the Zuni shot as compared to smaller devices, with the second maximum considerably higher than the first. Evidence is presented to show that considerable care must be exercised in the interpretation of the data. The Pacific atmosphere makes it essentially impossible to extrapolate from irradiance measurements at a distant point back to the device itself. Evidence is presented to show that considerable care must be exercised in the interpretation of the data.

Major Descriptors: *NUCLEAR EXPLOSIONS -- THERMAL RADIATION; *REDWING PROJECT -- THERMAL RADIATION
Descriptors: ATMOSPHERIC EXPLOSIONS
Broader Terms: ELECTROMAGNETIC RADIATION; EXPLOSIONS; RADIATIONS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/649 (Item 349 from file: 103)
01552140 ERA-10-021614; EDB-85-058913
Author(s): Berkhouse, L.; Hallowell, J.H.; McMullan, F.W.; Davis, S.E.; Jones, C.B.
Title: Operation Crossroads-1946. Final report
Corporate Source: Kaman Tempo, Santa Barbara, CA (USA)
Publication Date: 1 May 1984 p 568
Report Number(s): AD-A-146562/4/XAD
Document Type: Report
Language: English
Journal Announcement: EDB8501
Availability: NTIS, PC A24/MF A01.
Subfile: ERA (Energy Research Abstracts).
Country of Origin: United States
Country of Publication: United States
Abstract: Crossroads was the first peacetime nuclear weapons test series. It was conducted at Bikini Atoll in 1946. Report emphasis is on the radiological safety of the personnel. Available records on personnel exposure are summarized.
Major Descriptors: *CROSSROADS PROJECT; *NUCLEAR EXPLOSIONS; *NUCLEAR WEAPONS -- TESTING
Descriptors: MARSHALL ISLANDS; RADIATION EFFECTS; SHIPS
Broader Terms: EXPLOSIONS; ISLANDS; MICRONESIA; NUCLEAR EXPLOSIONS; OCEANIA ; WEAPONS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/650 (Item 350 from file: 103)
01533402 EDB-85-040171
Title: Swimming in the atomic lagoon
Author(s): Quigley, E.
Source: Wash. Mon. (United States) v 16:11. Coden: WSMYA
Publication Date: Dec 1984 p 34-42
Document Type: Journal Article
Language: English
Journal Announcement: EPA8501
Subfile: EPA (Energy Abstracts for Policy Analysis); INS (US Atomindex input).
Country of Origin: United States
Abstract: Participants in the nuclear tests of the 1940s and 50s were the last generation of Americans with implicit trust in the government. Today, many are dying from radiation exposure. The author describes how 42,000 sailors took part in Operation Crossroads in the South Pacific. Despite warnings of temporary sterility, the men displayed an innocent lack of awareness of the dangers of radiation. Public relations during and after the tests minimized the possibility of injury and assigned only calculated levels of exposure. Later reviews of documents show that radiation badges were not given to everyone, that there were daily lists of men who were overexposed, and that the military did not understand or believe in the potential hazard enough to keep accurate records. Health-related problems and cancer deaths have left many with a sense of betrayal.;
Major Descriptors: *CROSSROADS PROJECT -- RADIATION HAZARDS; *MILITARY PERSONNEL -- RADIATION DOSES
Descriptors: DELAYED RADIATION EFFECTS; DISEASES; GENETICALLY SIGNIFICANT DOSE; GOVERNMENT POLICIES; INFORMATION DISSEMINATION; PUBLIC RELATIONS
Broader Terms: BIOLOGICAL EFFECTS; BIOLOGICAL RADIATION EFFECTS; DOSES; EXPLOSIONS; HAZARDS; HEALTH HAZARDS; NUCLEAR EXPLOSIONS; PERSONNEL; RADIATION DOSES; RADIATION EFFECTS

Subject Categories: 560151* -- Radiation Effects on Animals -- Man
290600 -- Energy Planning & Policy -- Nuclear Energy
INIS Subject Categories: C1500* -- Effects of External Radiation on Man
F1400 -- Social Impact of Nuclear Science & Technology

10/5/651 (Item 351 from file: 103)
01522679 ERA-10-010344; EDB-85-029444
Author(s): Smith, S.B.
Title: Operation Crossroads. Atomic Bomb Tests. Volume 2, Appendix V. Final report of Army ground group
Corporate Source: Joint Task Force One, Washington, DC (USA)
Publication Date: 27 Sep 1946 p 139
Report Number(s): AD-367509/7; XRD-150
Note: See also Volume 3 Appendix 6, AD-367 508
Document Type: Report
Language: English
Journal Announcement: EDB8412
Availability: NTIS, PC A07/MF A01.
Subfile: ERA (Energy Research Abstracts).
Country of Origin: United States
Country of Publication: United States
Abstract: With the exception of Searchlights and far Infrared devices (Penrod), Corps of Engineers Equipment will probably withstand the effect of an air burst of an atomic bomb of present design at a distance of 1000 yards. Improved resistance to blast can be provided by shock-mounting, shielding, and strengthening more fragile parts of equipment. Similarly, resistance to radiant heat can be provided by covering shielding, or by substitution of more heat-resistant materials. Lateral protection by employment of natural terrain or construction of revetments will reduce the radius of damage materially. The destruction of Corps of Engineers Equipment by use of an atomic bomb does not appear to be a profitable use of the bomb.
Major Descriptors: *NUCLEAR EXPLOSIONS -- BLAST EFFECTS
Descriptors: CROSSROADS PROJECT; ENGINEERING; SHIELDING
Broader Terms: EXPLOSIONS; NUCLEAR EXPLOSIONS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/652 (Item 352 from file: 103)
01522678 ERA-10-010343; EDB-85-029443
Author(s): Frederick, J.D.
Title: Operation Crossroads. Atomic Bomb Tests. Volume III. Final report of Army ground group
Corporate Source: Joint Task Force One, Washington, DC (USA)
Publication Date: 27 Aug 1946 p 342
Report Number(s): AD-367508/9; XRD-151
Note: See also Volume 2, AD-367 508L
Document Type: Report
Language: English
Journal Announcement: EDB8412
Availability: NTIS, PC A15/MF A01.
Subfile: ERA (Energy Research Abstracts).
Country of Origin: United States
Country of Publication: United States
Abstract: From detonation of this bomb at the particular height used, it can be concluded that minimum horizontal range at which small, rugged, well built equipments with little shielding will remain operable is between 500 and 800 yards. Large sets of the SCR-3999, SCR-584 class remain operative, especially with minor shielding, at 1200 to 1500 yards. Precision radar at this distance will need mechanical reorientation before accurate fire-control can be resumed. Medium size equipment will be little affected at ranges intermediate between those stated above. Major damage at the Able Test was blast inflicted with the heat flash producing less serious effects.
Major Descriptors: *NUCLEAR EXPLOSIONS -- BLAST EFFECTS
Descriptors: CROSSROADS PROJECT; SHELTERS

Broader Terms: EXPLOSIONS; NUCLEAR EXPLOSIONS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/653 (Item 353 from file: 103)
01522677 ERA-10-010342; EDB-85-029442
Author(s): Frederick, J.D.
Title: Operation Crossroads. Atomic Bomb Tests. Volume 5, Appendix VIII. Final report of Army ground group
Corporate Source: Joint Task Force One, Washington, DC (USA)
Publication Date: 27 Aug 1946 p 213
Report Number(s): AD-367506/3; XRD-153
Note: See also Volume 4, Appendix 7, AD-367 507
Document Type: Report
Language: English
Journal Announcement: EDB8412
Availability: NTIS, PC A10/MF A01.
Subfile: ERA (Energy Research Abstracts).
Country of Origin: United States
Country of Publication: United States
Abstract: Chemical Warfare test items displayed in normal weather packaging and boxing withstood the effects of the atomic bomb. Dark colored containers were susceptible to the intense heat. Light colored containers, excepting rough wood surfaces, in the same area suffered no damage. Thin pliofilms could not withstand the heat at distances of 2300 yards or less from the blast. Plastics, as used in the containers of CWS Medical Kits, were susceptible to blistering and charring at distances of 1500 yards from the blast. One layer of flashproof cloth did not provide protection from the flash heat. Double and triple layers gave protection as close as 1000 yards.
Major Descriptors: *NUCLEAR EXPLOSIONS -- BLAST EFFECTS; *NUCLEAR EXPLOSIONS -- THERMAL RADIATION
Descriptors: CROSSROADS PROJECT; PACKAGING; SHIELDING
Broader Terms: ELECTROMAGNETIC RADIATION; EXPLOSIONS; NUCLEAR EXPLOSIONS; RADIATIONS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/654 (Item 354 from file: 103)
01522675 ERA-10-010338; EDB-85-029440
Title: Operation Crossroads. Tests Able and Baker. Bureau of aeronautics group final report
Corporate Source: Joint Task Force One, Washington, DC (USA)
Publication Date: 18 Oct 1946 p 277
Report Number(s): AD-367502/2; XRD-157
Document Type: Report
Language: English
Journal Announcement: EDB8412
Availability: NTIS, PC A13/MF A01.
Subfile: ERA (Energy Research Abstracts).
Country of Origin: United States
Country of Publication: United States
Abstract: Test data are summarized on airburst (Test Able) and underwater (Test Baker) nuclear explosion tests of naval aircraft. The Bureau of Aeronautics target aircraft exposure plans for Test ABLE had as their objective the determination of the effects of the atomic bomb upon aircraft as a function of distance from the center of the burst. Of the 73 aircraft originally provided for the air burst forty remained usable for the underwater bomb test. These forty aircraft comprised nineteen undamaged, ten lightly damaged and eleven moderately to heavily damaged aircraft which were considered, however, to be satisfactory test items.
Major Descriptors: *NUCLEAR EXPLOSIONS -- BLAST EFFECTS
Descriptors: CROSSROADS PROJECT; RADIOACTIVITY; THERMAL RADIATION; VULNERABILITY
Broader Terms: ELECTROMAGNETIC RADIATION; EXPLOSIONS; NUCLEAR EXPLOSIONS; RADIATIONS

Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/655 (Item 355 from file: 103)
01517741 EDB-85-024503
Author(s): Frederick, J.B.
Title: Operation Crossroads. Atomic Bomb Tests. Volume 6, Part 2, Appendix IX. Final report of Army ground group
Corporate Source: Joint Task Force One, Washington, DC (USA)
Publication Date: 30 Sep 1946 p 250
Report Number(s): AD-367504/8; XRD-155
Note: See also Volume 6, Part 1, Appendix 9, AD-367 505
Document Type: Report
Language: English
Journal Announcement: ERA8411
Availability: NTIS, PC A11/MF A01.
Subfile: ERA (Energy Research Abstracts).
Country of Origin: United States
Country of Publication: United States
Abstract: Potential fires within approximately 800 yards of the detonation center were extinguished by the closely following air blast, (except where high porosity of certain material enabled the heat radiation to penetrate) where as many distant fires would have been extinguished had the air blast been greater. Inflammability of fiber materials was greatly increased by presence of surface fuzz and high porosity. Objects having a cylindrical surface enabled the blast radiation to be directly normal to a portion of the surface and thus, if porous, penetrate deeper than would have otherwise been the case. The velocity of the air blast, and therefore its fire extinguishing power was greatly reduced by deck houses and other obstructions. Close packaging increased the fire hazard by forming crevasses where heat radiation could penetrate. Underground metal objects of a high surface/mass ratio that were directly exposed to the blast were the recipients of energy that manifested itself in the form of heat.;
Major Descriptors: *CROSSROADS PROJECT -- BLAST EFFECTS
Descriptors: NUCLEAR EXPLOSIONS; VULNERABILITY
Broader Terms: EXPLOSIONS; NUCLEAR EXPLOSIONS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/656 (Item 356 from file: 103)
01517740 EDB-85-024502
Author(s): Frederick, J.D.
Title: Operation Crossroads. Atomic Bomb Tests. Volume 7, Appendix X. Final report of Army ground group
Corporate Source: Joint Task Force One, Washington, DC (USA)
Publication Date: 27 Aug 1946 p 260
Report Number(s): AD-367503/0; XRD-156
Note: See also Volume 6, Part 2, Appendix 9, AD-367 504
Document Type: Report
Language: English
Journal Announcement: ERA8411
Availability: NTIS, PC A12/MF A01.
Subfile: ERA (Energy Research Abstracts).
Country of Origin: United States
Country of Publication: United States
Abstract: Blast was the most destructive force acting against equipment exposed. The heat wave was of such short duration or low temperature that little damage occurred to Army Air Forces test items. Dispersion is an effective passive defense against atomic bomb attack. All aircraft instruments were unharmed by radioactivity. Methyl Bromide will retain radioactivity to a dangerous degree for an extended period. High pressure steel flasks, such as carbon dioxide bottles, will withstand extreme exposure to atomic detonation. No Army Air Forces exposed items were materially injured by radioactivity.;
Major Descriptors: *CROSSROADS PROJECT -- BLAST EFFECTS

Descriptors: NUCLEAR EXPLOSIONS; SHOCK WAVES; VULNERABILITY
Broader Terms: EXPLOSIONS; NUCLEAR EXPLOSIONS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/657 (Item 357 from file: 103)
01508173 EDB-85-014932
Author(s): Carder, D.S.; Murphy, L.M.; Pearce, T.H.; Mickey, W.V.
Title: Operation HARDTACK II: surface motions from underground explosions
Corporate Source: Coast and Geodetic Survey, Washington, DC (USA)
Publication Date: 1 Apr 1960 p 53
Report Number(s): DOE/NBM-5002794
Order Number: DE85002794
Note: Portions are illegible in microfiche products
Document Type: Report
Language: English
Journal Announcement: NTS8501
Availability: NTIS, PC A 04/MF A01; 1.
Subfile: NTS (NTIS).
Country of Origin: United States
Country of Publication: United States
Abstract: Ground effects resulting from certain HARDTACK II underground explosions were measured by strong-motion and teleseismic seismographs from 2000 ft to distances of nearly 100 miles. In addition, many temporary seismographs were operated by a number of organizations to distances of nearly 2400 miles, and routine seismographs continued to operate on a worldwide basis. Some of the results are given in this report. For safety purposes, predictions of ground effects, using formulas derived by the Coast and Geodetic Survey from pre-Rainier H. E. tests and modified slightly as a result of the Rainier tests, hold with reasonable accuracy. However, it is believed that low frequency ground displacements in the distance ranges covered in this report attenuate, with absorption, as the first power of the distance. An energetic wave believed reflected from the surface near the source was recorded by some of the strong-motion seismographs. It is out of phase with the initial wave and follows it by about a quarter second. From the ground effects standpoint, the Blanca shot was equivalent to a magnitude 4.8 earthquake.;
Major Descriptors: *HARDTACK PROJECT -- SEISMIC SURFACE WAVES; *UNDERGROUND EXPLOSIONS -- SEISMIC SURFACE WAVES
Descriptors: NUCLEAR EXPLOSIONS
Broader Terms: EXPLOSIONS; NUCLEAR EXPLOSIONS; SEISMIC WAVES
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)
450300 -- Military Technology, Weaponry, & National Defense -- Nuclear Explosion Detection

10/5/658 (Item 358 from file: 103)
01499536 ERA-10-003239; EDB-85-006294
Author(s): Burton, D.E.; Swift, R.P.; Bryan, J.B.; Glenn, H.D.
Title: Subsidence in the craters of nuclear tests at the Pacific Proving Grounds
Corporate Source: Lawrence Livermore National Lab., CA (USA)
Conference Title: Engineering Foundation conference on compressibility phenomena in subsidence
Conference Location: Henniker, NH, USA Conference Date: 29 Jul 1984
Publication Date: Aug 1984 p 37
Report Number(s): UCRL-91583; CONF-840721-3
Order Number: DE85000747
Contract Number (DOE): W-7405-ENG-48
Note: Portions are illegible in microfiche products
Document Type: Report; Conference literature
Language: English
Journal Announcement: NTS8412
Availability: NTIS, PC A03/MF A01; 1.
Subfile: NTS (NTIS); ERA (Energy Research Abstracts).

Country of Origin: United States
Country of Publication: United States
Abstract: The craters from high-yield nuclear tests at the Pacific Proving Ground are very broad and shallow in comparison with the bowl-shaped craters formed in continental rock at the Nevada Test Site (NTS) and elsewhere. Attempts to explain the difference in terms of device yield (which was much larger in the Pacific tests than at NTS) have been generally unsatisfactory. We have for the first time successfully modeled the Koa Event, a representative coral-atoll test. On the basis of plausible assumptions about the geology and about the constitutive relations for coral, we have shown that the size and shape of the Koa crater can be accounted for by subsidence and liquefaction phenomena. If future studies confirm these assumptions, it will mean that some scaling formulas based on data from the Pacific will have to be revised to avoid overestimating weapons effects in continental geology. 41 references, 10 figures, 1 table.;
Major Descriptors: *CRATERS -- GROUND SUBSIDENCE; *NUCLEAR WEAPONS -- BLAST EFFECTS
Descriptors: CORALS; CRATERING EXPLOSIONS; ENIWETOK
Broader Terms: CAVITIES; CNIDARIA; EXPLOSIONS; ISLANDS; MARSHALL ISLANDS; MICRONESIA; OCEANIA; WEAPONS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/659 (Item 359 from file: 103)
01499529 EDB-85-006287
Title: Operation Greenhouse. Scientific director's report of atomic weapon tests at Eniwetok, 1951. Annex 2.1. Japtan Island development and animal production
Corporate Source: USAEC, Washington, DC
Publication Date: 1951 p 43
Report Number(s): AD-A-995221/9; AEC-WT-2
Document Type: Report
Language: English
Journal Announcement: ERA8412
Availability: NTIS, PC A03/MF A01.
Subfile: ERA (Energy Research Abstracts).
Country of Origin: United States
Country of Publication: United States
Abstract: None;
Major Descriptors: *GREENHOUSE PROJECT -- ANIMAL BREEDING; *NUCLEAR WEAPONS -- RESEARCH PROGRAMS
Descriptors: DOGS; ENIWETOK; LABORATORY ANIMALS; MICE; SWINE
Broader Terms: ANIMALS; DOMESTIC ANIMALS; EXPLOSIONS; ISLANDS; MAMMALS; MARSHALL ISLANDS; MICRONESIA; NUCLEAR EXPLOSIONS; OCEANIA; RODENTS; VERTEBRATES; WEAPONS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/660 (Item 360 from file: 103)
01499525 EDB-85-006283
Author(s): Adams, C.E.; Holden, F.R.; Wallace, N.R.
Title: Scientific director's report of atomic weapons tests at Eniwetok, 1951. Annex 6.4. Fall-out phenomenology
Corporate Source: Naval Radiological Defense Lab., San Francisco, CA (USA)
Publication Date: Aug 1951 p 32
Report Number(s): AD-483423/0
Note: Report on Operation Greenhouse. See also Rept. No. WT-22, dated August 1951, AD-224 534, Annex 2.3, dated August 1951, AD-224 533
Document Type: Report
Language: English
Journal Announcement: ERA8412
Availability: NTIS, PC A03/MF A01.
Subfile: ERA (Energy Research Abstracts).
Country of Origin: United States

Country of Publication: United States
Abstract: An experiment was designed to measure the fall-out pattern and to study the nature of the fall-out particles from low-level, experimental atomic bomb air bursts in order to provide data for the appraisal of the potential health hazard from external and internal exposure to the fall-out products. Samples of the fall-out from Dog and Easy Shots were obtained. A study of the size distribution of the active particles was made by size fractionation and radioautographic techniques. Radiochemical analyses of the fallout were made. In addition, a study of the structure and composition of the fall-out particles was made. It was determined that the bulk of the radioactivity in the fall-out was associated with particles greater than 5 microns in diameter. The highest radiation levels were found on Bogallua at E + 30 min. The reading was about 30 r/hr as measured from a helicopter hovering 10 to 20 ft above the island.;
Major Descriptors: *GREENHOUSE PROJECT -- FALLOUT
Descriptors: CHEMICAL ANALYSIS; DOSE RATES; PARTICLE SIZE; PERSONNEL; RADIATION HAZARDS; RADIOCHEMISTRY; SPATIAL DISTRIBUTION; WIND
Broader Terms: CHEMISTRY; DISTRIBUTION; EXPLOSIONS; HAZARDS; HEALTH HAZARDS ; NUCLEAR EXPLOSIONS; SIZE
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)
510302 -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- Terrestrial Ecosystems & Food Chains -- (-1987)

10/5/661 (Item 361 from file: 103)
01499524 EDB-85-006282
Author(s): Heidt, W.B. Jr.; Schuert, E.A.; Perkins, W.W.; Stetson, R.L.
Title: Nature, intensity, and distribution of fall-out from Mike shot
Corporate Source: Naval Radiological Defense Lab., San Francisco, CA (USA)
Publication Date: Apr 1953 p 84
Report Number(s): AD-467227/5
Note: Report on Operation Ivy, Project 5.4a
Document Type: Report
Language: English
Journal Announcement: ERA8412
Availability: NTIS, PC A05/MF A01.
Subfile: ERA (Energy Research Abstracts).
Country of Origin: United States
Country of Publication: United States
Abstract: The physical and chemical properties of the particulate matter deposited following Mike shot, Operation Ivy, together with its distribution in time and area, were investigated. Total fallout and differential fall-out collectors were installed in islands, anchored lagoon floats, and free-floating sea stations about the detonation point. All collected samples were analyzed at the U. S. Naval Radiological Defense Laboratory. All the samples of primary fall-out collected were in a cross-wind direction from the detonation point; secondary fall-out samples were collected to distances of 600 miles from this point. Radiation levels as high as 800 r/hr at 2 hr were found 3 miles from the detonation point. No positive evidence of the occurrence of a base surge was found.;
Major Descriptors: *FALLOUT DEPOSITS -- CHEMICAL PROPERTIES; *FALLOUT DEPOSITS -- PHYSICAL PROPERTIES; *FALLOUT DEPOSITS -- SPATIAL DISTRIBUTION; *IVY PROJECT -- FALLOUT
Descriptors: CALCIUM COMPOUNDS; PARTICLE SIZE; PARTICULATES; RADIATION HAZARDS; STRATOSPHERE
Broader Terms: ALKALINE EARTH METAL COMPOUNDS; DISTRIBUTION; EARTH ATMOSPHERE; EXPLOSIONS; FALLOUT; HAZARDS; HEALTH HAZARDS; NUCLEAR EXPLOSIONS; PARTICLES; SIZE
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)
510302 -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- Terrestrial Ecosystems & Food Chains -- (-1987)
520301 -- Environment, Aquatic -- Radioactive Materials Monitoring &

Transport -- Water -- (1987)

10/5/662 (Item 362 from file: 103)
01488590 ERA-10-001186; EDB-84-186399
Title: Intercomparison of natural and technologically enhanced background radiation levels in Micronesia
Author(s): Greenhouse, N.A.; Miltenberger, R.P.; Vohra, K.G.; Mishra, U.C.; Pillai, K.C.; Sadasivan, S. (eds.)
Affiliation: Lawrence Berkeley Lab., CA
Title: Natural radiation environment
Conference Title: 2. special symposium on natural radiation environment
Conference Location: Bombay, India Conference Date: 19 Jan 1981
Publisher: John Wiley and Sons, Inc.,New York, NY, USA
Publication Date: 1982 p 452-458
Report Number(s): CONF-810153-
Document Type: Analytic of a Book; Conference literature
Language: English
Journal Announcement: INS8411
Subfile: INS (US Atomindex input); ERA (Energy Research Abstracts).
Country of Origin: United States
Country of Publication: United States
Abstract: The United States Pacific Nuclear Testing Program resulted in local and regional fallout contamination of islands in the central Pacific basin, in an area which is generically known as Micronesia. Since all of the Marshall Islands are low coral islands or atolls, the natural radioactivity content of their soil is among the lowest on earth. In contrast, the high islands of the Caroline groups, to the west of the Marshalls, are characterized by volcanic soils having a significant complement of radionuclides of the uranium and thorium chains. Several field trips between 1975 and 1980 have afforded opportunities to study the natural radiation environments of the coral atolls of the Marshalls and several high islands in the Carolines. The results of these studies have indicated that significant contributions from radioactive fallout can be evaluated in-situ with relative ease on coral islands. In contrast, the higher natural radioactivity content of high island soils, as well as the greater distance of these islands from the test areas, combine to make evaluations of local fallout contributions from US Pacific tests indistinguishable from the contributions of the world-wide fallout.;
Major Descriptors: *BACKGROUND RADIATION -- ORIGIN; *BACKGROUND RADIATION -- RADIATION MONITORING; *LOCAL FALLOUT -- RADIATION MONITORING; *MICRONESIA -- BACKGROUND RADIATION; *NATURAL RADIOACTIVITY -- RADIATION MONITORING
Descriptors: NUCLEAR EXPLOSIONS; RESPONSE MODIFYING FACTORS; SOILS
Broader Terms: EXPLOSIONS; FALLOUT; ISLANDS; MONITORING; OCEANIA; RADIATIONS; RADIOACTIVITY
Subject Categories: 510301* -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- Soil -- (-1987)
INIS Subject Categories: B3110* -- Radioactive materials monitoring & transport

10/5/663 (Item 363 from file: 103)
01462392 EDB-84-160197
Author(s): Adams, W.H.; Harper, J.A.; Rittmaster, R.S.; Heotis, P.M.; Scott, W.A.
Title: Medical status of Marshallese accidentally exposed to 1954 Bravo fallout radiation: January 1980-December 1982
Corporate Source: Brookhaven National Lab., Upton, NY (USA)
Publication Date: 1984 p 25
Report Number(s): BNL-51761
Order Number: DE84017140
Contract Number (DOE): AC02-76CH00016
Document Type: Report; Numerical data
Language: English
Journal Announcement: ERA8410
Availability: NTIS, PC A02/MF A01.

Subfile: ERA (Energy Research Abstracts); INS (US Atomindex input); NTS (NTIS).
Country of Origin: United States
Country of Publication: United States
Abstract: This report updates, for 1980 through 1982, the results of continuing medical surveillance of a Marshallese population accidentally exposed to radioactive fallout in March 1954. The originally exposed Marshallese population comprised 64 persons on Rongelap Atoll who each received, on the average, an estimated 190 rads of absorbed external gamma radiation, 18 on Ailingnae Atoll who received 110 rads, and 159 on Utirik who received 11 rads. There were, in addition, 3 persons in utero on Rongelap, 1 person in utero on Ailingnae, and 8 persons in utero on Utirik who are considered exposed. The recipients of primary medical care include exposed and comparison populations as well as a rather large number of additional beneficiaries who are seen on a humanitarian basis of practical need and resource availability. In recent years, about 1400 people have been seen annually. This report, however, deals with four clearly defined groups: the remaining individuals who were exposed to radioactive fallout on Rongelap, Ailingnae, and Utirik in 1954 (including those in utero), and a comparison population of individuals from Rongelap who were unexposed. The number of persons now in each exposure category are 51, 12, 116, and 137, respectively. 100 references, 4 figures, 5 tables. (ACR);
Major Descriptors: *HUMAN POPULATIONS -- MEDICAL SURVEILLANCE
Descriptors: DATA COMPILATION; GAMMA RADIATION; IMMUNITY; MARSHALL ISLANDS; MORTALITY; NEOPLASMS; RADIATION DOSES
Broader Terms: DATA; DISEASES; DOSES; ELECTROMAGNETIC RADIATION; INFORMATION; IONIZING RADIATIONS; ISLANDS; MICRONESIA; NUMERICAL DATA; OCEANIA; POPULATIONS; RADIATIONS; SURVEILLANCE
Subject Categories: 560151* -- Radiation Effects on Animals -- Man
560161 -- Radionuclide Effects, Kinetics, & Toxicology -- Man
INIS Subject Categories: C1500* -- Effects of External Radiation on Man
C2110 -- Radioisotope effects, kinetics & toxicology in man

10/5/664 (Item 364 from file: 103)
01462059 ERA-09-044576; EDB-84-159864
Author(s): Marsh, K.V.; Buddemeier, R.W.
Title: Marine plankton as an indicator of low-level radionuclide contamination in the Southern Ocean
Corporate Source: Lawrence Livermore National Lab., CA (USA)
Publication Date: Jul 1984 p 41
Report Number(s): UCRL-53549
Order Number: DE84016306
Contract Number (DOE): W-7405-ENG-48
Document Type: Report; Numerical data
Language: English
Journal Announcement: NTS8409
Availability: NTIS, PC A03/MF A01.
Subfile: NTS (NTIS); INS (US Atomindex input); ERA (Energy Research Abstracts).
Country of Origin: United States
Country of Publication: United States
Abstract: We have initiated an investigation of the utility of marine plankton as bioconcentrating samplers of low-level marine radioactivity in the southern hemisphere. A literature review shows that both freshwater and marine plankton have trace element and radionuclide concentration factors (relative to water) of up to 10/sup 4/. In the years 1956-1958, considerable work was done on the accumulation and distribution of a variety of fission and activation products produced by the nuclear tests in the Marshall Islands. Since then, studies have largely been confined to a few selected radionuclides, and by far most of this work has been done in the northern hemisphere. We participated in Operation Deepfreeze 1981, collecting 32 plankton samples from the U.S. Coast Guard Cutter Glacier on its Antarctic cruise, while Battelle Pacific Northwest Laboratories concurrently sampled air, water, rain

and fallout. We were able to measure concentrations of the naturally occurring radionuclides /sup 7/Be, /sup 40/K and the U and th series, and we believe that we have detected low levels of /sup 144/Ce and /sup 95/Nb in seven samples ranging as far south as 68/sup 0/. There is a definite association between the radionuclide content of plankton and air filters, suggesting that aerosol resuspension of marine radioactivity may be occurring. Biological identification of the plankton suggests a possible correlation between radionuclide concentration and foraminifera content of the samples. 38 references, 7 figures, 3 tables.;
Major Descriptors: *RADIOISOTOPES -- BIOLOGICAL ACCUMULATION
Descriptors: ANTARCTIC OCEAN; BERYLLIUM 7; CESIUM 144; EXPERIMENTAL DATA; NIOBIUM 95; PACIFIC OCEAN; PLANKTON; POTASSIUM 40; RADIOACTIVE AEROSOLS ; RADIOECOLOGICAL CONCENTRATION; THORIUM 228; URANIUM 235; URANIUM 238
Broader Terms: ACTINIDE ISOTOPES; ACTINIDE NUCLEI; AEROSOLS; ALKALI METAL ISOTOPES; ALKALINE EARTH ISOTOPES; ALPHA DECAY RADIOISOTOPES; AQUATIC ORGANISMS; BERYLLIUM ISOTOPES; BETA DECAY RADIOISOTOPES; BETA-MINUS DECAY RADIOISOTOPES; BETA-PLUS DECAY RADIOISOTOPES; CESIUM ISOTOPES; COLLOIDS; DATA; DAYS LIVING RADIOISOTOPES; DISPERSIONS; ECOLOGICAL CONCENTRATION; ELECTRON CAPTURE RADIOISOTOPES; EVEN-EVEN NUCLEI; EVEN-ODD NUCLEI; HEAVY NUCLEI; INFORMATION; INTERMEDIATE MASS NUCLEI; ISOMERIC TRANSITION ISOTOPES; ISOTOPES; LIGHT NUCLEI; MINUTES LIVING RADIOISOTOPES; NIOBIUM ISOTOPES; NUCLEI; NUMERICAL DATA; ODD-EVEN NUCLEI; ODD-ODD NUCLEI; POTASSIUM ISOTOPES; RADIOISOTOPES; SEAS; SECONDS LIVING RADIOISOTOPES; SOLS; SURFACE WATERS; THORIUM ISOTOPES; URANIUM ISOTOPES; YEARS LIVING RADIOISOTOPES
Subject Categories: 520300* -- Environment, Aquatic -- Radioactive Materials Monitoring & Transport -- (1989)
500300 -- Environment, Atmospheric -- Radioactive Materials Monitoring & Transport -- (-1989)
INIS Subject Categories: B3200* -- Water
B3310 -- Radioactive materials monitoring & transport; meteorology

10/5/665 (Item 365 from file: 103)
01452754 AIX-15-052605; EDB-84-150558
Title: Review of the development of health physics activity in Japan
Author(s): Izawa, Masami (National Inst. of Radiological Sciences, Chiba (Japan))
Source: Hoken Butsuri (Japan) v 17:3. Coden: HOKBA
Publication Date: Sep 1982 p 273-276
Note: Published in summary form only
Document Type: Journal Article
Language: Japanese
Journal Announcement: EDB8408
Country of Origin: Japan
Abstract: None;
Major Descriptors: *JAPAN -- RADIATION PROTECTION
Descriptors: BIKINI; ENVIRONMENTAL POLICY; HEALTH HAZARDS; NUCLEAR WEAPONS; RADIATION INJURIES; RADIATION MONITORING; REPROCESSING; SAFETY STANDARDS
Broader Terms: ASIA; BIOLOGICAL EFFECTS; BIOLOGICAL RADIATION EFFECTS; GOVERNMENT POLICIES; HAZARDS; INJURIES; ISLANDS; MARSHALL ISLANDS; MICRONESIA; MONITORING; OCEANIA; RADIATION EFFECTS; SEPARATION PROCESSES; STANDARDS; WEAPONS
Subject Categories: 550600* -- Medicine
655000 -- Medical Physics
INIS Subject Categories: C5500* -- Personnel Dosimetry & Monitoring

10/5/666 (Item 366 from file: 103)
01434226 EDB-84-132028
Title: Determination of /sup 240/Pu//sup 239/Pu ratio in the environmental samples based on the measurement of Lx/..cap alpha..-ray activity ratio
Author(s): Komura, K.; Sakanoue, M.; Yamamoto, M.
Affiliation: Kanazawa Univ., Wake, Japan
Source: Health Phys. (United Kingdom) v 46:6. Coden: HLTPA
Publication Date: Jun 1984 p 1213-1219

Document Type: Journal Article
Language: English
Journal Announcement: EDB8408
Country of Origin: Japan
Abstract: The determination of the /sup 240/Pu//sup 239/Pu isotopic ratio in environmental samples has been attempted by the measurement of the Lx/..cap alpha..-ray activity ratio using a Ge-LEPS (low-energy photon spectrometer) and a surface-barrier Si detector. By this method, interesting data were obtained for various samples collected from Thule, Greenland, Bikini Atoll and Nagasaki, as well as for some soils collected from near and off-site locations of atomic power stations.;
Major Descriptors: *PLUTONIUM 239 -- ISOTOPE RATIO; *PLUTONIUM 240 -- ISOTOPE RATIO; *SOILS -- SAMPLING; *SURFACE BARRIER DETECTORS -- PERFORMANCE; *X-RAY SPECTROMETERS -- PERFORMANCE
Descriptors: ALPHA PARTICLES; BIKINI; GREENLAND; NAGASAKI; X RADIATION
Broader Terms: ACTINIDE ISOTOPES; ACTINIDE NUCLEI; ALPHA DECAY RADIOISOTOPES; ASIA; CHARGED PARTICLES; ELECTROMAGNETIC RADIATION; EVEN-EVEN NUCLEI; EVEN-ODD NUCLEI; HEAVY NUCLEI; IONIZING RADIATIONS; ISLANDS; ISOTOPES; JAPAN; MARSHALL ISLANDS; MEASURING INSTRUMENTS; MICRONESIA; NUCLEI; OCEANIA; PLUTONIUM ISOTOPES; RADIATION DETECTORS; RADIATIONS; RADIOISOTOPES; SEMICONDUCTOR DETECTORS; SPECTROMETERS; YEARS LIVING RADIOISOTOPES
Subject Categories: 440101* -- Radiation Instrumentation -- General Detectors or Monitors & Radiometric Instruments
510301 -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- Soil -- (-1987)

10/5/667 (Item 367 from file: 103)
01422428 ERA-09-036291; EDB-84-120229
Author(s): Hicks, H.G.
Title: Results of calculations of external gamma radiation exposure rates from local fallout and the related radionuclide compositions of selected US Pacific events
Corporate Source: Lawrence Livermore National Lab., CA (USA)
Publication Date: Feb 1984 p 205
Report Number(s): UCRL-53505
Order Number: DE84010678
Contract Number (DOE): W-7405-ENG-48
Note: Portions are illegible in microfiche products. Original copy available until stock is exhausted
Document Type: Report; Numerical data
Language: English
Journal Announcement: INS8408
Availability: NTIS, PC A10/MF A01; 1.
Subfile: INS (US Atomindex input); NTS (NTIS); ERA (Energy Research Abstracts).
Country of Origin: United States
Country of Publication: United States
Abstract: This report presents data on calculated gamma radiation exposure rates and local surface deposition of related radionuclides resulting from selected US Pacific events. Results of the calculations of relative external gamma radiation exposure rate and related radionuclide ground deposition are given in six appendices. The output of the calculation has 30 decay times: 10 from 1 to 21 h, 10 from 1 to 300 d, and 10 from 1 to 50 y. For each of these times and for zero time, there are values of the external gamma radiation exposure rate normalized to 1 mR/h, 1 m above the surface, 12 h after the event; the associated values of ..mu..Ci/m/sup 2/ for each radionuclide; and the total ..mu..Ci/m/sup 2/. Surface roughness effects are simulated by using Beck's values of (mR/h)/..mu..Ci/m/sup 2/) for a relaxation length of 0.16 g/cm/sup 2/. Fractionation effects, simulated by the removal of a fraction of the refractory nuclides from the calculation, were found for unfractionated debris and for debris with 0.5 and 0.1 of the refractory elements present. Each Appendix contains three sets of 11 pages of calculated results relating to one event in Table 1. Each set of 11 pages is marked page 2 through page 12. Page 2 of each set

gives the external gamma-ray exposure rates and associated values of total microcuries per square meter at 30 decay intervals and at zero time. The value for each activation product at zero time is the result of a measurement. The measurements were performed on debris samples taken by aircraft approximately 1 to 4 h after detonation. When no measurement exists, the value appears as zero. Fission products were calculated from the fissioning nuclides and neutron energy spectra. Calculated values for each radionuclide at various decay intervals are given.;
Major Descriptors: *BRAVO EVENT -- FISSION PRODUCTS; *BRAVO EVENT -- FISSION PRODUCTS; *MIKE EVENT -- FISSION PRODUCTS; *PERSONNEL -- RADIATION DOSES; *RADIONUCLIDE MIGRATION -- COMPUTER CALCULATIONS; *ROMEO EVENT -- FISSION PRODUCTS; *TEWA EVENT -- FISSION PRODUCTS; *YANKEE EVENT -- FISSION PRODUCTS; *ZUNI EVENT -- FISSION PRODUCTS
Descriptors: DOSE RATES; FALLOUT; GAMMA RADIATION; PACIFIC OCEAN; STATISTICAL DATA; SURFACE CONTAMINATION
Broader Terms: ATMOSPHERIC EXPLOSIONS; CASTLE PROJECT; CONTAMINATION; DATA; DOSES; ELECTROMAGNETIC RADIATION; ENVIRONMENTAL TRANSPORT; EXPLOSIONS; INFORMATION; IONIZING RADIATIONS; ISOTOPES; IVY PROJECT; MASS TRANSFER; MATERIALS; NUCLEAR EXPLOSIONS; NUMERICAL DATA; RADIATIONS; RADIOACTIVE MATERIALS; REDWING PROJECT; SEAS; SURFACE EXPLOSIONS; SURFACE WATERS
Subject Categories: 510302* -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- Terrestrial Ecosystems & Food Chains -- (-1987)
560151 -- Radiation Effects on Animals -- Man
450202 -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)
INIS Subject Categories: C2210* -- Radionuclide Ecology -- Terrestrial Ecosystems
C1500 -- Effects of External Radiation on Man

10/5/668 (Item 368 from file: 103)
01422164 ERA-09-036239; EDB-84-119965
Author(s): Berkhouse, L.H.; Hallowell, J.H.; McMullan, F.W.; Davis, S.E.; Jones, C.B.
Title: Operation Sandstone: 1948. Technical report
Corporate Source: Kaman Tempo, Santa Barbara, CA (USA)
Publication Date: 19 Dec 1983 p 222
Report Number(s): AD-A-139151/5
Document Type: Report
Language: English
Journal Announcement: EDB8406
Availability: NTIS, PC A10/MF A01.
Subfile: ERA (Energy Research Abstracts).
Country of Origin: United States
Country of Publication: United States
Abstract: SANDSTONE was a three-detonation atmospheric nuclear weapon test series conducted during the spring of 1948 at Enewetak Atoll in the Marshall Islands. Report emphasis is on the radiological safety of the personnel. Available records on personnel exposure are summarized.;
Major Descriptors: *NUCLEAR WEAPONS -- TESTING
Descriptors: DOSIMETRY; ENIWETOK; FALLOUT; MILITARY PERSONNEL; NUCLEAR EXPLOSIONS; PERSONNEL; RADIATION EFFECTS; RADIATION PROTECTION; SAFETY
Broader Terms: EXPLOSIONS; ISLANDS; MARSHALL ISLANDS; MICRONESIA; OCEANIA; PERSONNEL; WEAPONS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/669 (Item 369 from file: 103)
01414070 ERA-09-031793; EDB-84-111870
Title: Protracted exposure to fallout: the Rongelap and Utirik experience
Author(s): Lessard, E.T.; Miltenberger, R.P.; Cohn, S.H.; Musolino, S.V.; Conard, R.A.
Affiliation: Brookhaven National Lab., Upton, NY
Source: Health Phys. (United Kingdom) v 46:3. Coden: HLTPA
Publication Date: Mar 1984 p 511-527
Contract Number (DOE): AC02-76CH00016

Document Type: Journal Article; Numerical data
Language: English
Journal Announcement: EDB8407
Subfile: ERA (Energy Research Abstracts).
Country of Origin: United States
Abstract: From June 1946 to August 1958, the U.S. Department of Defense and the U.S. Atomic Energy Commission (AEC) conducted nuclear weapons tests in the Northern Marshall Islands. On 1 March 1954, BRAVO, an above-ground test in the Castle series, produced high levels of radioactive material, some of which subsequently fell on Rongelap and Utirik Atolls due to an unexpected wind shift. On 3 March 1954, the inhabitants of these atolls were moved out of the affected area. They later returned to Utirik in June 1954 and to Rongelap in June 1957. Comprehensive environmental and personnel radiological monitoring programs were initiated in the mid 1950s by Brookhaven National Laboratory to ensure that body burdens of the exposed Marshallese subjects remained within AEC guidelines. Their body-burden histories and calculated activity ingestion rate patterns post-return are presented along with estimates of internal committed effective dose equivalents. External exposure data are also included. In addition, relationships between body burden or urine-activity concentration and declining continuous intake were developed.;
Major Descriptors: *CESIUM 137 -- BODY BURDEN; *COBALT 60 -- BODY BURDEN; *MARSHALL ISLANDS -- RADIATION MONITORING; *STRONTIUM 90 -- BODY BURDEN ; *ZINC 65 -- BODY BURDEN
Descriptors: DOSE EQUIVALENTS; EXPERIMENTAL DATA; FALLOUT; FISHES; NUCLEAR EXPLOSIONS; RADIATION DOSES; URINE
Broader Terms: ALKALI METAL ISOTOPES; ALKALINE EARTH ISOTOPES; ANIMALS; AQUATIC ORGANISMS; BETA DECAY RADIOISOTOPES; BETA-MINUS DECAY RADIOISOTOPES; BETA-PLUS DECAY RADIOISOTOPES; BIOLOGICAL MATERIALS; BIOLOGICAL WASTES; BODY FLUIDS; CESIUM ISOTOPES; COBALT ISOTOPES; DATA; DAYS LIVING RADIOISOTOPES; DOSES; ELECTRON CAPTURE RADIOISOTOPES; EVEN-EVEN NUCLEI; EVEN-ODD NUCLEI; EXPLOSIONS; INFORMATION; INTERMEDIATE MASS NUCLEI; INTERNAL CONVERSION RADIOISOTOPES; ISLANDS; ISOMERIC TRANSITION ISOTOPES; ISOTOPES; MATERIALS; MICRONESIA; MINUTES LIVING RADIOISOTOPES; MONITORING; NUCLEI; NUMERICAL DATA; OCEANIA; ODD-EVEN NUCLEI; ODD-ODD NUCLEI; RADIOISOTOPES; STRONTIUM ISOTOPES; VERTEBRATES; WASTES; YEARS LIVING RADIOISOTOPES; ZINC ISOTOPES
Subject Categories: 560161* -- Radionuclide Effects, Kinetics, & Toxicology -- Man

10/5/670 (Item 370 from file: 103)
01404437 EDB-84-102236
Author(s): Sehmel, G.A.
Title: Transuranic resuspension
Corporate Source: Pacific Northwest Lab., Richland, WA (USA)
Conference Title: 6. workshop on environmental research for actinide elements
Conference Location: Hilton Head Island, SC, USA Conference Date: 7 Nov 1983
Publication Date: Apr 1984 p 38
Report Number(s): PNL-SA-11792; CONF-8311110-4
Order Number: DE84011903
Contract Number (DOE): AC06-76RL01830
Note: Portions are illegible in microfiche products
Document Type: Report; Conference literature
Language: English
Journal Announcement: ERA8406
Availability: NTIS, PC A03/MF A01; 1.
Subfile: ERA (Energy Research Abstracts); INS (US Atomindex input); NTS (NTIS).
Country of Origin: United States
Country of Publication: United States
Abstract: Characteristics of aged resuspension sources are more uncertain than those of new resuspension sources, which can be investigated using inert-particle controlled-tracer sources. Even though airborne

concentrations are low, one aged uniform-area source which can be used for resuspension studies is the accumulated radionuclide fallout in the soil from stratospheric and tropospheric fallout debris. Airborne radionuclide concentrations from this source were investigated at convenient locations on the Hanford site. The objective is to summarize plutonium and americium resuspension research conducted by the Pacific Northwest Laboratory from 1977 to 1983. Airborne plutonium was determined at five sites in the Hanford area, and both plutonium and americium were determined at two Hanford sites. Airborne plutonium and americium were examined as a function of aerodynamic particle diameter, sampling height, wind speed increments, and wind direction increments. The following results are discussed: airborne radionuclide concentrations, ..mu..Ci/cm/sup 3/ of sampled air; radionuclide activity densities, ..mu..Ci/g of airborne solids; airborne plutonium fluxes, ..mu..Ci/(m/sup 2/ day); /sup 241/Am//sup 239 +240/Pu) activity ratios, (..mu..Ci /sup 241/Am)/(..mu..Ci/sup 239 +240/Pu); and airborne solid concentrations, ..mu..g/m/sup 3/ of sampled air. In addition, a relationship based on field data for aged plutonium sources at Bikini Atoll, the Hanford site, and Rocky Flats was developed to estimate the maximum expected plutonium activity density on airborne solids compared to activity densities for bulk surface-soil samples. As a result, it is possible to more accurately predict resuspension factor ranges as a function of the resuspension source activity densities. 31 references, 18 figures, 5 tables.;
Major Descriptors: *AMERICIUM -- PARTICLE RESUSPENSION; *PLUTONIUM -- PARTICLE RESUSPENSION
Descriptors: ACTIVITY LEVELS; HANFORD RESERVATION; PARTICLE SIZE; RADIOECOLOGICAL CONCENTRATION; RADIONUCLIDE MIGRATION
Broader Terms: ACTINIDES; ECOLOGICAL CONCENTRATION; ELEMENTS; ENVIRONMENTAL TRANSPORT; MASS TRANSFER; METALS; NATIONAL ORGANIZATIONS; SIZE; TRANSPLUTONIUM ELEMENTS; TRANSURANIUM ELEMENTS; US DOE; US ERDA; US ORGANIZATIONS
Subject Categories: 500300* -- Environment, Atmospheric -- Radioactive Materials Monitoring & Transport -- (-1989)
INIS Subject Categories: B3310* -- Radioactive materials monitoring & transport; meteorology

10/5/671 (Item 371 from file: 103)
01396447 ERA-09-029168; EDB-84-094245
Author(s): Gladeck, F.R.; Gould, K.G.; Hallowell, J.H.; Martin, E.J.; McMullan, F.W.
Title: Operation hardtack I-1958. Technical report
Corporate Source: Kaman Tempo, Santa Barbara, CA (USA)
Publication Date: 1 Dec 1982 p 474
Report Number(s): AD-A-136819/0
Document Type: Report
Language: English
Journal Announcement: EDB8404
Availability: NTIS, PC A20/MF A01.
Subfile: ERA (Energy Research Abstracts).
Country of Origin: United States
Country of Publication: United States
Abstract: HARDTACK I was an atmospheric nuclear weapon test series held at Johnston Island and in the Marshall Islands at Enewetak and Bikini atolls in 1958. This is a report of DOD personnel in HARDTACK with an emphasis on operations and radiological safety.;
Major Descriptors: *FALLOUT -- SAFETY; *NUCLEAR EXPLOSIONS -- RADIATION MONITORS; *NUCLEAR EXPLOSIONS -- TESTING
Descriptors: ATMOSPHERIC EXPLOSIONS; MILITARY PERSONNEL; PACIFIC OCEAN; SURFACE EXPLOSIONS; UNDERWATER EXPLOSIONS
Broader Terms: EXPLOSIONS; MEASURING INSTRUMENTS; MONITORS; PERSONNEL; SEAS ; SURFACE WATERS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/672 (Item 372 from file: 103)

01384079 EDB-84-081876
Title: Heavy-fuel-burning diesels power Pacific island
Author(s): Weall, A.
Source: Mod. Power Syst. (United Kingdom) v 4:3. Coden: MPSYD
Publication Date: Mar 1984 p 29,31-33
Document Type: Journal Article
Language: English
Journal Announcement: EPA8405
Subfile: EPA (Energy Abstracts for Policy Analysis).
Country of Origin: United Kingdom
Abstract: Four Crossley-Pielstick PC2.2V diesel engines running on heavy fuel are not the sole source of power on Majuro Atoll, one of the Marshall Islands in the Pacific. The power station is rated at 12 MW and there is provision for future expansion. 7 figures.;
Major Descriptors: *DIESEL ENGINES -- POWER GENERATION; *OCEANIA -- DIESEL ENGINES; *OCEANIA -- POWER PLANTS; *POWER PLANTS -- DESIGN
Broader Terms: ENGINES; HEAT ENGINES; INTERNAL COMBUSTION ENGINES
Subject Categories: 200102* -- Fossil-Fueled Power Plants -- Power Cycles
296000 -- Energy Planning & Policy -- Electric Power

10/5/673 (Item 373 from file: 103)
01378638 ERA-09-025078; EDB-84-076433
Author(s): Noshkin, V.E.; Wong, K.M.; Jokela, T.A.; Brunk, J.L.; Eagle, R.J.
Title: Plutonium and americium behavior in coral atoll environments
Corporate Source: Lawrence Livermore National Lab., CA (USA)
Publication Date: 1 Feb 1984 p 46
Report Number(s): UCID-19997
Order Number: DE84010920
Contract Number (DOE): W-7405-ENG-48
Document Type: Report; Numerical data
Language: English
Journal Announcement: INS8405
Availability: NTIS, PC A03/MF A01.
Subfile: INS (US Atomindex input); NTS (NTIS); ERA (Energy Research Abstracts).
Country of Origin: United States
Country of Publication: United States
Abstract: Inventories of /sup 239 +240/Pu and /sup 241/Am greatly in excess of global fallout levels persist in the benthic environments of Bikini and Enewetak Atolls. Quantities of /sup 239 +240/Pu and lesser amounts of /sup 241/Am are continuously mobilizing from these sedimentary reservoirs. The amount of /sup 239 +240/Pu mobilized to solution at any time represents 0.08 to 0.09% of the sediment inventories to a depth of 16 cm. The mobilized /sup 239 +240/Pu has solute-like characteristics and different valence states coexist in solution - the largest fraction of the soluble plutonium is in an oxidized form (+V,VI). The adsorption of plutonium to sediments is not completely reversible because of changes that occur in the relative amounts of the mixed oxidation states in solution with time. Further, any characteristics of /sup 239 +240/Pu described at one location may not necessarily be relevant in describing its behavior elsewhere following mobilization and migration. The relative amounts of /sup 241/Am to /sup 239 +240/Pu in the sedimentary deposits at Enewetak and Bikini may be altered in future years because of mobilization and radiological decay. Mobilization of /sup 239 +240/Pu is not a process unique to these atolls, and quantities in solution derived from sedimentary deposits can be found at other global sites. These studies in the equatorial Pacific have significance in assessing the long-term behavior of the transuranics in any marine environment. 22 references, 1 figure, 13 tables.;
Major Descriptors: *BIKINI -- AMERICIUM 241; *BIKINI -- PLUTONIUM 239; *BIKINI -- PLUTONIUM 240; *ENIWETOK -- AMERICIUM 241; *ENIWETOK -- PLUTONIUM 239; *ENIWETOK -- PLUTONIUM 240; *SEDIMENTS -- RADIONUCLIDE MIGRATION
Descriptors: EXPERIMENTAL DATA; RADIOECOLOGICAL CONCENTRATION; SEAWATER; SOLUBILITY; VALENCE

Broader Terms: ACTINIDE ISOTOPES; ACTINIDE NUCLEI; ALPHA DECAY RADIOISOTOPES; AMERICIUM ISOTOPES; DATA; ECOLOGICAL CONCENTRATION; ENVIRONMENTAL TRANSPORT; EVEN-EVEN NUCLEI; EVEN-ODD NUCLEI; HEAVY NUCLEI; HYDROGEN COMPOUNDS; INFORMATION; ISLANDS; ISOTOPES; MARSHALL ISLANDS; MASS TRANSFER; MICRONESIA; NUCLEI; NUMERICAL DATA; OCEANIA; ODD-EVEN NUCLEI; OXYGEN COMPOUNDS; PLUTONIUM ISOTOPES; RADIOISOTOPES; WATER; YEARS LIVING RADIOISOTOPES
Subject Categories: 520302* -- Environment, Aquatic -- Radioactive Materials Monitoring & Transport -- Aquatic Ecosystems & Food Chains -- (-1987)
INIS Subject Categories: C2210* -- Radionuclide Ecology -- Terrestrial Ecosystems

10/5/674 (Item 374 from file: 103)
01378512 ERA-09-025070; EDB-84-076307
Title: Relationship between plutonium activity densities of airborne and surface soils
Author(s): Sehmel, G.A.
Affiliation: Pacific Northwest Lab., Richland, WA
Source: Health Phys. (United Kingdom) v 45:6. Coden: HLTPA
Publication Date: Dec 1983 p 1047-1050
Contract Number (DOE): AC06-76RL01830
Document Type: Journal Article
Language: English
Journal Announcement: EDB8405
Subfile: ERA (Energy Research Abstracts).
Country of Origin: United States
Abstract: The purpose here is to summarize data for plutonium as a pollutant on airborne and surface soils, if both are available at study sites, and to examine the data for relationships between plutonium concentrations on airborne soils and on surface soils near the airborne particulate sampling sites. In practice, surface soil samples are actually soil samples taken to a sampling depth. Only data for sites will be summarized for which the plutonium concentrations on both airborne and surface soils have been investigated. These sites include the Bikini Atoll, the Hanford Site, and Rocky Flats.;
Major Descriptors: *PARTICLE RESUSPENSION -- CALCULATION METHODS; *PLUTONIUM 239 -- RADIONUCLIDE MIGRATION; *PLUTONIUM 240 -- RADIONUCLIDE MIGRATION
Descriptors: AIR POLLUTION; BIKINI; HANFORD RESERVATION; PARTICLE SIZE; ROCKY FLATS PLANT; SOILS; SPATIAL DISTRIBUTION
Broader Terms: ACTINIDE ISOTOPES; ACTINIDE NUCLEI; ALPHA DECAY RADIOISOTOPES; DISTRIBUTION; ENVIRONMENTAL TRANSPORT; EVEN-EVEN NUCLEI; EVEN-ODD NUCLEI; HEAVY NUCLEI; ISLANDS; ISOTOPES; MARSHALL ISLANDS; MASS TRANSFER; MICRONESIA; NATIONAL ORGANIZATIONS; NUCLEI; OCEANIA; PLUTONIUM ISOTOPES; POLLUTION; RADIOISOTOPES; SIZE; US AEC; US DOE; US ERDA; US ORGANIZATIONS; YEARS LIVING RADIOISOTOPES
Subject Categories: 500300* -- Environment, Atmospheric -- Radioactive Materials Monitoring & Transport -- (-1989)
510301 -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- Soil -- (-1987)

10/5/675 (Item 375 from file: 103)
01369526 EDB-84-067319
Title: Atoll hydrology: island groundwater characteristics and their relationship to diagenesis
Author(s): Buddemeier, R.W.; Holladay, G.
Title: Proceedings third international coral reef symposium
Conference Title: 3. international coal reef symposium
Conference Location: Miami, FL, USA Conference Date: May 1977
Publisher: University of Miami,Miami, FL
Publication Date: 1977 p 168-173
Document Type: Analytic of a Book; Conference literature
Language: English
Journal Announcement: EDB8405
Country of Origin: United States

Country of Publication: United States
Abstract: Results of a study of the hydrology and geochemistry of Enewetak Atoll are reported. Downhole probes were used to measure salinity, temperature and dissolved oxygen profiles in situ. Samples were pumped from various depths in the wells and/or dipped from the surface for radionuclide and chemical analysis. Rainfall was monitored and tidal responses of the wells determined. (JMT);
Major Descriptors: *ENIWETOK -- GEOCHEMISTRY; *ENIWETOK -- HYDROLOGY; *GROUND WATER -- RADIOCHEMICAL ANALYSIS
Descriptors: DIAGENESIS; RAIN; SALINITY; TIDE
Broader Terms: ATMOSPHERIC PRECIPITATIONS; CHEMICAL ANALYSIS; CHEMISTRY; HYDROGEN COMPOUNDS; ISLANDS; MARSHALL ISLANDS; MICRONESIA; OCEANIA; OXYGEN COMPOUNDS; QUANTITATIVE CHEMICAL ANALYSIS; WATER
Subject Categories: 580400* -- Geochemistry -- (-1989)
510300 -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- (-1989)

10/5/676 (Item 376 from file: 103)
01360356 EDB-84-058036
Author(s): Sutow, W.W.; West, E.; Cronkite, E.P.; Conard, R.A.; Farr, R.S.; Browning, E.; Bond, V.P.; Shulman, R.; Cohn, S.H.
Title: Studies of Nagasaki (Japan) children exposed in utero to the atomic bomb: a roentgenographic survey of the skeletal system. Response of human beings accidentally exposed to significant fall-out radiation
Corporate Source: Atomic Bomb Casualty Commission, Hiroshima (Japan)
Publication Date: 1959 p 29
Report Number(s): ABCC-31-59
Order Number: DE84008435
Contract Number (DOE): AC01-76EV03081
Note: Portions are illegible in microfiche products
Document Type: Report
Language: Japanese and English
Journal Announcement: ERA8404
Availability: NTIS, PC A03/MF A01; 1.
Subfile: ERA (Energy Research Abstracts); NTS (NTIS).
Country of Origin: Japan
Country of Publication: Japan
Abstract: This document contains 2 reports. In the first report, a roentgenographic survey of the skeletal system was made on 74 children who were exposed in utero to the atomic bomb explosion in Nagasaki, Japan at distances under 2000 meters from the hypocenter. The findings were compared with those on a group of 91 children also exposed while in utero to the bomb but at distances of 4000 to 5000 meters. No differences in the incidence of skeletal abnormalities were found between the two groups. In the second report, a description of injuries suffered due to fallout after the explosion of a thermonuclear device on the Marshall Islands is presented. Marshallese and Americans were accidentally exposed on islands in this area, receiving whole-body gamma radiation, beta radiation injury to skin, and minimal internal contamination. The highest dose (an estimated 175 r) was received by a group of 64 Marshallese. The dose of radiation received proved to be sublethal. Though there was significant depression of hemopoiesis, no clinical signs or symptoms developed that could be attributed with certainty to this effect. Skin lesions and epilation developed in 90% of the group beginning about two weeks after the exposure. Minimal amounts of radioactive material were detected in the urine. The internal deposition was insufficient to contribute significantly to the acute reaction, and it is believed there is no long-term hazard. Examinations conducted one year after the exposure revealed these people to be in generally good health. Slight depression of lymphocytes and platelets persisted. A few pigment aberrations and minimal atrophy remained at the site of the deeper skin lesions.;
Major Descriptors: *A-BOMB SURVIVORS -- PRENATAL EXPOSURE; *SKELETON -- DELAYED RADIATION EFFECTS; *HUMAN POPULATIONS -- RADIATION INJURIES; *MARSHALL ISLANDS -- FALLOUT
Broader Terms: AGE GROUPS; ASIA; BIOLOGICAL EFFECTS; BIOLOGICAL MATERIALS;

BIOLOGICAL RADIATION EFFECTS; BODY; BODY FLUIDS; CHARGED PARTICLES; DIAGNOSTIC TECHNIQUES; ELECTROMAGNETIC RADIATION; EXPLOSIONS; HUMAN POPULATIONS; INJURIES; IONIZING RADIATIONS; ISLANDS; JAPAN; MATERIALS; MEDICINE; MICRONESIA; NUCLEAR MEDICINE; OCEANIA; ORGANS; POPULATIONS; RADIATION EFFECTS; RADIATIONS; RADIOLOGY
Subject Categories: 560151* -- Radiation Effects on Animals -- Man
560161 -- Radionuclide Effects, Kinetics, & Toxicology -- Man

10/5/677 (Item 377 from file: 103)
01359639 EDB-84-057319
Author(s): Burton, D.E.; Bryan, J.B.; Swift, R.P.; Moran, B.
Title: Effects of pore fluids at the Pacific proving grounds: a simulation of the KOA event
Corporate Source: Lawrence Livermore National Lab., CA (USA)
Publication Date: Nov 1983 p 55
Report Number(s): UCID-19938
Order Number: DE84007092
Contract Number (DOE): W-7405-ENG-48
Note: Paper copy only, copy does not permit microfiche production. Original copy available until stock is exhausted
Document Type: Report
Language: English
Journal Announcement: ERA8404
Availability: NTIS, PC A04/MF A01; 3.
Subfile: ERA (Energy Research Abstracts); NTS (NTIS).
Country of Origin: United States
Country of Publication: United States
Abstract: A new constitutive model has been developed to describe the response of the ground to the shock effects of a surface nuclear explosion. The model is applied to the KOA event, taking into account pore pressure effects. (ACR);
Major Descriptors: *CRATERS -- COMPUTERIZED SIMULATION; *NUCLEAR EXPLOSIONS -- BLAST EFFECTS
Descriptors: CRATERING EXPLOSIONS; GROUND MOTION; INTERSTITIAL WATER; MARSHALL ISLANDS; MATHEMATICAL MODELS; PORE PRESSURE; SURFACE EXPLOSIONS
Broader Terms: CAVITIES; EXPLOSIONS; GROUND WATER; HYDROGEN COMPOUNDS; ISLANDS; MICRONESIA; MOTION; OCEANIA; OXYGEN COMPOUNDS; SIMULATION; WATER
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/678 (Item 378 from file: 103)
01359637 ERA-09-019017; EDB-84-057317
Title: Operation Hardtack, Phase II. On-site radiological safety support report, Nevada Test Site. Report for 12 Sep-30 Oct 58
Corporate Source: Reynolds Electrical and Engineering Co., Inc., Mercury, NV (USA). Radiological Safety Div.
Publication Date: 30 Oct 1958 p 144
Report Number(s): AD-A-995189/8
Document Type: Report
Language: English
Journal Announcement: EDB8403
Availability: NTIS, PC A07/MF A01.
Subfile: ERA (Energy Research Abstracts).
Country of Origin: United States
Country of Publication: United States
Abstract: None;
Major Descriptors: *HARDTACK PROJECT -- FALLOUT; *HARDTACK PROJECT -- SURVEYS; *RADIATION DOSES -- HARDTACK PROJECT
Descriptors: CALIBRATION; CONTROL SYSTEMS; DECONTAMINATION; DOSIMETRY; NEVADA; PERSONNEL; RADIATION HAZARDS; RADIATION MONITORS; RADIOACTIVE MATERIALS; SAFETY; TRAINING
Broader Terms: CLEANING; DOSES; EXPLOSIONS; FEDERAL REGION IX; HAZARDS; HEALTH HAZARDS; MATERIALS; MEASURING INSTRUMENTS; MONITORS; NORTH AMERICA; NUCLEAR EXPLOSIONS; USA

Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/679 (Item 379 from file: 103)
01359632 EDB-84-057312
Author(s): Berkhouse, L.; Davis, S.E.; Gladeck, F.R.; Hallowell, J.H.; Jones, C.B.
Title: Operation GREENHOUSE-1951. Final report
Corporate Source: Kaman Tempo, Santa Barbara, CA (USA)
Publication Date: 15 Jun 1983 p 334
Report Number(s): AD-A-134735/0
Document Type: Report
Language: English
Journal Announcement: ERA8403
Availability: NTIS, PC A15/MF A01.
Subfile: ERA (Energy Research Abstracts).
Country of Origin: United States
Country of Publication: United States
Abstract: GREENHOUSE was a four-detonation atmospheric nuclear weapon's test series conducted in the Marshall Islands at Enewetak Atoll in April and May 1951. This is a report of DOD personnel in GREENHOUSE with an emphasis on operational radiological safety.;
Major Descriptors: *NUCLEAR EXPLOSIONS -- FALLOUT
Descriptors: DOSIMETRY; MILITARY PERSONNEL; NUCLEAR WEAPONS; RADIATION EFFECTS; SAFETY; TOWERS
Broader Terms: EXPLOSIONS; MECHANICAL STRUCTURES; PERSONNEL; WEAPONS
Subject Categories: 450201* -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives -- Containment

10/5/680 (Item 380 from file: 103)
01354197 AIX-15-001755; EDB-84-051876
Title: Sunrise in the west
Author(s): Mather, C.
Source: New Soc. (London) (United Kingdom) v 65:1085. Coden: NEWSB
Publication Date: 1 Sep 1983 p 309-310
Document Type: Journal Article
Language: English
Journal Announcement: EDB8402
Country of Origin: United Kingdom
Abstract: The effects on the peoples of the Marshall Islands in the west Pacific, of the use of the Islands as bases for nuclear weapon tests, are described.;
Major Descriptors: *HUMAN POPULATIONS -- BIOLOGICAL RADIATION EFFECTS; *MARSHALL ISLANDS -- NUCLEAR EXPLOSIONS
Descriptors: CONTAMINATION; ECONOMY; FALLOUT DEPOSITS; NUCLEAR WEAPONS; POPULATION RELOCATION; RADIATION HAZARDS; RADIATION INJURIES; SOCIOLOGY ; USA
Broader Terms: BIOLOGICAL EFFECTS; BIOLOGICAL RADIATION EFFECTS; EXPLOSIONS ; FALLOUT; HAZARDS; HEALTH HAZARDS; INJURIES; ISLANDS; MICRONESIA; NORTH AMERICA; OCEANIA; POPULATIONS; RADIATION EFFECTS; WEAPONS
Subject Categories: 560151* -- Radiation Effects on Animals -- Man
INIS Subject Categories: C1500* -- Effects of External Radiation on Man

10/5/681 (Item 381 from file: 103)
01353827 EDB-84-051506
Author(s): Bair, W.J.
Title: Meaning of radiation for those atolls in the northern part of the Marshall Islands that were surveyed in 1978
Corporate Source: Pacific Northwest Lab., Richland, WA (USA)
Publication Date: Nov 1982 p 72
Report Number(s): PNL-SA-10885
Order Number: DE84008308
Contract Number (DOE): AC06-76RL01830
Note: Portions are illegible in microfiche products
Document Type: Report
Language: English and Marshallese

Journal Announcement: ERA8404
Availability: NTIS, PC A04/MF A01; 1.
Subfile: ERA (Energy Research Abstracts); NTS (NTIS).
Country of Origin: United States
Country of Publication: United States
Abstract: This book explains the results of the 1978 radiation measurements for the following atolls: Rongelap, Utrik, Taka, Bikar, Rongrik, Ailinginae, Likiep, Ailuk, Jemo, Mejit, Wotho and Ujelang. It explains the meaning of radiation, and about the radioactive particles that came from the atomic bombs, and about their distribution in the soil of each of these atolls. The book also gives information about the amounts of radiation people might receive now and later from radioactivity remaining on the atolls. (ACR);
Major Descriptors: *HUMAN POPULATIONS -- DOSE COMMITMENTS; *MARSHALL ISLANDS -- RADIOACTIVITY; *RADIOISOTOPES -- ENVIRONMENTAL EXPOSURE PATHWAY; *SOILS -- RADIONUCLIDE MIGRATION
Descriptors: NUCLEAR EXPLOSIONS; NUCLEAR WEAPONS; RADIATION MONITORING
Broader Terms: ENVIRONMENTAL TRANSPORT; EXPLOSIONS; ISLANDS; ISOTOPES; MASS TRANSFER; MICRONESIA; MONITORING; OCEANIA; POPULATIONS; WEAPONS
Subject Categories: 510302* -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- Terrestrial Ecosystems & Food Chains -- (-1987)
520302 -- Environment, Aquatic -- Radioactive Materials Monitoring & Transport -- Aquatic Ecosystems & Food Chains -- (-1987)
INIS Subject Categories: C2210* -- Radionuclide Ecology -- Terrestrial Ecosystems

10/5/682 (Item 382 from file: 103)
01353735 EDB-84-051414
Author(s): Archer, J.S.; Lawlor, E.A.
Title: Damage survey and analysis of structures
Corporate Source: Massachusetts Inst. of Tech., Cambridge (USA)
Publication Date: Nov 1954 p 176
Report Number(s): AD-356270/9
Document Type: Report
Language: English
Journal Announcement: ERA8403
Availability: NTIS, PC A09/MF A01.
Subfile: ERA (Energy Research Abstracts).
Country of Origin: United States
Country of Publication: United States
Abstract: The purpose of this study was to determine the damage and blast loading on Operation Greenhouse Army Test Structure 3.1.1 and to survey the damage done to Greenhouse Structure 3.1.3 and other miscellaneous structures. These structures, located on the Eniwetok Atoll, were exposed to the effects of the two atomic bursts (Mike and King) of Operation Ivy in the late fall of 1952. A damage survey was conducted to obtain data upon which to base a correlation of the damage incurred with the measured air-blast overpressures caused by the two shots. The damage caused to Structure 3.1.1 by shot Mike was comparable to that caused by shot Easy of Operation Greenhouse. It is probable that no damage occurred to Structure 3.1.1 from shot King. Only the final permament deflections were recorded of Structure 3.1.1 for shot Mike. The lack of transient response records for this shot increased the difficulty of correlating the loading with the deformations sustained. Analyses were performed on Buildings 2 and 3 of Structure 3.1.1.;
Major Descriptors: *BUILDINGS -- BLAST EFFECTS; *IVY PROJECT -- BLAST EFFECTS
Descriptors: DAMAGE; DEFORMATION; MECHANICAL STRUCTURES
Broader Terms: EXPLOSIONS; NUCLEAR EXPLOSIONS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/683 (Item 383 from file: 103)
01353728 EDB-84-051407
Author(s): Bruce-Henderson, S.; Gladeck, F.R.; Hallowell, J.H.; Martin,

E.J.; McMullan, F.W.
Title: Operation REDWING 1956. Technical report
Corporate Source: Kaman Tempo, Santa Barbara, CA (USA)
Publication Date: 1 Aug 1982 p 442
Report Number(s): AD-A-134795/4
Document Type: Report
Language: English
Journal Announcement: ERA8403
Availability: NTIS, PC A19/MF A01.
Subfile: ERA (Energy Research Abstracts).
Country of Origin: United States
Country of Publication: United States
Abstract: REDWING was a 17-detonation atmospheric nuclear weapons test series conducted in the Marshall Islands at Enewetak and Bikini atolls in spring and summer 1956. This is a report of DOD personnel in REDWING with an emphasis on operations and radiological safety.;
Major Descriptors: *NUCLEAR EXPLOSIONS -- FALLOUT
Descriptors: DOSIMETRY; MILITARY PERSONNEL; RADIATION EFFECTS; SAFETY
Broader Terms: EXPLOSIONS; PERSONNEL
Subject Categories: 450200* -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives

10/5/684 (Item 384 from file: 103)
01326668 EDB-84-024342
Author(s): Colin, P.L.; Harrison, J.T. III
Title: Mid-Pacific Research Laboratory annual report, October 1, 1982-September 30, 1983
Corporate Source: Hawaii Univ., Honolulu (USA). Office of Research Administration
Publication Date: Feb 1982 p 13
Report Number(s): DOE/EV/00703-5
Order Number: DE84005325
Contract Number (DOE): AC08-76EV00703
Document Type: Report
Language: English
Journal Announcement: ERA8402
Availability: NTIS, PC A02/MF A01.
Subfile: ERA (Energy Research Abstracts); NTS (NTIS).
Country of Origin: United States
Country of Publication: United States
Abstract: Fiscal year 1983 marked the end of on-site operations of the Mid-Pacific Research Laboratory at Enewetak Atoll in the Northern Marshall Islands. With the departure of the laboratory staff from Enewetak on 22 September, research conducted by the resident scientific staff ceased. Henceforth, MPRL will exist in the form of a research readiness program involving a part-time technician at the Hawaii Institute of Marine Biology who will inventory and maintain residual scientific assets and be available to support expeditionary research efforts in the Pacific area. A summary of research efforts in FY 83 is reported including descriptions of the redistribution of coarse surface particles by callianassid to deeper layers of the sediment. The relationship of this bioturbation to the redistribution of Bravo event fallout is related.;
Major Descriptors: *ENIWETOK -- RADIOECOLOGICAL CONCENTRATION
Descriptors: CRUSTACEANS; ECOSYSTEMS; RADIONUCLIDE MIGRATION
Broader Terms: ANIMALS; AQUATIC ORGANISMS; ARTHROPODS; ECOLOGICAL CONCENTRATION; ENVIRONMENTAL TRANSPORT; INVERTEBRATES; ISLANDS; MARSHALL ISLANDS; MASS TRANSFER; MICRONESIA; OCEANIA
Subject Categories: 510200* -- Environment, Terrestrial -- Chemicals Monitoring & Transport -- (-1989)

10/5/685 (Item 385 from file: 103)
01288168 ERA-08-056352; EDB-83-188173
Author(s): Jennings, C.D.; Mount, M.E.
Title: Northern Marshall Islands Radiological Survey: a quality-control program for a radiochemical analyses

Corporate Source: Lawrence Livermore National Lab., CA (USA)
Publication Date: Aug 1983 p 75
Report Number(s): UCRL-52853-Pt.5
Order Number: DE84000658
Contract Number (DOE): W-7405-ENG-48
Note: Includes 1 sheet of 48x reduction microfiche
Document Type: Report
Language: English
Journal Announcement: NTS8310
Availability: NTIS, PC E04/MF A01.
Subfile: NTS (NTIS); INS (US Atomindex input); ERA (Energy Research Abstracts).
Country of Origin: United States
Country of Publication: United States
Abstract: More than 16,000 radiochemical analyses were performed on about 5400 samples of soils, vegetation, animals, fish, invertebrates, and water to establish amounts of /sup 90/Sr, /sup 137/Cs, /sup 241/Am, and plutonium isotopes in the Northern Marshall Islands. Three laboratories were contracted by Lawrence Livermore National Laboratory to perform the radiochemical analyses: Environmental Analysis Laboratory (EAL), Richmond, California; Eberline Instrument Corporation (EIC), Albuquerque, New Mexico; and Laboratory of Radiation Ecology (LRE), University of Washington, Seattle, Washington. The analytical precision and accuracy were monitored by regularly including duplicate samples and natural matrix standards in each group of about 100 samples analyzed. Based on the duplicates and standards, over 83% of the radiochemical analyses in this survey were acceptable - 97% of the analyses by EAL, 45% of the analyses by EIC, and 98% of the analyses by LRE.;
Major Descriptors: *MARSHALL ISLANDS -- RADIATION MONITORING; *RADIOCHEMICAL ANALYSIS -- QUALITY CONTROL
Descriptors: AMERICIUM 241; CESIUM 137; PLUTONIUM ISOTOPES; STRONTIUM 90
Broader Terms: ACTINIDE ISOTOPES; ACTINIDE NUCLEI; ALKALI METAL ISOTOPES; ALKALINE EARTH ISOTOPES; ALPHA DECAY RADIOISOTOPES; AMERICIUM ISOTOPES; BETA DECAY RADIOISOTOPES; BETA-MINUS DECAY RADIOISOTOPES; CESIUM ISOTOPES; CHEMICAL ANALYSIS; CONTROL; EVEN-EVEN NUCLEI; HEAVY NUCLEI; INTERMEDIATE MASS NUCLEI; ISLANDS; ISOTOPES; MICRONESIA; MONITORING; NUCLEI; OCEANIA; ODD-EVEN NUCLEI; QUANTITATIVE CHEMICAL ANALYSIS; RADIOISOTOPES; STRONTIUM ISOTOPES; YEARS LIVING RADIOISOTOPES
Subject Categories: 510300* -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- (-1989)
INIS Subject Categories: B31* -- Land

10/5/686 (Item 386 from file: 103)
01271557 ERA-08-052386; EDB-83-171560
Author(s): Gladeck, F.R.; Hallowell, J.H.; Martin, E.J.; McMullan, F.W.; Miller, R.H.
Title: Operation Ivy: 1952. Technical rept
Corporate Source: Kaman Tempo, Santa Barbara, CA (USA)
Publication Date: 1 Dec 1982 p 364
Report Number(s): AD-A-128082/5
Document Type: Report
Language: English
Journal Announcement: EDB8308
Availability: NTIS, PC A16/MF A01.
Subfile: ERA (Energy Research Abstracts).
Country of Origin: United States
Country of Publication: United States
Abstract: Ivy was a two-detonation atmospheric nuclear weapon test series conducted during October and November of 1952 at Enewetak Atoll in the Marshall Islands. One of the two events was designated Mike and was the first thermonuclear or hydrogen bomb. Report emphasis is on the radiological safety of the personnel. Available records on personnel exposure are summarized.;
Major Descriptors: *MILITARY PERSONNEL -- RADIATION DOSES; *NUCLEAR EXPLOSIONS -- FALLOUT; *NUCLEAR EXPLOSIONS -- PERSONNEL DOSIMETRY

Descriptors: ENIWETOK; MAN; NUCLEAR WEAPONS; RADIATION EFFECTS; RADIATION PROTECTION; RADIONUCLIDE KINETICS
Broader Terms: ANIMALS; DOSES; DOSIMETRY; EXPLOSIONS; ISLANDS; MAMMALS; MARSHALL ISLANDS; MICRONESIA; OCEANIA; PERSONNEL; PRIMATES; VERTEBRATES; WEAPONS
Subject Categories: 560151* -- Radiation Effects on Animals -- Man
510302 -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- Terrestrial Ecosystems & Food Chains -- (-1987)

10/5/687 (Item 387 from file: 103)
01247745 EDB-83-147746
Title: Evaluation of Enewetak radioactivity containment. Final report
Corporate Source: National Research Council, Washington, DC (USA). Committee on Evaluation of Enewetak Radioactivity Containment
Publication Date: Mar 1982 p 53
Report Number(s): PB-83-204263
Document Type: Report
Language: English
Journal Announcement: ERA8307
Availability: NTIS, PC A04/MF A01.
Subfile: ERA (Energy Research Abstracts); INS (US Atomindex input).
Country of Origin: United States
Country of Publication: United States
Abstract: Between 1948 and 1958 the Enewetak Atoll in the Marshall Islands was the site of 43 nuclear explosions, part of the government's nuclear testing program. Responding to the demands of the Enewetak people, the government in 1972 decided to rehabilitate the atoll. In the cleanup process, radiologically contaminated soil and debris from many of the atoll's islands were placed in a massive, domed concrete containment structure built over one of the bomb craters on Runit Island. In order to provide the people of Enewetak and the Marshallese Government with an objective assessment of the containment structure's safety, the Defense Nuclear Agency asked the Advisory Board on the Built Environment of the National Research Council to study the matter. The committee appointed to conduct the study concentrated on two issues: (1) the potential hazard of transuranics being transported to the surrounding environment from the structure, and (2) the possible sequence of events that would affect the structure's physical integrity, and the radioactive hazards that would result from breachment of the dome.;
Major Descriptors: *MARSHALL ISLANDS -- RADIOACTIVE WASTE DISPOSAL; *RADIOACTIVE WASTE DISPOSAL -- RADIATION HAZARDS
Descriptors: ALPHA-BEARING WASTES; CONTAINMENT; DECONTAMINATION; PLUTONIUM; RADIOACTIVE WASTE FACILITIES; RADIOACTIVE WASTES; SOILS; TRANSPORT
Broader Terms: ACTINIDES; CLEANING; ELEMENTS; HAZARDS; HEALTH HAZARDS; ISLANDS; MANAGEMENT; MATERIALS; METALS; MICRONESIA; NUCLEAR FACILITIES; OCEANIA; RADIOACTIVE MATERIALS; RADIOACTIVE WASTES; TRANSURANIUM ELEMENTS; WASTE DISPOSAL; WASTE MANAGEMENT; WASTES
Subject Categories: 052002* -- Nuclear Fuels -- Waste Disposal & Storage
INIS Subject Categories: E52* -- Waste Disposal

10/5/688 (Item 388 from file: 103)
01242918 EDB-83-142968
Title: Aerial and ground-based in situ measurements for evaluation and implementation of radioactive site clearnup
Author(s): Tipton, W.J.
Affiliation: EGandG Inc., P.O. Box 1912, Las Vegas, NM 89125
Conference Title: American Nuclear Society winter meeting
Conference Location: Washington, DC, USA Conference Date: 14 Nov 1982
Source: Trans. Am. Nucl. Soc. (United States) v 43. Coden: TANSA
Publication Date: 1982 p 57
Report Number(s): CONF-821103-
Document Type: Journal Article; Conference literature
Language: English
Journal Announcement: EDB8305
Country of Origin: United States

Abstract: None;
Major Descriptors: *ABANDONED SITES -- RADIOECOLOGICAL CONCENTRATION; *ENIWETOK -- ABANDONED SITES; *GNOME EVENT -- ABANDONED SITES; *MANHATTAN PROJECT -- ABANDONED SITES
Descriptors: FALLOUT DEPOSITS; NUCLEAR EXPLOSIONS; RADIATION DETECTORS; RADIATION MONITORING; SURFACE CONTAMINATION MONITORS
Broader Terms: ECOLOGICAL CONCENTRATION; EXPLOSIONS; FALLOUT; ISLANDS; MARSHALL ISLANDS; MEASURING INSTRUMENTS; MICRONESIA; MONITORING; MONITORS; OCEANIA; PLOWSHARE PROJECT; RADIATION MONITORS; VELA PROJECT
Subject Categories: 510300* -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- (-1989)
450200 -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives
510500 -- Environment, Terrestrial -- Site Resource & Use Studies -- (-1989)

10/5/689 (Item 389 from file: 103)
01240420 ERA-08-044051; EDB-83-140470
Author(s): Case, C.W.
Title: Department of Energy Appropriate Energy Technology projects for the US Pacific Islands. Final report, 1982
Corporate Source: Pacific Energy Technology, Inc., Sausalito, CA (USA)
Publication Date: Jul 1982 p 32
Report Number(s): DOE/SF/11549-T1
Order Number: DE83015167
Contract Number (DOE): AC03-81SF11549
Document Type: Report
Language: English
Journal Announcement: EPA8308
Availability: NTIS, PC A03/MF A01.
Subfile: EPA (Energy Abstracts for Policy Analysis); NTS (NTIS); ERA (Energy Research Abstracts).
Country of Origin: United States
Country of Publication: United States
Abstract: This report describes the status of 18 of the 33 Department of Energy (DOE) Appropriate Energy Technology (AET) Projects on the US Pacific Islands (excluding the Hawaiian Islands) as of August 1, 1982. The projects include: shallow lens water pumping on the Marshall Islands; hydroelectric power systems on Micronesia; hospital solar hot water system on Micronesia; wind and solar equipment for the Aramas Kapw school in Micronesia; sail powered fishing boat in Micronesia; wind electric power project in Micronesia; smokeless cooking stoves in the Marshall Islands; demonstration programs in the Mariana Islands; typhoon-proof greenhouse on Guam; evaporative cooling for buildings in Guam, solar photovoltaic refrigerator in Micronesia; and a solar dryer demonstration in Micronesia.;
Major Descriptors: *MICRONESIA -- ENERGY SOURCE DEVELOPMENT; *MICRONESIA -- RESEARCH PROGRAMS; *RENEWABLE ENERGY SOURCES -- RESEARCH PROGRAMS; *US DOE -- RESEARCH PROGRAMS
Descriptors: GREENHOUSES; HYDROELECTRIC POWER PLANTS; PHOTOVOLTAIC CELLS; SOLAR COOLING SYSTEMS; SOLAR DRYERS; SOLAR HEATING; SOLAR WATER HEATERS ; WATER PUMPS; WIND POWER; WIND POWER PLANTS; WOOD BURNING APPLIANCES
Broader Terms: APPLIANCES; BUILDINGS; DIRECT ENERGY CONVERTERS; DRYERS; ENERGY SOURCES; EQUIPMENT; HEATERS; HEATING; ISLANDS; NATIONAL ORGANIZATIONS; OCEANIA; PHOTOELECTRIC CELLS; POWER; POWER PLANTS; PUMPS ; RENEWABLE ENERGY SOURCES; SOLAR EQUIPMENT; US ORGANIZATIONS; WATER HEATERS
Subject Categories: 299000* -- Energy Planning & Policy -- Unconventional Sources & Power Generation
290500 -- Energy Planning & Policy -- Research, Development, Demonstration, & Commercialization

10/5/690 (Item 390 from file: 103)
01234099 ERA-08-042164; EDB-83-134148
Author(s): Schell, W.R.
Title: Chemical and isotope analysis of trace pollutants in different

environmental media
Corporate Source: Washington Univ., Seattle (USA)
Publication Date: 1980 p 28
Report Number(s): N-8312612
Document Type: Report
Language: English
Journal Announcement: EDB8303
Availability: NTIS MF A01- WMO, Geneva, Switzerland.
Subfile: ERA (Energy Research Abstracts).
Country of Origin: United States
Country of Publication: United States
Abstract: Radionuclide monitoring in three environmental systems is described and evaluated in the context of a biogeochemical cycle. The three systems involve monitoring :(1) globally, where fallout tracers are monitored worldwide, (2) regionally, where toxic metals in a fjord marine ecosystem are monitored in water, sediment, and biota, and (3) site specifically, where radionuclides produced by nuclear detonations in an atoll ecosystem are monitored in water, sediment, and biota. Tritium is used to study exchange processes across the tropopause and the processes of ocean mixing and transport. Lead 210 is used to gain insight into removal processes of particulate matter in the atmosphere and the mixed ocean layer. Sediment cores from Puget Sound, dated by Pb 210 - P0 210 techniques are used to study heavy metal pollution from sewage effluent, and the sedimentation rate caused by man's activities in the region. Monitoring of radionuclides in the food chain at the Bikini Atoll test site is described. The necessity of considering all of the sources and transport mechanisms is shown.;
Major Descriptors: *AIR POLLUTION -- MONITORING; *FALLOUT -- MONITORING; *POLLUTANTS -- CHEMICAL ANALYSIS; *POLLUTANTS -- MONITORING; *WATER POLLUTION -- MONITORING
Descriptors: AEROSOLS; BIOCHEMISTRY; FOOD CHAINS; LEAD 210; MIXING; POLONIUM 210; RADIOISOTOPES; TRITIUM; WASHINGTON
Broader Terms: ALPHA DECAY RADIOISOTOPES; BETA DECAY RADIOISOTOPES; BETA-MINUS DECAY RADIOISOTOPES; CHEMISTRY; COLLOIDS; DAYS LIVING RADIOISOTOPES; DISPERSIONS; EVEN-EVEN NUCLEI; FEDERAL REGION X; HEAVY NUCLEI; HYDROGEN ISOTOPES; ISOTOPES; LEAD ISOTOPES; LIGHT NUCLEI; NORTH AMERICA; NUCLEI; ODD-EVEN NUCLEI; POLLUTION; POLONIUM ISOTOPES; RADIOISOTOPES; SOLS; USA; YEARS LIVING RADIOISOTOPES
Subject Categories: 500200* -- Environment, Atmospheric -- Chemicals Monitoring & Transport -- (-1989)
500300 -- Environment, Atmospheric -- Radioactive Materials Monitoring & Transport -- (-1989)
520200 -- Environment, Aquatic -- Chemicals Monitoring & Transport -- (-1989)
520300 -- Environment, Aquatic -- Radioactive Materials Monitoring & Transport -- (1989)

10/5/691 (Item 391 from file: 103)
01225060 EDB-83-125107
Title: Kwajalein missile range, Kwajalein, Marshall Islands range reference atmosphere 0-70 km altitude
Corporate Source: Range Commanders Council, White Sands Missile Range, NM (USA). Meteorological Group
Publication Date: 1982 p 185
Report Number(s): AD-A-123424/4
Document Type: Report; Numerical data
Language: English
Journal Announcement: ERA8304
Availability: NTIS, PC A09/MF A01.
Subfile: ERA (Energy Research Abstracts).
Country of Origin: United States
Country of Publication: United States
Abstract: Atmospheric parameters are essential to the research and development of missiles and aerospace vehicles. The need for realistic atmospheric models derived in a consistent manner for each of the several major test ranges was recognized in the early 1960's. An

atmospheric model which is derived from statistical data for a particular geographical location is referred to as a reference atmosphere. This committee, Task MG-1, establishes RRAs Range Reference Atmospheres for the several ranges as provided by the RCC Range Commander's Council. An RRA is a model of the Earth's atmosphere over a geographical location of interest for use by DOD and other U.S. Government range users. The RRA is used to provide planning data for evaluating environmental constraints for the particular configurations of environment-sensitive systems and components being developed or undergoing tests. Using the best available upper atmosphere data base to include rawinsonde, rocketsonde and possibly other high-altitude data sources for the range location, the task is to establish a model of certain statistics for wind and thermodynamic quantities derived in a uniform manner and published in a standardized format.;
Major Descriptors: *ATMOSPHERICS -- MATHEMATICAL MODELS; *MARSHALL ISLANDS -- METEOROLOGY
Descriptors: MISSILES; STATISTICAL DATA; THERMODYNAMICS
Broader Terms: DATA; ELECTROMAGNETIC RADIATION; INFORMATION; ISLANDS; MICRONESIA; NOISE; NUMERICAL DATA; OCEANIA; RADIATIONS; RADIO NOISE; RADIOWAVE RADIATION
Subject Categories: 500100* -- Environment, Atmospheric -- Basic Studies -- (-1989)

10/5/692 (Item 392 from file: 103)
01210205 ERA-08-035494; EDB-83-110244
Author(s): Bifano, W.J.; Ratacajczak, A.F.
Title: DOE and AID stand-alone photovoltaic activities. Status report
Corporate Source: National Aeronautics and Space Administration, Cleveland, OH (USA). Lewis Research Center
Conference Title: American Solar Energy Society meeting
Conference Location: Minneapolis, MN, USA Conference Date: 1 Jun 1983
Publication Date: 1983 p 8
Report Number(s): DOE/NASA/20485-15; NASA-TM-83374; CONF-830622-12
Order Number: DE83013135
Contract Number (DOE): AI01-76ET20485
Note: Portions are illegible in microfiche products. Original copy available until stock is exhausted
Document Type: Report; Conference literature
Language: English
Journal Announcement: NTS8306
Availability: NTIS, PC A02/MF A01; 1.
Subfile: NTS (NTIS); EPA (Energy Abstracts for Policy Analysis); ERA (Energy Research Abstracts).
Country of Origin: United States
Country of Publication: United States
Abstract: The NASA Lewis Research Center (LeRC) is managing stand-alone photovoltaic (PV) system activities sponsored by the US Department of Energy (DOE) and the US Agency for International Development (AID). The DOE project includes village PV power demonstration projects in Gabon (four sites) and the Marshall Islands, PV-powered medical refrigerators in six countries, PV system microprocessor control development activities and PV-hybrid system assessments. The AID project includes a large village systen in Tunisia, a water pumping/grain grinding project in Upper Volta, five medical clinics in four countries, PV-powered medical refrigerator field tests in eighteen countries and one PV-powered remote earth station application. This paper reviews these PV activities and summarizes significant findings to date.;
Major Descriptors: *PHOTOVOLTAIC POWER SUPPLIES -- DEMONSTRATION PROGRAMS; *PHOTOVOLTAIC POWER SUPPLIES -- RESEARCH PROGRAMS
Descriptors: COMPUTERIZED CONTROL SYSTEMS; FIELD TESTS; GABON; GRINDING; MARSHALL ISLANDS; MICROPROCESSORS; REFRIGERATORS; SATELLITES; TUNISIA; UPPER VOLTA; WATER PUMPS
Broader Terms: AFRICA; COMMINUTION; COMPUTERS; CONTROL SYSTEMS; DEVELOPING COUNTRIES; ELECTRONIC CIRCUITS; ELECTRONIC EQUIPMENT; EQUIPMENT; ISLANDS; MACHINING; MICROELECTRONIC CIRCUITS; MICRONESIA; OCEANIA; POWER SUPPLIES; PUMPS; SOLAR EQUIPMENT; TESTING

Subject Categories: 140600* -- Solar Energy -- Photovoltaic Power Systems
299001 -- Energy Planning & Policy -- Solar -- (1989-)

10/5/693 (Item 393 from file: 103)
01197245 ERA-08-032462; EDB-83-097281
Author(s): Robison, W.L.
Title: Radiological-dose assessments of atolls in the northern Marshall Islands
Corporate Source: Lawrence Livermore National Lab., CA (USA)
Publication Date: Apr 1983 p 54
Report Number(s): UCRL-89037
Order Number: DE83012106
Contract Number (DOE): W-7405-ENG-48
Document Type: Report; Numerical data
Language: English
Journal Announcement: NTS8305
Availability: NTIS, PC A04/MF A01.
Subfile: NTS (NTIS); INS (US Atomindex input); ERA (Energy Research Abstracts).
Country of Origin: United States
Country of Publication: United States
Abstract: The Marshall Islands in the Equatorial Pacific, specifically Enewetak and Bikini Atolls, were the site of US nuclear testing from 1946 through 1958. In 1978, the Northern Marshall Islands Radiological Survey was conducted to evaluate the radiological conditions of two islands and ten atolls downwind of the proving grounds. The survey included aerial external gamma measurements and collection of soil, terrestrial, and marine samples for radionuclide analysis to determine the radiological dose from all exposure pathways. The methods and models used to estimate doses to a population in an environment where natural processes have acted on the source-term radionuclides for nearly 30 y, data bases developed for the models, and results of the radiological dose analyses are described.;
Major Descriptors: *HUMAN POPULATIONS -- RADIATION DOSES; *MARSHALL ISLANDS -- RADIATION MONITORING
Descriptors: AMERICIUM 241; AQUATIC ECOSYSTEMS; CESIUM 137; DOSE COMMITMENTS; DOSE EQUIVALENTS; ENVIRONMENTAL EXPOSURE PATHWAY; EXPERIMENTAL DATA; FOOD CHAINS; GAMMA RADIATION; NUCLEAR WEAPONS; PLUTONIUM 239; PLUTONIUM 240; SOILS; STRONTIUM 90; TERRESTRIAL ECOSYSTEMS
Broader Terms: ACTINIDE ISOTOPES; ACTINIDE NUCLEI; ALKALI METAL ISOTOPES; ALKALINE EARTH ISOTOPES; ALPHA DECAY RADIOISOTOPES; AMERICIUM ISOTOPES; BETA DECAY RADIOISOTOPES; BETA-MINUS DECAY RADIOISOTOPES; CESIUM ISOTOPES; DATA; DOSES; ECOSYSTEMS; ELECTROMAGNETIC RADIATION; EVEN-EVEN NUCLEI; EVEN-ODD NUCLEI; HEAVY NUCLEI; INFORMATION; INTERMEDIATE MASS NUCLEI; IONIZING RADIATIONS; ISLANDS; ISOTOPES; MICRONESIA; MONITORING; NUCLEI; NUMERICAL DATA; OCEANIA; ODD-EVEN NUCLEI; PLUTONIUM ISOTOPES; POPULATIONS; RADIATIONS; RADIOISOTOPES; STRONTIUM ISOTOPES; WEAPONS; YEARS LIVING RADIOISOTOPES
Subject Categories: 510302* -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- Terrestrial Ecosystems & Food Chains -- (-1987)
520302 -- Environment, Aquatic -- Radioactive Materials Monitoring & Transport -- Aquatic Ecosystems & Food Chains -- (-1987)
INIS Subject Categories: C22* -- Radionuclide Ecology

10/5/694 (Item 394 from file: 103)
01193486 ERA-08-031492; EDB-83-093522
Author(s): Schaller, D.A.
Title: Photovoltaic applications for remote-island needs
Corporate Source: Black Hawk Associates, Denver, CO (USA)
Publication Date: Jan 1983 p 202
Report Number(s): DOE/SF/11597-T1
Order Number: DE83008112
Contract Number (DOE): AC03-82SF11597
Note: Portions are illegible in microfiche products

Document Type: Report
Language: English
Journal Announcement: NTS8305
Availability: NTIS, PC A10/MF A01; 1.
Subfile: NTS (NTIS); ERA (Energy Research Abstracts).
Country of Origin: United States
Country of Publication: United States
Abstract: Electric power supply options available to many of the central and south Pacific island governments are severely constrained by remoteness, limited infrastructures, a corrosive natural environment, and the high delivered costs of many conventional energy sources. Photovoltaic energy systems offer a currently available, practical, and cost-effective source of electricity for many stand-alone applications in remote areas of the Pacific. Photovoltaic system definitions and cost analyses are provided for selected applications in the Republic of Palau, the Federated States of Micronesia, the Republic of the Marshall Islands, and the Territory of American Samoa.;
Major Descriptors: *PHOTOVOLTAIC POWER SUPPLIES -- USES
Descriptors: AIRPORTS; AMERICAN SAMOA; COST ESTIMATION; ELECTRIC BATTERIES; INSOLATION; LIGHTING SYSTEMS; MANUFACTURERS; MARKET; MARSHALL ISLANDS; POWER CONDITIONING CIRCUITS; REFRIGERATORS; RURAL ENERGY CENTERS; SIZING; TECHNOLOGY ASSESSMENT; WATER PUMPS
Broader Terms: ELECTROCHEMICAL CELLS; ELECTRONIC CIRCUITS; ELECTRONIC EQUIPMENT; ENERGY SYSTEMS; EQUIPMENT; ISLANDS; MICRONESIA; NORTH AMERICA; OCEANIA; POWER SUPPLIES; PUMPS; SOLAR EQUIPMENT; USA
Subject Categories: 140600* -- Solar Energy -- Photovoltaic Power Systems

10/5/695 (Item 395 from file: 103)
01184128 ERA-08-029479; EDB-83-084163
Author(s): Schroeder, T.A.; Hori, A.M.
Title: Wind-energy assessment for the western Pacific based on ship reports
Corporate Source: Hawaii Univ., Honolulu (USA). Dept. of Meteorology
Publication Date: Nov 1982 p 28
Report Number(s): UHMET-82-05
Order Number: DE83008149
Contract Number (DOE): AT03-82SF11642
Note: Portions are illegible in microfiche products
Document Type: Report
Language: English
Journal Announcement: NTS8305
Availability: NTIS, PC A03/MF A01; 1.
Subfile: NTS (NTIS); ERA (Energy Research Abstracts).
Country of Origin: United States
Country of Publication: United States
Abstract: Over 468,000 wind reports from ships traversing the Pacific Islands (Micronesia) affiliated with the United States have been examined. From these data, maps were prepared of annual and seasonal average wind speed and wind energy density and wind rose summaries for 100 2/sup 0/ by 5/sup 0/ (latitude by longitude) boxes. The Northern Marshall Islands possess the best wind energy resource in the region, the Northern Marianas the next best. Tropical storms exert a limited influence on the wind statistics. Future research should first concentrate on evaluating wind characteristics on one atoll, and then on one high island.;
Major Descriptors: *MICRONESIA -- WIND; *WIND POWER -- AVAILABILITY
Descriptors: MARIANA ISLANDS; MARSHALL ISLANDS; SEASONAL VARIATIONS; SHIPS; STORMS
Broader Terms: DISASTERS; ENERGY SOURCES; ISLANDS; MICRONESIA; NORTH AMERICA; OCEANIA; POWER; RENEWABLE ENERGY SOURCES; TRUST TERRITORY OF THE PACIFIC ISLANDS; USA; VARIATIONS
Subject Categories: 170100* -- Wind Energy -- Resources & Availability (Climatology)

10/5/696 (Item 396 from file: 103)
01181203 AIX-13-714220; EDB-83-081237
Title: Toward the abolition of nuclear arms, Part 4

Title: Hiroshima and Nagasaki. The physical, medical, and social effects of the atomic bombings
Publisher: Iwanami,Tokyo, Japan
Publication Date: 1981 p 501-680
Document Type: Analytic of a Book
Language: English
Journal Announcement: EDB8211
Country of Origin: Japan
Country of Publication: Japan
Abstract: The activities of various survey and relief groups in the period immediately after the atomic bombings are reported. The researches on atomic bombing casualties and the publication of the results by Japanese scientists were greatly restricted during the occupation period, but the conditions improved in 1951, when the San Francisco Peace Treaty was signed. In 1954, a Japanese fishing boat was exposed to the fallout from the hydrogen bomb test carried out by the U.S. in Bikini atoll. Thereafter, many national and international works concerning the use of radiation have been carried out in Japan. The status of Hiroshima and Nagasaki in 1945 is reported. Especially the medical care soon after the bombings, and keloid treatment and A-bomb disease treatment thereafter are described. The guidelines for medical treatment of A-bomb aftereffects was drafted, and the A-bomb victims medical care law was enacted. The policies of the government and local governments for A-bomb victims, and the movements of citizens against atomic weapons, especially peace education, are described. The tests of the Peace Declaration in Hiroshima and Nagasaki on August 6 and 9, 1980, respectively, are reprinted as the appendix. Also the chronology from 1945 to 1978 on the events related to atomic bombing damages is given.;
Major Descriptors: *A-BOMB SURVIVORS -- MEDICAL RECORDS; *HIROSHIMA -- RADIATION HAZARDS; *NAGASAKI -- NUCLEAR EXPLOSIONS; *NAGASAKI -- RADIATION HAZARDS; *NUCLEAR DISARMAMENT -- NUCLEAR EXPLOSIONS; *NUCLEAR DISARMAMENT -- NUCLEAR WEAPONS
Descriptors: ATOMIC ENERGY CONTROL; BIBLIOGRAPHIES; BIOLOGICAL RADIATION EFFECTS; GOVERNMENT POLICIES; MEDICAL SURVEILLANCE; MEDICINE; THERMAL RADIATION; VICTIMS COMPENSATION
Broader Terms: ASIA; BIOLOGICAL EFFECTS; CONTROL; DOCUMENT TYPES; ELECTROMAGNETIC RADIATION; EXPLOSIONS; HAZARDS; HEALTH HAZARDS; HUMAN POPULATIONS; JAPAN; POPULATIONS; RADIATION EFFECTS; RADIATIONS; SURVEILLANCE; WEAPONS
Subject Categories: 990500* -- Civilian Defense -- (-1987)
INIS Subject Categories: C52* -- Radiation Hazards & Safety Evaluations of Nuclear Installations

10/5/697 (Item 397 from file: 103)
01178345 ERA-08-027339; EDB-83-078379
Author(s): Kerwin, W.T.
Title: Operation Redwing, Operation Order Number 1-56, Task Group 7.1
Corporate Source: Kaman Tempo, Santa Barbara, CA (USA)
Publication Date: 1 Aug 1982 p 140
Report Number(s): AD-A-995170/8
Document Type: Report
Language: English
Journal Announcement: EDB8304
Availability: NTIS, PC A07/MF A01.
Subfile: ERA (Energy Research Abstracts).
Country of Origin: United States
Country of Publication: United States
Abstract: No abstract available.;
Major Descriptors: *NUCLEAR EXPLOSIONS; *REDWING PROJECT -- PLANNING
Descriptors: METEOROLOGY; PHOTOGRAPHY; RADIATION PROTECTION; TESTING
Broader Terms: EXPLOSIONS
Subject Categories: 450200* -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives

5003901

10/5/698 (Item 398 from file: 103)

01169454 ERA-08-024295; EDB-83-069487
Author(s): Noshkin, V.E.; Wong, K.M.; Jokela, T.A.; Brunk, J.L.; Eagle, R.J.
Title: Comparative behavior of plutonium and americium in the equatorial Pacific
Corporate Source: Lawrence Livermore National Lab., CA (USA)
Conference Title: 4. international ocean disposal symposium
Conference Location: Devon, UK Conference Date: 11 Apr 1983
Publication Date: 1983 p 46
Report Number(s): UCRL-88812; CONF-830424-1
Order Number: DE83009247
Contract Number (DOE): W-7405-ENG-48
Document Type: Report; Conference literature
Language: English
Journal Announcement: NTS8304
Availability: NTIS, PC A03/MF A01.
Subfile: NTS (NTIS); INS (US Atomindex input); ERA (Energy Research Abstracts).
Country of Origin: United States
Country of Publication: United States
Abstract: Inventories of /sup 239 +240/Pu and /sup 241/Am greatly in excess of global fallout levels persist in the benthic environments of Bikini and Enewetak Atolls. The amount of /sup 239 +240/Pu mobilized to solution at the atolls can be predicted from a distribution coefficient K/sub d/ of 2.3 x 10/sup 5/ and the mean sediment concentrations. The mobilized /sup 239 +240/Pu has solute-like characteristics and different valence states coexist in solution - the largest fraction of the soluble plutonium is in an oxidized form (+V,VI). The adsorption of plutonium to sediments is not completely reversible because of changes that occur in the relative amounts of the mixed oxidation states in solution with time. Characteristics of /sup 239 +240/Pu described at one location may not necessarily describe its behavior elsewhere. The relative amounts of /sup 241/Am to /sup 239 +240/Pu may be altered in future years because of mobilization and radiological decay.;
Major Descriptors: *AMERICIUM 241 -- RADIONUCLIDE MIGRATION; *BIKINI -- RADIOECOLOGY; *ENIWETOK -- RADIOECOLOGY; *FALLOUT -- RADIONUCLIDE MIGRATION; *PLUTONIUM 239 -- RADIONUCLIDE MIGRATION; *PLUTONIUM 240 -- RADIONUCLIDE MIGRATION
Descriptors: BENTHOS; PARTICLE RESUSPENSION; SEDIMENTS
Broader Terms: ACTINIDE ISOTOPES; ACTINIDE NUCLEI; ALPHA DECAY RADIOISOTOPES; AMERICIUM ISOTOPES; AQUATIC ORGANISMS; ECOLOGY; ENVIRONMENTAL TRANSPORT; EVEN-EVEN NUCLEI; EVEN-ODD NUCLEI; HEAVY NUCLEI; ISLANDS; ISOTOPES; MARSHALL ISLANDS; MASS TRANSFER; MICRONESIA; NUCLEI; OCEANIA; ODD-EVEN NUCLEI; PLUTONIUM ISOTOPES; RADIOISOTOPES; YEARS LIVING RADIOISOTOPES
Subject Categories: 520302* -- Environment, Aquatic -- Radioactive Materials Monitoring & Transport -- Aquatic Ecosystems & Food Chains -- (-1987)
INIS Subject Categories: C22* -- Radionuclide Ecology

10/5/699 (Item 399 from file: 103)
01151656 ERA-08-018573; EDB-83-051678
Author(s): Martin, E.J.; Rowland, R.H.
Title: Castle series, 1954. Technical report
Corporate Source: Kaman Tempo, Santa Barbara, CA (USA)
Publication Date: 1 Apr 1982 p 530
Report Number(s): AD-A-117574/4
Document Type: Report
Language: English
Journal Announcement: EDB8211
Availability: NTIS, PC A23/MF A01.
Subfile: ERA (Energy Research Abstracts).
Country of Origin: United States
Country of Publication: United States
Abstract: CASTLE was an atmospheric nuclear weapons test series held in the Marshall Islands at Enewetak and Bikini atolls in 1954. This is a

report of DOD peronnel in CASTLE with an emphasis on operations and radiological safety.;
Major Descriptors: *CASTLE PROJECT -- MILITARY PERSONNEL; *MILITARY PERSONNEL -- RADIATION PROTECTION; *MILITARY PERSONNEL -- SAFETY; *NUCLEAR WEAPONS -- TESTING
Descriptors: ATMOSPHERIC EXPLOSIONS; BIKINI; ENIWETOK; MARSHALL ISLANDS; MEASURING INSTRUMENTS; MILITARY EQUIPMENT; NUCLEAR EXPLOSIONS; PACIFIC OCEAN; RADIATION DOSES; RADIATION EFFECTS
Broader Terms: DOSES; EQUIPMENT; EXPLOSIONS; ISLANDS; MARSHALL ISLANDS; MICRONESIA; NUCLEAR EXPLOSIONS; OCEANIA; PERSONNEL; SEAS; SURFACE WATERS; WEAPONS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/700 (Item 400 from file: 103)
01151653 ERA-08-018568; EDB-83-051675
Author(s): Gibson, T.A. Jr
Title: The residual radiation pattern for various surface wind velocities - underwater atomic burst
Corporate Source: Defense Atomic Support Agency, Washington, DC (USA)
Publication Date: 14 Mar 1952 p 14
Report Number(s): AD-875967/2
Document Type: Report
Language: English
Journal Announcement: EDB8210
Availability: NTIS, PC A02/MF A01.
Subfile: ERA (Energy Research Abstracts).
Country of Origin: United States
Country of Publication: United States
Abstract: In the event of an underwater atomic explosion in a harbor, it is of interest to have estimates of the extent and magnitude of the residual radiation field as a function of surface wind velocity. It is possible to make such estimates by using the information available from the Bikini-Baker underwater explosion.;
Major Descriptors: *NUCLEAR EXPLOSIONS -- ENVIRONMENTAL IMPACTS; *RADIOACTIVITY -- SPATIAL DISTRIBUTION
Descriptors: DOSE RATES; FALLOUT; NUCLEAR WEAPONS; RADIATION DOSES; UNDERWATER EXPLOSIONS; VELOCITY
Broader Terms: DISTRIBUTION; DOSES; EXPLOSIONS; WEAPONS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)
500300 -- Environment, Atmospheric -- Radioactive Materials Monitoring & Transport -- (-1989)

10/5/701 (Item 401 from file: 103)
01144831 AIX-13-699259; EDB-83-044848
Title: Human epidemiology of radionuclide toxicity
Author(s): Pochin, E.E. (National Radiological Protection Board, Chilton Didcot, Oxfordshire (UK)); Galle, P. (ed.)
Title: Toxiques nucleaires. Comptes Rendus
Conference Title: Meeting on radionuclide toxicity
Conference Location: Creteil, France Conference Date: 14 Jan 1982
Publisher: Masson,Paris, France
Publication Date: 1982 p 271-283
Report Number(s): CONF-820155-
Document Type: Analytic of a Book; Conference literature
Language: English
Journal Announcement: EDB8209
Country of Origin: United Kingdom
Country of Publication: France
Abstract: The information obtained from epidemiological studies of radionuclides which have been incorporated in the body (as unsealed sources) under the following circumstances, are reviewed: 1) in the course of medical therapy after administration of radium 224 in treatment of ankylosing spondylitis, of iodine 131 for thyroid cancer, or of phosphorus 32 for polycythema vera; 2) in diagnostic radiology,

after the use of thorium oxide preparation (Thorotrast) in angiography, or of iodine 131 in the diagnosis or study of thyroid disease; 3) in research on the body retention of plutonium; 4) in occupational exposure of dial luminisers using radium 226, and of uranium or other hard rock miners exposed to radon 222 inhalation; 5) in fallout from a weapon test, with thyroid uptake of radioiodine in certain of the Marshall Islands. Such studies have yielded important information on the frequency with which radiation exposure may cause cancers of various body organs or tissues, and particularly of bone, lung and liver.;

Major Descriptors: *HUMAN POPULATIONS -- RADIATION DOSES; *RADIOISOTOPES -- CARCINOGENESIS; *RADIOISOTOPES -- TOXICITY

Descriptors: BIOMEDICAL RADIOGRAPHY; DAUGHTER PRODUCTS; EPIDEMIOLOGY; INTAKE; INTERNAL IRRADIATION; IODINE 131; LOW DOSE IRRADIATION; PHOSPHORUS 32; RADIOTHERAPY; RADIUM 224; RADIUM 226; RADON 222; THOROTRAST; UNSEALED SOURCES

Broader Terms: ACTINIDE COMPOUNDS; ALKALINE EARTH ISOTOPES; ALPHA DECAY RADIOISOTOPES; BETA DECAY RADIOISOTOPES; BETA-MINUS DECAY RADIOISOTOPES ; CHALCOGENIDES; COLLOIDS; CONTRAST MEDIA; DAYS LIVING RADIOISOTOPES; DIAGNOSTIC TECHNIQUES; DISPERSIONS; DOSES; EVEN-EVEN NUCLEI; HEAVY NUCLEI; INTERMEDIATE MASS NUCLEI; IODINE ISOTOPES; IRRADIATION; ISOTOPES; LIGHT NUCLEI; MEDICINE; NUCLEAR MEDICINE; NUCLEI; ODD-EVEN NUCLEI; ODD-ODD NUCLEI; OXIDES; OXYGEN COMPOUNDS; PATHOGENESIS; PHOSPHORUS ISOTOPES; POPULATIONS; RADIATION SOURCES; RADIOCOLLOIDS; RADIOISOTOPES; RADIOLOGY; RADIUM ISOTOPES; RADON ISOTOPES; THERAPY; THORIUM COMPOUNDS; THORIUM OXIDES; YEARS LIVING RADIOISOTOPES

Subject Categories: 560161* -- Radionuclide Effects, Kinetics, & Toxicology -- Man

INIS Subject Categories: C21* -- Tissue Distribution, Metabolism, Toxicology & Removal of Radionuclides

10/5/702 (Item 402 from file: 103)
01142235 EPA-09-001637; EDB-83-042252
Title: Territorial energy assessment. Phase 1
Corporate Source: USDOE San Francisco Operations Office, Oakland, CA USDOE Savannah River Operations Office, Aiken, SC
Publication Date: Jul 1981 p 314
Report Number(s): DOE/CP-0005
Order Number: DE83005257
Note: Portions are illegible in microfiche products. Original copy available until stock is exhausted
Document Type: Report
Language: English
Journal Announcement: ERA8302
Availability: NTIS, PC A14/MF A01; 1.
Subfile: ERA (Energy Research Abstracts); NTS (NTIS); EPA (Energy Abstracts for Policy Analysis).
Country of Origin: United States
Country of Publication: United States

Abstract: This document presents the findings and recommendations of the San Francisco (SAN) and Savannah River (SR) Operations Offices in evaluating the energy situation in the US Territories, Trust Territory of the Pacific Islands and the Department of Energy. The recommendations represent the collective judgment of the teams of energy specialists selected and headed by SAN and SR, and of the respective Territorial Energy Offices. This Phase I report is intended as an internal DOE working document submitted for the consideration of Headquarters DOE/DOI senior management.;

Major Descriptors: *AMERICAN SAMOA -- ENERGY POLICY; *GUAM -- ENERGY POLICY ; *MARIANA ISLANDS -- ENERGY POLICY; *MARSHALL ISLANDS -- ENERGY POLICY ; *MICRONESIA -- ENERGY POLICY; *OCEANIA -- ENERGY POLICY; *PUERTO RICO -- ENERGY POLICY; *VIRGIN ISLANDS -- ENERGY POLICY

Descriptors: ECONOMIC DEVELOPMENT; ENERGY SUPPLIES; EVALUATION; PLANNING; RESOURCE ASSESSMENT

Broader Terms: FEDERAL REGION II; GOVERNMENT POLICIES; GREATER ANTILLES; ISLANDS; LESSER ANTILLES; MARIANA ISLANDS; MICRONESIA; NORTH AMERICA;

OCEANIA; TRUST TERRITORY OF THE PACIFIC ISLANDS; USA; WEST INDIES
Subject Categories: 293000* -- Energy Planning & Policy -- Policy, Legislation, & Regulation

10/5/703 (Item 403 from file: 103)
01142034 EPA-09-001283; EDB-83-042050
Title: Territorial energy assessment. Final report
Corporate Source: Department of Energy, San Francisco, CA (USA). San Francisco Operations Office USDOE Savannah River Operations Office, Aiken, SC
Publication Date: Dec 1982 p 379
Report Number(s): DOE/CP-0005/1
Order Number: DE83005492
Note: Portions are illegible in microfiche product. Original copy available until stock is exhausted
Document Type: Report
Language: English
Journal Announcement: ERA8302
Availability: NTIS, PC A17/MF A01; 1.
Subfile: ERA (Energy Research Abstracts); NTS (NTIS); EPA (Energy Abstracts for Policy Analysis).
Country of Origin: United States
Country of Publication: United States
Abstract: This assessment is concerned with energy planning for the governments of the American territories of Guam and American Samoa, and of the four nations that are now emerging from the United Nations Trust Territory of the Pacific Islands: the Commonwealth of the Northern Mariana Islands, the Republic of the Marshall Islands, the Republic of Palau, and the Federated States of Micronesia. This study was directed by the United States Congress under Public Law 96-597, and carried out by the United States Department of Energy in cooperation with the respective island governments. This report addressed the current and future energy needs of the island governments and considers the feasibility of employing alternate sources of energy, especially indigenous renewable energy resources, to reduce dependence on petroleum-based fuels.;
Major Descriptors: *AMERICAN SAMOA -- ECONOMIC DEVELOPMENT; *AMERICAN SAMOA -- ENERGY MODELS; *ENERGY MODELS; *GUAM -- ECONOMIC DEVELOPMENT; *GUAM -- ENERGY MODELS; *MARIANA ISLANDS -- ECONOMIC DEVELOPMENT; *MARIANA ISLANDS -- ENERGY MODELS; *MARSHALL ISLANDS -- ECONOMIC DEVELOPMENT; *MARSHALL ISLANDS -- ENERGY MODELS; *MICRONESIA -- ECONOMIC DEVELOPMENT ; *MICRONESIA -- ENERGY MODELS; *PALAU -- ECONOMIC DEVELOPMENT; *PALAU -- ENERGY MODELS; *PUERTO RICO -- ECONOMIC DEVELOPMENT; *PUERTO RICO -- ENERGY MODELS; *TRUST TERRITORY OF THE PACIFIC ISLANDS -- ECONOMIC DEVELOPMENT; *TRUST TERRITORY OF THE PACIFIC ISLANDS -- ENERGY MODELS; *VIRGIN ISLANDS -- ECONOMIC DEVELOPMENT; *VIRGIN ISLANDS -- ENERGY MODELS
Descriptors: EDUCATION; ENERGY SUPPLIES; PLANNING; POLITICAL ASPECTS; SOCIAL IMPACT
Broader Terms: ALLOYS; FEDERAL REGION II; GOLD ALLOYS; GOLD BASE ALLOYS; GREATER ANTILLES; INSTITUTIONAL FACTORS; ISLANDS; LESSER ANTILLES; MARIANA ISLANDS; MICRONESIA; NORTH AMERICA; OCEANIA; PALLADIUM ALLOYS; PLATINUM METAL ALLOYS; TRUST TERRITORY OF THE PACIFIC ISLANDS; USA; WEST INDIES
Subject Categories: 290100* -- Energy Planning & Policy -- Energy Analysis & Modeling

10/5/704 (Item 404 from file: 103)
01138515 AIX-14-717422; ERA-08-013400; EDB-83-038528
Title: ..beta.. and ..gamma..-comparative dose estimates on Enewetak Atoll
Author(s): Crase, K.W.; Gudiksen, P.H.; Robison, W.L. (California Univ., Livermore (USA). Lawrence Livermore National Lab.)
Source: Health Phys. (United Kingdom) v 42:5. Coden: HLTPA
Publication Date: May 1982 p 559-564
Document Type: Journal Article
Language: English

Journal Announcement: EDB8301
Subfile: ERA (Energy Research Abstracts).
Country of Origin: United States
Abstract: Enewetak Atoll in the Pacific is used for atmospheric testing of U.S. nuclear weapons. Beta dose and ..gamma..-ray exposure measurements were made on two islands of the Enewetak Atoll during July-August 1976 to determine the ..beta.. and low energy ..gamma..-contribution to the total external radiation doses to the returning Marshallese. Measurements were made at numerous locations with thermoluminescent dosimeters (TLD), pressurized ionization chambers, portable NaI detectors, and thin-window pancake GM probes. Results of the TLD measurements with and without a ..beta..-attenuator indicate that approx. 29% of the total dose rate at 1 m in air is due to ..beta..- or low energy ..gamma..-contribution. The contribution at any particular site, however, is reduced by vegetation. Integral 30-yr external shallow dose estimates for future inhabitants were made and compared with external dose estimates of a previous large scale radiological survey. Integral 30-yr shallow external dose estimates are 25-50% higher than whole body estimates. Due to the low penetrating ability of the ..beta..'s or low energy ..gamma..'s, however, several remedial actions can be taken to reduce the shallow dose contribution to the total external dose.;
Major Descriptors: *ENIWETOK -- RADIATION DOSES
Descriptors: BETA PARTICLES; ENVIRONMENT; EXTERNAL IRRADIATION; GAMMA RADIATION; GROUND COVER; MAN; NUCLEAR EXPLOSIONS
Broader Terms: ANIMALS; CHARGED PARTICLES; DOSES; ELECTROMAGNETIC RADIATION ; EXPLOSIONS; IONIZING RADIATIONS; IRRADIATION; ISLANDS; MAMMALS; MARSHALL ISLANDS; MICRONESIA; OCEANIA; PRIMATES; RADIATIONS; VERTEBRATES
Subject Categories: 655003* -- Medical Physics -- Dosimetry
INIS Subject Categories: C55* -- Personnel Dosimetry & Monitoring

10/5/705 (Item 405 from file: 103)
01135748 ERA-08-013013; CXS-83-000240; EDB-83-035760
Author(s): Bliss, W. (comp.)
Title: Enewetak fact book (a resume of pre-cleanup information)
Corporate Source: Department of Energy, Las Vegas, NV (USA). Nevada Operations Office
Publication Date: Sep 1982 p 219
Report Number(s): NVO-214
Order Number: DE83004468
Note: Portions of document are illegible
Document Type: Report
Language: English
Journal Announcement: NTS8302
Availability: NTIS, PC A10/MF A01.
Subfile: NTS (NTIS); INS (US Atomindex input); ERA (Energy Research Abstracts).
Country of Origin: United States
Country of Publication: United States
Abstract: The book contains a group of short treatises on the precleanup condition of the islands in Enewetak Atoll. Their purpose was to provide brief guidance to the radiological history and radiological condition of the islands for use in cleanup of the atoll. (ACR);
Major Descriptors: *ENIWETOK -- CONTAMINATION; *ENIWETOK -- SITE SURVEYS
Descriptors: DOSE RATES; NUCLEAR EXPLOSIONS; NUCLEAR WEAPONS; RADIOECOLOGICAL CONCENTRATION; RADIOISOTOPES
Broader Terms: ECOLOGICAL CONCENTRATION; EXPLOSIONS; ISLANDS; ISOTOPES; MARSHALL ISLANDS; MICRONESIA; OCEANIA; WEAPONS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)
510302 -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- Terrestrial Ecosystems & Food Chains -- (-1987)
INIS Subject Categories: E14* -- Nuclear Explosions
C22 -- Radionuclide Ecology

10/5/706 (Item 406 from file: 103)
01128100 EDB-83-028105
Author(s): Kohn, H.I.; Dreyer, N.A.
Title: Radiation-induced risk of resettling Bikini atoll. Final report, November 7, 1981-May 28, 1982
Corporate Source: Epidemiology Resources, Inc., Chestnut Hill, MA (USA)
Publication Date: 1982 p 56
Report Number(s): DOE/EP/12040-T1
Order Number: DE82015865
Contract Number (DOE): AC01-82EP12040
Note: Portions of document are illegible
Document Type: Report
Language: English
Journal Announcement: ERA8301
Availability: NTIS, PC A04/MF A01.
Subfile: ERA (Energy Research Abstracts); NTS (NTIS); INS (US Atomindex input).
Country of Origin: United States
Country of Publication: United States
Abstract: The Department of Energy (DOE) has concluded that the Bikini atoll is unsafe for resettlement. In response to the Bikinians' request for an independent review, we have examined the following DOE findings: (a) radionuclide contamination of Eneu and Bikini Islands, (b) radiation dosage to those who might resettle the islands, and (c) risks to the health of such settlers. We are in practical agreement with the DOE estimates. Resettlement of either island in 1983 would lead to a range of annual or 30-year cumulative doses that exceed the Federal Radiation Council (FRC) guides for the general population, but not those for occupation exposure. By 2013 resettlement of Eneu probably would be permissible. The principal source of radiation dose is local food, especially coconut, owing to contamination of the soil by cesium-137. A precise estimate of dose is impossible. The availability of imported foods would lessen local food consumption, but not sufficiently to meet the FRC guides for the general population. The 30-year cumulative index dose is 61 (25-122) rem for Bikini, and about 8 (3-16) rem for Eneu.;
Major Descriptors: *BIKINI -- CONTAMINATION; *BIKINI -- RADIATION HAZARDS; *HUMAN POPULATIONS -- RADIATION DOSES
Descriptors: CESIUM 137; DIET; DOSE COMMITMENTS; FOOD CHAINS; RISK ASSESSMENT
Broader Terms: ALKALI METAL ISOTOPES; BETA DECAY RADIOISOTOPES; BETA-MINUS DECAY RADIOISOTOPES; CESIUM ISOTOPES; DOSES; HAZARDS; HEALTH HAZARDS; ISLANDS; ISOTOPES; MARSHALL ISLANDS; MICRONESIA; NUCLEI; OCEANIA; ODD-EVEN NUCLEI; POPULATIONS; RADIOISOTOPES; YEARS LIVING RADIOISOTOPES
Subject Categories: 560151* -- Radiation Effects on Animals -- Man
510302 -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- Terrestrial Ecosystems & Food Chains -- (-1987)
INIS Subject Categories: C15* -- Effects of External Radiation on Man
C22 -- Radionuclide Ecology

10/5/707 (Item 407 from file: 103)
01127290 ERA-08-010657; EDB-83-027295
Author(s): Ryan, M.T.; Case, G.N.; McDowell, W.J.; Henley, L.C.
Title: Preliminary comparison of two techniques for bioassay of urine for plutonium
Corporate Source: Oak Ridge National Lab., TN (USA)
Publication Date: Dec 1982 p 13
Report Number(s): ORNL/TM-8531
Order Number: DE83004233
Contract Number (DOE): W-7405-ENG-26
Document Type: Report
Language: English
Journal Announcement: NTS8301
Availability: NTIS, PC A02/MF A01.
Subfile: NTS (NTIS); ERA (Energy Research Abstracts).
Country of Origin: United States

Country of Publication: United States
Abstract: A single 5-liter composite urine sample obtained by Brookhaven National Laboratory personnel from inhabitants of the Marshall Islands was analyzed for plutonium content using two different chemical sample preparation methods. Two of the five litters were prepared using a basic phosphate precipitation and three of the five liters were analyzed using complete dissolution of samples by wet ashing methods. In both cases these procedures were followed by separation of the plutonium by solvent extraction methods and counting by a special type of alpha liquid scintillation counting developed at ORNL called PERALS (Photon-Electron Rejecting Alpha Liquid Scintillation) spectrometry. The average plutonium concentration was 5.1 Bq/l (0.09 dpm/l) +- 10%. The advantages and disadvantages of both methods are presented and discussed.;
Major Descriptors: *PLUTONIUM -- BIOASSAY; *PLUTONIUM -- RADIOCHEMICAL ANALYSIS; *PLUTONIUM -- RADIOECOLOGICAL CONCENTRATION; *URINE -- BIOASSAY; *URINE -- RADIOCHEMICAL ANALYSIS
Descriptors: BIOLOGICAL ACCUMULATION; COMPARATIVE EVALUATIONS; HUMAN POPULATIONS; MARSHALL ISLANDS; PHOSPHATES; PRECIPITATION; RADIONUCLIDE KINETICS; SAMPLE PREPARATION; SCINTILLATION COUNTING; SOLVENT EXTRACTION; WET ASHING
Broader Terms: ACTINIDES; BIOLOGICAL MATERIALS; BIOLOGICAL WASTES; BODY FLUIDS; CHEMICAL ANALYSIS; COUNTING TECHNIQUES; ECOLOGICAL CONCENTRATION; ELEMENTS; EXTRACTION; ISLANDS; MATERIALS; METALS; MICRONESIA; OCEANIA; OXYGEN COMPOUNDS; PHOSPHORUS COMPOUNDS; POPULATIONS; QUANTITATIVE CHEMICAL ANALYSIS; SEPARATION PROCESSES; TRANSURANIUM ELEMENTS; WASTES
Subject Categories: 510302* -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- Terrestrial Ecosystems & Food Chains -- (-1987)
560171 -- Radiation Effects -- Nuclide Kinetics & Toxicology -- Man -- (-1987)
400103 -- Radiometric & Radiochemical Procedures -- (-1987)

10/5/708 (Item 408 from file: 103)
01123365 ERA-08-009467; EDB-83-023369
Title: Technology transfer of small-scale energy technologies in the US Pacific Territories
Author(s): Case, C.W.
Affiliation: Lawrence Berkeley Lab., CA
Conference Title: American section of the International Solar Energy Society conference
Conference Location: Houston, TX, USA Conference Date: 1 Jun 1982
Source: Proc. Annu. Meet. - Am. Sect. Int. Sol. Energy Soc. (United States) v 5. Coden: PMSID
Publication Date: 1982 p 1169-1174
Report Number(s): CONF-820629-Vol.5-Pt.2
Contract Number (DOE): W-7405-ENG-48
Document Type: Journal Article; Conference literature
Language: English
Journal Announcement: EPA8301
Subfile: EPA (Energy Abstracts for Policy Analysis); ERA (Energy Research Abstracts).
Country of Origin: United States
Abstract: From 1977 to 1981 the Department of Energy has awarded 32 grants for small-scale energy projects in the US Pacific Territories. A critical issue with these projects has been transferring the technology within the community once the project has been completed. Certain projects are more successful at this than others. There are elements common to projects which are the most successful in this regard. In addition, there appear to be five different types of technology transfer processes. This paper identifies these processes, illustrates each with a case study, and points out the common elements. Perhaps this information can be used when designing other projects to facilitate technology transfer in developing countries.;
Major Descriptors: *SOLAR ENERGY -- TECHNOLOGY TRANSFER

Descriptors: AMERICAN SAMOA; DEMONSTRATION PLANTS; EDUCATION; MARSHALL ISLANDS; TRUST TERRITORY OF THE PACIFIC ISLANDS
Broader Terms: ENERGY; ENERGY SOURCES; ISLANDS; MICRONESIA; NORTH AMERICA; OCEANIA; RENEWABLE ENERGY SOURCES; USA
Subject Categories: 140400* -- Solar Energy -- Environmental Aspects
299001 -- Energy Planning & Policy -- Solar -- (1989-)

10/5/709 (Item 409 from file: 103)
01118569 ERA-08-008349; EDB-83-018572
Author(s): Robison, W.L.; Mount, M.E.; Phillips, W.A.; Conrado, C.A.; Stuart, M.L.; Stoker, C.E.
Title: Northern Marshall Islands radiological survey: terrestrial food chain and total doses
Corporate Source: Lawrence Livermore National Lab., CA (USA)
Publication Date: 30 Sep 1982 p 154
Report Number(s): UCRL-52853-Pt.4
Order Number: DE83003106
Contract Number (DOE): W-7405-ENG-48
Document Type: Report; Numerical data
Language: English
Journal Announcement: NTS8212
Availability: NTIS, PC A08/MF A01.
Subfile: NTS (NTIS); INS (US Atomindex input); ERA (Energy Research Abstracts).
Country of Origin: United States
Country of Publication: United States
Abstract: A radiological survey was conducted from September through November of 1978 to assess the concentrations of persistent manmade radionuclides in the terrestrial and marine environments of 11 atolls and 2 islands in the Northern Marshall Islands. The survey consisted mainly of an aerial radiological reconnaissance to map the external gamma-ray exposure rates over the islands of each atoll. The logistical support for the entire survey was designed to accommodate this operation. As a secondary phase of the survey, shore parties collected appropriate terrestrial and marine samples to assess the radiological dose from pertinent food chains to those individuals residing on the atolls, who may in the future reside on some of the presently uninhabited atolls, or who collect food from these atolls. Over 5000 terrestrial and marine samples were collected for radionuclide analysis from 76 different islands. Soils, vegetation, indigenous animals, and cistern water and groundwater were collected from the islands. Reef and pelagic fish, clams, lagoon water, and sediments were obtained from the lagoons. The concentration data for /sup 90/Sr, /sup 137/Cs, /sup 238/Pu, /sup 239/ /sup 240/Pu, and /sup 241/Am in terrestrial food crops, fowl, and animals collected at the atolls or islands are summarized. An assessment of the total dose from the major exposure pathways including external gamma, terrestrial food chain including food products and drinking water, marine food chain, and inhalation is provided. Radiological doses at each atoll or island are calculated from the average radionuclide concentrations in the terrestrial foods, marine foods, etc. assuming the average daily intake for each food item.;
Major Descriptors: *AMERICIUM 241 -- RADIOECOLOGICAL CONCENTRATION; *CESIUM 137 -- RADIOECOLOGICAL CONCENTRATION; *HUMAN POPULATIONS -- RADIATION DOSES; *MARSHALL ISLANDS -- RADIATION MONITORING; *PLUTONIUM 238 -- RADIOECOLOGICAL CONCENTRATION; *PLUTONIUM 239 -- RADIOECOLOGICAL CONCENTRATION; *PLUTONIUM 240 -- RADIOECOLOGICAL CONCENTRATION; *STRONTIUM 90 -- RADIOECOLOGICAL CONCENTRATION
Descriptors: AQUATIC ECOSYSTEMS; COCONUTS; CROPS; DIET; DRINKING WATER; EXPERIMENTAL DATA; FISHES; FOOD CHAINS; GAMMA RADIATION; RADIOACTIVITY; SEAWATER; TERRESTRIAL ECOSYSTEMS
Broader Terms: ACTINIDE ISOTOPES; ACTINIDE NUCLEI; ALKALI METAL ISOTOPES; ALKALINE EARTH ISOTOPES; ALPHA DECAY RADIOISOTOPES; AMERICIUM ISOTOPES; ANIMALS; AQUATIC ORGANISMS; BETA DECAY RADIOISOTOPES; BETA-MINUS DECAY RADIOISOTOPES; CESIUM ISOTOPES; DATA; DOSES; ECOLOGICAL CONCENTRATION; ECOSYSTEMS; ELECTROMAGNETIC RADIATION; EVEN-EVEN NUCLEI; EVEN-ODD

NUCLEI; FOOD; FRUITS; HEAVY NUCLEI; HYDROGEN COMPOUNDS; INFORMATION; INTERMEDIATE MASS NUCLEI; IONIZING RADIATIONS; ISLANDS; ISOTOPES; MICRONESIA; MONITORING; NUCLEI; NUMERICAL DATA; OCEANIA; ODD-EVEN NUCLEI; OXYGEN COMPOUNDS; PLUTONIUM ISOTOPES; POPULATIONS; RADIATIONS; RADIOISOTOPES; STRONTIUM ISOTOPES; VERTEBRATES; WATER; YEARS LIVING RADIOISOTOPES
Subject Categories: 520302* -- Environment, Aquatic -- Radioactive Materials Monitoring & Transport -- Aquatic Ecosystems & Food Chains -- (-1987)
510302 -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- Terrestrial Ecosystems & Food Chains -- (-1987)
560171 -- Radiation Effects -- Nuclide Kinetics & Toxicology -- Man -- (-1987)
INIS Subject Categories: C22* -- Radionuclide Ecology
C21 -- Tissue Distribution, Metabolism, Toxicology & Removal of Radionuclides

10/5/710 (Item 410 from file: 103)
01118477 ERA-08-008317; CXS-82-000619; EDB-83-018480
Author(s): Friesen, B. (ed.)
Title: Enewetak radiological support project. Final report
Corporate Source: USDOE Nevada Operations Office, Las Vegas Holmes and Narver, Inc., Orange, CA (USA)
Publication Date: Sep 1982 p 669
Report Number(s): NVO-213
Order Number: DE83003674
Note: Portions of document are illegible. Printed copy available until stock is exhausted. Includes 8 sheets of 48 + 24x reduction microfiche
Document Type: Report
Language: English
Journal Announcement: NTS8301
Availability: NTIS, PC E19/MF $5.50.
Subfile: NTS (NTIS); INS (US Atomindex input); ERA (Energy Research Abstracts).
Country of Origin: United States
Country of Publication: United States
Abstract: From 1972 through 1980, the Department of Energy acted in an advisory role to the Defense Nuclear Agency during planning for and execution of the cleanup of Enewetak Atoll. The Nevada Operations Office of the Department of Energy was responsible for the radiological characterization of the atoll and for certification of radiological condition of each island upon completion of the project. In-situ measurements of gamma rays emitted by americium-241 were utilized along with wet chemistry separation of plutonium from soil samples to identify and delineate surface areas requiring removal of soil. Military forces removed over 100,000 cubic yards of soil from the surface of five islands and deposited this material in a crater remaining from the nuclear testing period. Subsurface soil was excavated and removed from several locations where measurements indicated the presence of radionuclides above predetermined criteria. The methodologies of data acquisition, analysis and interpretation are described and detailed results are provided in text, figures and microfiche. The final radiological condition of each of 43 islets is reported.;
Major Descriptors: *ENIWETOK -- DECONTAMINATION; *ENIWETOK -- RADIATION MONITORING
Descriptors: AERIAL MONITORING; CLEANING; CONTAMINATION; FALLOUT; FISSION PRODUCTS; NUCLEAR EXPLOSIONS; NUCLEAR WEAPONS; PLUTONIUM ISOTOPES; RADIATION PROTECTION; RADIOACTIVITY; REMOVAL; SAMPLING; SOILS; TRANSURANIUM ELEMENTS
Broader Terms: ACTINIDE ISOTOPES; CLEANING; ELEMENTS; EXPLOSIONS; ISLANDS; ISOTOPES; MARSHALL ISLANDS; MATERIALS; MICRONESIA; MONITORING; OCEANIA; RADIOACTIVE MATERIALS; WEAPONS
Subject Categories: 510300* -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- (-1989)
520300 -- Environment, Aquatic -- Radioactive Materials Monitoring &

Transport -- (1989)
INIS Subject Categories: B31* -- Land
B32 -- Water

10/5/711 (Item 411 from file: 103)
01118351 ERA-08-008271; EDB-83-018354
Title: Operation Castle. Report of the Manager Santa Fe Operations. Extracted version
Corporate Source: Kaman Tempo, Santa Barbara, CA (USA)
Publication Date: 1 Nov 1981 p 113
Report Number(s): AD-A-995144/3
Document Type: Report
Language: English
Journal Announcement: EDB8208
Availability: NTIS, PC A06/MF A01.
Subfile: ERA (Energy Research Abstracts).
Country of Origin: United States
Country of Publication: United States
Abstract: No abstract available.;
Major Descriptors: *CASTLE PROJECT -- MANAGEMENT; *CASTLE PROJECT -- OPERATION; *CASTLE PROJECT -- PLANNING
Descriptors: CONSTRUCTION; COST; ENIWETOK; MARSHALL ISLANDS; NUCLEAR EXPLOSIONS; PACIFIC OCEAN; TEST FACILITIES; TESTING
Broader Terms: EXPLOSIONS; ISLANDS; MARSHALL ISLANDS; MICRONESIA; NUCLEAR EXPLOSIONS; OCEANIA; SEAS; SURFACE WATERS
Subject Categories: 450200* -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives

10/5/712 (Item 412 from file: 103)
01118350 ERA-08-008270; EDB-83-018353
Author(s): Perret, W.R.
Title: General report of weapons tests. Ground-motion studies on Operations Ivy and Castle. Extracted version
Corporate Source: Kaman Tempo, Santa Barbara, CA (USA)
Publication Date: 1 Nov 1981 p 52
Report Number(s): AD-A-995143/5
Document Type: Report
Language: English
Journal Announcement: EDB8208
Availability: NTIS, PC A04/MF A01.
Subfile: ERA (Energy Research Abstracts).
Country of Origin: United States
Country of Publication: United States
Abstract: No abstract available.;
Major Descriptors: *CASTLE PROJECT -- GROUND MOTION; *IVY PROJECT -- GROUND MOTION; *NUCLEAR EXPLOSIONS -- GROUND MOTION
Descriptors: CONCRETES; DATA PROCESSING; NUCLEAR WEAPONS; SAND; SHELTERS
Broader Terms: BUILDING MATERIALS; EXPLOSIONS; MATERIALS; MOTION; NUCLEAR EXPLOSIONS; PROCESSING; WEAPONS
Subject Categories: 450200* -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives

10/5/713 (Item 413 from file: 103)
01118349 ERA-08-008269; EDB-83-018352
Author(s): Luke, C.W.; Rigotti, D.L.; Kinch, J.W.; Fullwood, R.; Anderson, D.
Title: Operation Redwing. Project 2.51, neutron-flux measurements. Extracted version. Report for May-Jul 56
Corporate Source: Kaman Tempo, Santa Barbara, CA (USA)
Publication Date: 15 May 1981 p 67
Report Number(s): AD-A-995142/7
Document Type: Report
Language: English
Journal Announcement: EDB8208
Availability: NTIS, PC A04/MF A01.
Subfile: ERA (Energy Research Abstracts).

Country of Origin: United States
Country of Publication: United States
Abstract: No abstract available.;
Major Descriptors: *NEUTRON FLUX -- MEASURING INSTRUMENTS; *NUCLEAR EXPLOSIONS -- NEUTRON FLUX; *REDWING PROJECT -- NEUTRON FLUX
Descriptors: ATTENUATION; BORATES; CONCRETES; DISTRIBUTION; DOSEMETERS; FAST NEUTRONS; GAMMA RADIATION; NEUTRON DETECTORS; NUCLEAR WEAPONS; SHIELDING; SODIUM COMPOUNDS; SULFUR; THERMAL NEUTRONS
Broader Terms: ALKALI METAL COMPOUNDS; BARYONS; BORON COMPOUNDS; BUILDING MATERIALS; ELECTROMAGNETIC RADIATION; ELEMENTARY PARTICLES; ELEMENTS; EXPLOSIONS; FERMIONS; HADRONS; IONIZING RADIATIONS; MATERIALS; MEASURING INSTRUMENTS; NEUTRONS; NONMETALS; NUCLEONS; OXYGEN COMPOUNDS; RADIATION DETECTORS; RADIATION FLUX; RADIATIONS; WEAPONS
Subject Categories: 450200* -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives
440102 -- Radiation Instrumentation -- Radiation Dosemeters

10/5/714 (Item 414 from file: 103)
01108410 ERA-08-006135; EDB-83-008411
Author(s): Colin, P.L.; Harrison, J.T. III
Title: Mid-Pacific Research Laboratory. Annual report, 1 October 1980-30 September 1981
Corporate Source: Hawaii Univ., Honolulu (USA). Office of Research Administration
Publication Date: Feb 1982 p 37
Report Number(s): DOE/EV/00703-4
Order Number: DE83002439
Contract Number (DOE): AC08-76EV00703
Document Type: Report
Language: English
Journal Announcement: NTS8212
Availability: NTIS, PC A03/MF A01.
Subfile: NTS (NTIS); INS (US Atomindex input); ERA (Energy Research Abstracts).
Country of Origin: United States
Country of Publication: United States
Abstract: The sediments of the Enewetak lagoon are the repository for the majority of residual radionuclides from the weapons testing program. The objective was to evaluate the biological and physical-chemical processes in the sediment bottom communities. Research has focused on features of the environment which reflect biological influence as opposed to direct studies of the constituent organisms. (ACR);
Major Descriptors: *BENTHOS -- ECOLOGY; *ENIWETOK -- AQUATIC ECOSYSTEMS; *SEDIMENTS -- RADIONUCLIDE MIGRATION
Descriptors: CRUSTACEANS; ENVIRONMENTAL EXPOSURE PATHWAY; PRODUCTIVITY; RADIOACTIVITY
Broader Terms: ANIMALS; AQUATIC ORGANISMS; ARTHROPODS; ECOSYSTEMS; ENVIRONMENTAL TRANSPORT; INVERTEBRATES; ISLANDS; MARSHALL ISLANDS; MASS TRANSFER; MICRONESIA; OCEANIA
Subject Categories: 520302* -- Environment, Aquatic -- Radioactive Materials Monitoring & Transport -- Aquatic Ecosystems & Food Chains -- (-1987)
INIS Subject Categories: C22* -- Radionuclide Ecology

10/5/715 (Item 415 from file: 103)
01108355 ERA-08-003017; EDB-83-008356
Title: ''A ground water resources study of a Pacific Ocean atoll - Tarawa, Gilbert Islands,'' by J. W. Lloyd, J.C. Miles, G. R. Chessmand, and S. F. Bugg
Author(s): Wheatcraft, S.W. (Desert Reseach Inst., Reno, NV); Buddemeier, R.W.
Source: Water Resour. Bull. (United States) v 17:5. Coden: WARBA
Publication Date: Oct 1981 p 898
Document Type: Journal Article
Language: English
Journal Announcement: EDB8207

Subfile: ERA (Energy Research Abstracts).
Country of Origin: United States
Abstract: Several inherent problems in the methodology employed in the ground water resource study of Tarawa Atoll (Lloyd, et al., 1981) are described. Studies of Enewetak Atoll have provided data that require a significantly different conceptual model of the atoll hydrogeology system. Comparison of well, lagoon, and ocean tidal observations with a mathematical model that assumes horizontal tidal propagation indicates that the observed results are more consistent with a system that is controlled by vertical coupling between the unconsolidated surface aquifer and an underlying aquifer of more permeable limestone. This indicates that most fresh water recharged to the aquifer migrates downward and mixes with the sea water in a deeper aquifer providing easy exchange with the ocean. Lloyd, et al., do not take tidal mixing or vertical transport into account and it therefore seems likely that fresh water inventories are significantly overestimated. Failure to include these significant loss terms in the island water budget may also account for calculated heads above ground level. (JMT);
Major Descriptors: *ENIWETOK -- GEOLOGY; *ENIWETOK -- HYDROLOGY; *GROUND WATER -- MATHEMATICAL MODELS
Descriptors: AQUIFERS; MIXING; SEAWATER
Broader Terms: HYDROGEN COMPOUNDS; ISLANDS; MARSHALL ISLANDS; MICRONESIA; OCEANIA; OXYGEN COMPOUNDS; WATER
Subject Categories: 520100* -- Environment, Aquatic -- Basic Studies -- (-1989)

10/5/716 (Item 416 from file: 103)
01108312 EDB-83-008313
Title: beta- and gamma-Comparative dose estimates on Eniwetok Atoll
Author(s): Crase, K.W.; Gudiksen, P.H.; Robison, W.L.
Affiliation: Lawrence Livermore National Laboratory, CA
Source: Health Phys. (United Kingdom) v 42:5. Coden: HLTPA
Publication Date: May 1982 p 559-564
Document Type: Journal Article
Language: English
Journal Announcement: EDB8210
Country of Origin: United States
Abstract: Eniwetok Atoll is one of the Pacific atolls used for atmospheric testing of U.S. nuclear weapons. Beta dose and gamma-ray exposure measurements were made on two islands of the Eniwetok Atoll during July-August 1976 to determine the beta and low energy gamma-contribution to the total external radiation doses to the returning Marshallese. Measurements were made at numerous locations with thermoluminescent dosimeters (TLD), pressurized ionization chambers, portable NaI detectors, and thin-window pancake GM probes. Results of the TLD measurements with and without a beta-attenuator indicate that approx. 29% of the total dose rate at 1 m in air is due to beta- or low energy gamma-contribution. The contribution at any particular site, however, is somewhat dependent on ground cover, since a minimal amount of vegetation will reduce it significantly from that over bare soil, but thick stands of vegetation have little effect on any further reductions. Integral 30-yr external shallow dose estimates for future inhabitants were made and compared with external dose estimates of a previous large scale radiological survey (En73). Integral 30-yr shallow external dose estimates are 25-50% higher than whole body estimates. Due to the low penetrating ability of the beta's or low energy gamma's, however, several remedial actions can be taken to reduce the shallow dose contribution to the total external dose.;
Major Descriptors: *RADIATION DOSES -- RADIOECOLOGICAL CONCENTRATION
Descriptors: BETA DETECTION; COMPARATIVE EVALUATIONS; ENIWETOK; EXTERNAL IRRADIATION; FORECASTING; GAMMA DETECTION; HUMAN POPULATIONS; MEASURING METHODS; NUCLEAR EXPLOSIONS; PLANTS; STATISTICS; THERMOLUMINESCENT DOSEMETERS; THERMOLUMINESCENT DOSIMETRY
Broader Terms: CHARGED PARTICLE DETECTION; DETECTION; DOSEMETERS; DOSES; DOSIMETRY; ECOLOGICAL CONCENTRATION; EXPLOSIONS; IRRADIATION; ISLANDS; LUMINESCENT DOSEMETERS; MARSHALL ISLANDS; MATHEMATICS; MEASURING

INSTRUMENTS; MICRONESIA; OCEANIA; POPULATIONS; RADIATION DETECTION
Subject Categories: 510300* -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- (-1989)
440102 -- Radiation Instrumentation -- Radiation Dosemeters

10/5/717 (Item 417 from file: 103)
01108140 AIX-13-705567; EDB-83-008141
Title: Message of Hiroshima. The memories and comments of a nuclear scientist
Author(s): Shimizu, S. (Kyoto Univ. (Japan))
Source: Fiz. Sz. (Hungary) v 32:1. Coden: FISZA
Publication Date: 1982 p 2-9
Document Type: Journal Article
Language: Hungarian
Journal Announcement: EPA8210
Subfile: EPA (Energy Abstracts for Policy Analysis).
Country of Origin: Japan
Abstract: A review of the research conducted during the Second World War by Japanese scientists and their in-situ experiences on the Hiroshima atomic bomb effects a week after the explosion is given. Details are presented on the activity data of samples from the site, on the results of half-life measurements and of chemical analyses. From these data the site of explosion and the neutron flux on the surface were computed. The damages caused by the Hiroshima and Nagasaki bombs were compared. Further, an account on the powder from the Bikini H-bomb explosion is given. Finally, the author protests against the military uses of nuclear energy.;
Major Descriptors: *NUCLEAR WEAPONS -- ETHICS
Descriptors: A-BOMB SURVIVORS; BIKINI; CONTAMINATION; FALLOUT; HIROSHIMA; NAGASAKI; RADIOACTIVITY
Broader Terms: ASIA; HUMAN POPULATIONS; ISLANDS; JAPAN; MARSHALL ISLANDS; MICRONESIA; OCEANIA; POPULATIONS; WEAPONS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)
290600 -- Energy Planning & Policy -- Nuclear Energy
INIS Subject Categories: C51* -- Actual Radiation Accidents

10/5/718 (Item 418 from file: 103)
01108137 ERA-08-002936; EDB-83-008138
Author(s): Fee, J.J.
Title: Operation Crossroads. Radiological decontamination of target and non-target vessels. volume 3. Director of ship material technical inspection report
Corporate Source: Joint Task Force One, Washington, DC (USA)
Publication Date: 1946 p 126
Report Number(s): AD-473908/2
Document Type: Report
Language: English
Journal Announcement: EDB8207
Availability: NTIS, PC A07/MF A01.
Subfile: ERA (Energy Research Abstracts).
Country of Origin: United States
Country of Publication: United States
Abstract: Contents: Decontamination and Ship Clearance Directives; Miscellaneous Conference Notes; Directives for Future Decontamination Research.;
Major Descriptors: *CROSSROADS PROJECT -- DECONTAMINATION; *SHIPS -- DECONTAMINATION
Descriptors: CONTAMINATION; EVAPORATORS; FALLOUT; NUCLEAR EXPLOSIONS; PIPES; PROTECTIVE CLOTHING; RADIATION PROTECTION; SHIELDING; UNDERWATER EXPLOSIONS
Broader Terms: CLEANING; CLOTHING; EXPLOSIONS; NUCLEAR EXPLOSIONS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)
400702 -- Radiochemistry & Nuclear Chemistry -- Properties of Radioactive Materials

10/5/719 (Item 419 from file: 103)
01108136 ERA-08-002935; EDB-83-008137
Author(s): Fee, J.J.
Title: Operation Crossroads. Radiological decontamination of target and non-target vessels. Volume 2. Director of ship material technical inspection report
Corporate Source: Joint Task Force One, Washington, DC (USA)
Publication Date: 1946 p 145
Report Number(s): AD-473907/4
Document Type: Report
Language: English
Journal Announcement: EDB8207
Availability: NTIS, PC A07/MF A01.
Subfile: ERA (Energy Research Abstracts).
Country of Origin: United States
Country of Publication: United States
Abstract: No abstract available.;
Major Descriptors: *CROSSROADS PROJECT -- DECONTAMINATION; *SHIPS -- DECONTAMINATION
Descriptors: CONTAMINATION; EVAPORATORS; FALLOUT; NUCLEAR EXPLOSIONS; PIPES ; PROTECTIVE CLOTHING; RADIATION PROTECTION; SAMPLERS; SAN FRANCISCO BAY; SEAWATER; UNDERWATER EXPLOSIONS
Broader Terms: CLEANING; CLOTHING; EQUIPMENT; EXPLOSIONS; HYDROGEN COMPOUNDS; LABORATORY EQUIPMENT; NUCLEAR EXPLOSIONS; OXYGEN COMPOUNDS; PACIFIC OCEAN; SEAS; SURFACE WATERS; WATER
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)
400702 -- Radiochemistry & Nuclear Chemistry -- Properties of Radioactive Materials

10/5/720 (Item 420 from file: 103)
01108135 ERA-08-002934; EDB-83-008136
Author(s): Fee, J.J.
Title: Operation Crossroads. Radiological decontamination of target and non-target vessels. Volume I. Director of ship material technical inspection report
Corporate Source: Joint Task Force One, Washington, DC (USA)
Publication Date: 1946 p 145
Report Number(s): AD-473906/6
Document Type: Report
Language: English
Journal Announcement: EDB8207
Availability: NTIS, PC A07/MF A01.
Subfile: ERA (Energy Research Abstracts).
Country of Origin: United States
Country of Publication: United States
Abstract: It was soon after Test Baker that the radioactive fission products were absorbed readily by rusty, porous and scaly surfaces loose paint, marine growths and algae. This fact was demonstrated forcibly on the lightly contaminated target APA's, which showed considerable radiation intensities on the outer shell in the vicinity of the waterline. The radioactive materials were lodged almost entirely in the marine growth and rust adhering to the shell. These vessels using ordinary paddle type bottom scrapers removed as much as practicable of the growth in the waterline area and thereby reduced considerably the amount of activity in that vicinity. They next proceeded outside the lagoon and steamed at high speed for a period of about 24 hours. The erosion of the water incident to this steaming resulted in a further reduction by about fifty percent. Continued streaming did not result in additional reduction of activity, however. Upon return to port, GENEVA wire-dragged the entire bottom using hogging lines and walking them down the length of the ship. This operation resulted in reducing the radiation levels inside the ship in the vicinity of the shell to tolerance limits for continuous occupancy. ;

Major Descriptors: *CROSSROADS PROJECT -- DECONTAMINATION; *SHIPS -- DECONTAMINATION
Descriptors: ALGAE; BARGES; CLEANING; CONTAMINATION; FALLOUT; FISSION PRODUCTS; NUCLEAR EXPLOSIONS; PAINTS; RADIATION PROTECTION; REMOVAL; SEAWATER; SHIELDING; SUBMARINES; UNDERWATER EXPLOSIONS
Broader Terms: CLEANING; COATINGS; EXPLOSIONS; HYDROGEN COMPOUNDS; ISOTOPES; MATERIALS; NUCLEAR EXPLOSIONS; OXYGEN COMPOUNDS; PLANTS; RADIOACTIVE MATERIALS; SHIPS; WATER
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)
400702 -- Radiochemistry & Nuclear Chemistry -- Properties of Radioactive Materials

10/5/721 (Item 421 from file: 103)
01107918 ERA-08-002859; EDB-83-007919
Author(s): Eicher, M.; Friedman, H.
Title: Operation Crossroads. Vycor glass gamma ray dosimeters. Appendix no. 20 to final report
Corporate Source: Joint Task Force One, Washington, DC (USA)
Publication Date: 3 Feb 1947 p 11
Report Number(s): AD-473895/1
Document Type: Report
Language: English
Journal Announcement: EDB8207
Availability: NTIS, PC A02/MF A01.
Subfile: ERA (Energy Research Abstracts).
Country of Origin: United States
Country of Publication: United States
Abstract: A gamma ray dosimeter was developed and used on Operation Crossroads providing dosage measurements at certain selected locations on the target ships. The range of dosage measured was from 100 to 20,000 roentgens. The principle of darkening of vycor glass by gamma rays proved to be applicable for a rugged, simple dosimeter.;
Major Descriptors: *COLORIMETRIC DOSEMETERS -- PERFORMANCE; *CROSSROADS PROJECT -- GAMMA DOSIMETRY; *GAMMA DOSIMETRY -- COLORIMETRIC DOSEMETERS
Descriptors: ATMOSPHERIC EXPLOSIONS; GLASS; NUCLEAR EXPLOSIONS; UNDERWATER EXPLOSIONS; VYCOR
Broader Terms: DOSEMETERS; DOSIMETRY; EXPLOSIONS; MEASURING INSTRUMENTS; NUCLEAR EXPLOSIONS
Subject Categories: 440102* -- Radiation Instrumentation -- Radiation Dosemeters
450202 -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)
500300 -- Environment, Atmospheric -- Radioactive Materials Monitoring & Transport -- (-1989)

10/5/722 (Item 422 from file: 103)
00983717 AIX-13-690662; EDB-82-158574
Title: Greenhouse effect of planetary atmospheres
Author(s): Kondratyev, K.Ya.; Moskalenko, N.I. (AN SSSR, Moscow. Glavnaya Geofizicheskaya Observatoriya; USSR State Committee for Hydrometeorology and Control of the Natural Environment, Moscow (USSR))
Source: Nuovo Cim., C. (Italy) v 3:4.
Publication Date: Jul-Aug 1980 p 436-460
Document Type: Journal Article
Language: English
Journal Announcement: EDB8208
Country of Origin: USSR
Abstract: The greenhouse effect of the atmosphere is the main factor of possible climate changes of anthropogenic origin. The growing pollution of the atmosphere leads to an increase of the concentration of various gaseous components. Of great importance is also the consideration of the aerosols. All the gaseous components, as well as aerosols, have the absorption bands in the IR spectral range. The traditional attention to the problem of the CO/sub 2/ contribution to the greenhouse effect has somewhat overshadowed the significance of the different components. The data characterizing the significance of the different components of the

greenhouse effect are considered. The results of studying the absorption spectra of methane, nitrous oxides, sulphuric gas, ammonia, nitric-acid vapours and other components are discussed. The assessments of their contribution to the greenhouse effect are given. The important role of the small-size fraction of the atmospheric aerosols as a factor of the greenhouse effect is discussed. Both the analysis of the causes of the Earth's climate variability and the relevant investigation of the atmospheric greenhouse effect determine the expediency of analysing the conditions of the greenhouse effect formation on other planets. Laboratory studies of the IR absorption spectra of synthetic CO/sub 2/ atmospheres were carried out. Some results from these studies are discussed.;
Major Descriptors: *EARTH ATMOSPHERE -- GREENHOUSE PROJECT; *GREENHOUSE PROJECT
Descriptors: AEROSOLS; CLIMATES; OPTICAL PROPERTIES; PLANETARY ATMOSPHERES; POLLUTION; SPECTRA
Broader Terms: ATMOSPHERES; COLLOIDS; DISPERSIONS; EXPLOSIONS; NUCLEAR EXPLOSIONS; PHYSICAL PROPERTIES; SOLS
Subject Categories: 640107* -- Astrophysics & Cosmology -- Planetary Phenomena
INIS Subject Categories: A15* -- Astrophysics & Cosmology, Cosmic Radiation

10/5/723 (Item 423 from file: 103)
00982824 EDB-82-157681
Author(s): Schell, W.R.; Nevissi, A.; Meyers, J.M.
Title: Biogeochemistry of transuranic elements in Bikini Atoll lagoon. Final report
Corporate Source: Washington Univ., Seattle (USA). Lab. of Radiation Ecology
Publication Date: Nov 1978 p 222
Report Number(s): RLO-2225-T18-22
Order Number: DE82021989
Contract Number (DOE): AT06-76EV70018
Note: Portions of document are illegible
Document Type: Report
Language: English
Journal Announcement: ERA8210
Availability: NTIS MF A01.
Subfile: ERA (Energy Research Abstracts); NTS (NTIS); INS (US Atomindex input).
Country of Origin: United States
Country of Publication: United States
Abstract: The distribution of transuranic and other radionuclides in the marine environment at Bikini Atoll was studied to better understand the biogeochemical cycling of radionuclides produced during testing of some 23 nuclear and thermonuclear devices between 1946 and 1958. The radionuclides are primarily associated with the coralline sediments. However, the highest radionuclide concentrations are not found at the detonation craters but with the fine particles which have been washed out of the craters in the reef by the currents and deposited downstream. The transuranic elements are distributed widely in sediments over the northwest quadrant of the atoll suggesting that this area serves as a settling basin for particles. The transuranic elements associated with these sediment particles do not remain fixed but are remobilized and distributed asymmetrically in the water column throughout the lagoon. The physico-chemical states of plutonium, measured using dialysis and sorption techniques include approx. 15% colloidal and varying amounts in the soluble and particulate fractions depending on sample location. Uptake of these physicochemical states is extensive on plankton with distribution coefficients measured at Bikini between water and plankton of 10/sup 4/ - 10/sup 6/. The uptake of plutonium in higher organisms decreases with trophic level and low concentrations (approx. .001 pCi/g for /sup 239/ /sup 240/Pu) are found in the edible muscle of fish. The half-time for cleansing the reef of contaminant radionuclides has been estimated near the Bravo Crater

using measurements made on the viscera of mullet.;
Major Descriptors: *BIKINI -- TRANSURANIUM ELEMENTS; *TRANSURANIUM ELEMENTS -- BIOGEOCHEMISTRY
Descriptors: DECONTAMINATION; DISTRIBUTION FUNCTIONS; FISSION PRODUCTS; ISOTOPE RATIO; NUCLEAR EXPLOSIONS; PLANKTON; RADIOECOLOGICAL CONCENTRATION; RADIONUCLIDE MIGRATION; SEDIMENTS; SPATIAL DISTRIBUTION
Broader Terms: AQUATIC ORGANISMS; CHEMISTRY; CLEANING; DISTRIBUTION; ECOLOGICAL CONCENTRATION; ELEMENTS; ENVIRONMENTAL TRANSPORT; EXPLOSIONS ; FUNCTIONS; GEOCHEMISTRY; ISLANDS; ISOTOPES; MARSHALL ISLANDS; MASS TRANSFER; MATERIALS; MICRONESIA; OCEANIA; RADIOACTIVE MATERIALS
Subject Categories: 520302* -- Environment, Aquatic -- Radioactive Materials Monitoring & Transport -- Aquatic Ecosystems & Food Chains -- (-1987)
INIS Subject Categories: C22* -- Radionuclide Ecology

10/5/724 (Item 424 from file: 103)
00970982 EDB-82-145837
Title: Operation Castle. Pacific Proving Grounds, spring of 1954. Report of Commander, Task Group 7.5
Corporate Source: Joint Task Force Seven, Washington, DC (USA)
Publication Date: 1954 p 57
Report Number(s): AD-A-995141/9
Document Type: Report
Language: English
Journal Announcement: ERA8204
Availability: NTIS, PC A04/MF A01.
Subfile: ERA (Energy Research Abstracts).
Country of Origin: United States
Country of Publication: United States
Abstract: None;
Major Descriptors: *CASTLE PROJECT
Descriptors: ENGINEERING; EQUIPMENT; NUCLEAR EXPLOSIONS; PLANNING
Broader Terms: EXPLOSIONS; NUCLEAR EXPLOSIONS
Subject Categories: 450200* -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives

10/5/725 (Item 425 from file: 103)
00970973 EDB-82-145828
Author(s): Swift, L.M.; Wells, E.J.
Title: Air pressure measurements (Operation CASTLE)
Corporate Source: Stanford Research Inst., Menlo Park, CA (USA)
Publication Date: May 1955 p 116
Report Number(s): AD-362095/2
Document Type: Report
Language: English
Journal Announcement: ERA8205
Availability: NTIS, PC A06/MF A01.
Subfile: ERA (Energy Research Abstracts).
Country of Origin: United States
Country of Publication: United States
Abstract: Project 3.1 of Operation CASTLE was concerned with the measurement of pressures existing on the surfaces of a non-responsive cubical structure from Shot 3. The analysis of data was not a portion of this particular project but the data will be analyzed by other agencies and used in computations of structural loading under air blast. The definition of free-field conditions in the vicinity of the structure constituted a vital portion of the project. Free-field conditions have been analyzed and the results are included in this report. Of a total of 65 gages, 63 gave usable data, which are reported in the form of both tracings and tabulations. One Q gage and one pressure gage gave recordings which are obviously wrong and these data are therefore not reported. Due to the low yield of the shot, conditions were far from optimum so that the usefulness of the data was impaired.;
Major Descriptors: *CASTLE PROJECT -- PRESSURE MEASUREMENT; *CASTLE PROJECT -- SHOCK WAVES; *MECHANICAL STRUCTURES -- BLAST EFFECTS; *PRESSURE

GAGES
Descriptors: DYNAMIC LOADS; NUCLEAR EXPLOSIONS
Broader Terms: EXPLOSIONS; MEASURING INSTRUMENTS; NUCLEAR EXPLOSIONS
Subject Categories: 450200* -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives

10/5/726 (Item 426 from file: 103)
00970971 EDB-82-145826
Author(s): Rollosson, G.W.
Title: Underwater pressure measurements in the lagoon
Corporate Source: Sandia Corp., Albuquerque, NM (USA)
Publication Date: Apr 1953 p 24
Report Number(s): AD-341048/7
Document Type: Report
Language: English
Journal Announcement: ERA8205
Availability: NTIS, PC A02/MF A01.
Subfile: ERA (Energy Research Abstracts).
Country of Origin: United States
Country of Publication: United States
Abstract: On Mike shot of Operation Ivy measurement of underwater pressures was attempted at four locations near the floor of the lagoon. Gauges were installed at distances ranging from approximately 5700 to 112,000 ft from ground zero and about 1 mile from the reef. The single usable record showed sharp pressure spikes at 0.3 and 0/6 sec after zero time. Although the later spike corresponded with the time of arrival of the air shock at the surface of the lagoon above the gauge, no satisfactory explanation for the first spike has been found. Because two of the four gauges used were apparently faulty in their operation and the recorder to which a third was connected failed to start at all, it was impossible to draw any conclusions regarding the nature or magnitude of the underwater shock.;
Major Descriptors: *IVY PROJECT -- SHOCK WAVES; *UNDERWATER EXPLOSIONS -- SHOCK WAVES
Descriptors: NUCLEAR EXPLOSIONS; PRESSURE MEASUREMENT
Broader Terms: EXPLOSIONS; NUCLEAR EXPLOSIONS
Subject Categories: 450200* -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives

10/5/727 (Item 427 from file: 103)
00956005 INS-82-016430; EDB-82-130859
Author(s): Robison, W.L.; Mount, M.E.; Phillips, W.A.; Stuart, M.L.; Thompson, S.E.; Conrado, C.L.; Stoker, A.C.
Title: Updated radiological dose assessment of Bikini and Eneu Islands at Bikini Atoll
Corporate Source: Lawrence Livermore National Lab., CA (USA)
Publication Date: 29 Jan 1982 p 87
Report Number(s): UCRL-53225
Order Number: DE82017380
Contract Number (DOE): W-7405-ENG-48
Document Type: Report
Language: English
Journal Announcement: ERA8208
Availability: NTIS, PC A05/MF A01.
Subfile: ERA (Energy Research Abstracts); NTS (NTIS); INS (US Atomindex input).
Country of Origin: United States
Country of Publication: United States
Abstract: This report is part of a continuing effort to refine dose assessments for resettlement options at Bikini Atoll. Radionuclide concentration data developed at Bikini Atoll since 1977 have been used in conjunction with recent dietary information and current dose models to develop the annual dose rate and 30- and 50-y integral doses presented here for Bikini and Eneu Island living patterns. The terrestrial food chain is the most significant exposure pathway--it contributes more than 50% of the total dose--and external gamma

exposure is the second most significant pathway. Other pathways evaluated are the marine food chain, drinking water, and inhalation. Cesium-137 produces more than 85% of the predicted dose; /sup 90/Sr is the second most significant radionuclide; /sup 60/Co contributes to the external gamma exposure in varying degrees, but is a small part of the total predicted dose; the transuranic radionuclides contribute a small portion of the total predicted lung and bone doses but do present a long-term source of exposure. Maximum annual dose rates for Bikini Island are about 1 rem/y for the whole body and bone marrow when imported foods are available and about 1.9 rem/y when imports are unavailable. Maximum annual dose rates for Eneu Island when imports are available are 130 mrem/y for the whole body and 136 mrem/y for bone marrow. Similar doses when imported foods are unavailable are 245 and 263 mrem/y, respectively. The 30-y integral doses for Bikini Island are about 23 rem for whole body and bone marrow when imported foods are available and more than 40 rem when imports are unavailable. The Eneu Island 30-y integral doses for whole body and bone marrow are about 3 rem when imports are available and 5.5 and 6.1 rem, respectively, when imports are unavailable. Doses from living patterns involving some combination of Bikini and Eneu Islands fall between the doses listed above for each island separately.;
Major Descriptors: *BIKINI -- RADIATION DOSES
Descriptors: CESIUM 137; COBALT 60; DOSE RATES; ENVIRONMENTAL EXPOSURE PATHWAY; FOOD CHAINS; RADIOECOLOGICAL CONCENTRATION; STRONTIUM 90
Broader Terms: ALKALI METAL ISOTOPES; ALKALINE EARTH ISOTOPES; BETA DECAY RADIOISOTOPES; BETA-MINUS DECAY RADIOISOTOPES; CESIUM ISOTOPES; COBALT ISOTOPES; DOSES; ECOLOGICAL CONCENTRATION; EVEN-EVEN NUCLEI; INTERMEDIATE MASS NUCLEI; INTERNAL CONVERSION RADIOISOTOPES; ISLANDS; ISOMERIC TRANSITION ISOTOPES; ISOTOPES; MARSHALL ISLANDS; MICRONESIA; MINUTES LIVING RADIOISOTOPES; NUCLEI; OCEANIA; ODD-EVEN NUCLEI; ODD-ODD NUCLEI; RADIOISOTOPES; STRONTIUM ISOTOPES; YEARS LIVING RADIOISOTOPES
Subject Categories: 510302* -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- Terrestrial Ecosystems & Food Chains -- (-1987)
520302 -- Environment, Aquatic -- Radioactive Materials Monitoring & Transport -- Aquatic Ecosystems & Food Chains -- (-1987)
INIS Subject Categories: C22* -- Radionuclide Ecology

10/5/728 (Item 428 from file: 103)
00955599 ERA-07-044610; EDB-82-130453
Author(s): Bainbridge, K.T.
Title: Trinity
Corporate Source: Los Alamos Scientific Lab., NM (USA)
Publication Date: May 1976 p 85
Report Number(s): LA-6300-H
Order Number: DE82010104
Contract Number (DOE): W-7405-ENG-36
Note: Portions of document are illegible
Document Type: Report; Numerical data
Language: English
Journal Announcement: NTS8203
Availability: NTIS, PC A05/MF A01.
Subfile: NTS (NTIS); ERA (Energy Research Abstracts).
Country of Origin: United States
Country of Publication: United States
Abstract: This report is intended as a comprehensive record of the July 16, 1945 atomic bomb test at the Alamogordo Air Base. The events leading up to Zero, the moment the bomb was detonated are described in detail. The radiation observations at Trinity, are summarized and compared with the airburst test at Bikini. All other experimental observations made at the Trinity test are summarized. Possible future atomic bomb tests that might be scheduled to investigate the behavior of bombs of a design different from the Model 2 Implosion Bomb used at Trinity, Nagasaki, and Bikini are discussed.;
Major Descriptors: *NUCLEAR WEAPONS -- TESTING; *TRINITY EVENT -- PLANNING; *TRINITY EVENT -- REVIEWS

Descriptors: BLAST EFFECTS; DETONATIONS; EXPERIMENTAL DATA; NEW MEXICO; RADIATION EFFECTS; SEISMIC WAVES; SHOCK WAVES
Broader Terms: ATMOSPHERIC EXPLOSIONS; DATA; DOCUMENT TYPES; EXPLOSIONS; FEDERAL REGION VI; INFORMATION; NORTH AMERICA; NUCLEAR EXPLOSIONS; NUMERICAL DATA; USA; WEAPONS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/729 (Item 429 from file: 103)
00951612 EPA-08-003623; ERA-07-047093; EDB-82-126466
Title: Territorial energy assessment. Phase I
Corporate Source: Department of Energy, San Francisco, CA (USA). San Francisco Operations Office
Publication Date: 31 Jul 1981 p 307
Report Number(s): DOE/NBM-2009009
Order Number: DE82009009
Note: Portions of document are illegible
Document Type: Report
Language: English
Journal Announcement: NTS8204
Availability: NTIS, PC A14/MF A01.
Subfile: NTS (NTIS); ERA (Energy Research Abstracts); EPA (Energy Abstracts for Policy Analysis).
Country of Origin: United States
Country of Publication: United States
Abstract: The goal of the project is to provide a current perspective on territorial energy problems, to identify existing energy supply and demand data, and to identify energy resources that might be developed and appropriate technology options. The cost of the technical assessment and economic analysis activities required to support the development of specific energy plans is defined and estimated. Information is summarized for the US Territories, the Pacific Trust Territories, and Puerto Rico. An overview and analysis of the the Pacific Island Entities; profiles of the Pacifc Island Entities; and the Caribbean Island Entities are presented. (MCW);
Major Descriptors: *AMERICAN SAMOA -- ENERGY DEMAND; *AMERICAN SAMOA -- ENERGY SUPPLIES; *MARSHALL ISLANDS -- ENERGY DEMAND; *MARSHALL ISLANDS -- ENERGY SUPPLIES; *MICRONESIA -- ENERGY DEMAND; *MICRONESIA -- ENERGY SUPPLIES; *PUERTO RICO -- ENERGY DEMAND; *PUERTO RICO -- ENERGY SUPPLIES; *TRUST TERRITORY OF THE PACIFIC ISLANDS -- ENERGY DEMAND; *TRUST TERRITORY OF THE PACIFIC ISLANDS -- ENERGY SUPPLIES; *VIRGIN ISLANDS -- ENERGY DEMAND; *VIRGIN ISLANDS -- ENERGY SUPPLIES
Descriptors: APPROPRIATE TECHNOLOGY; ECONOMIC DEVELOPMENT; ECONOMY; ENERGY SOURCE DEVELOPMENT; GUAM; MARIANA ISLANDS; POLITICAL ASPECTS; RENEWABLE ENERGY SOURCES; TECHNOLOGY ASSESSMENT; USA
Broader Terms: DEMAND; ENERGY SOURCES; FEDERAL REGION II; GREATER ANTILLES; INSTITUTIONAL FACTORS; ISLANDS; LESSER ANTILLES; MARIANA ISLANDS; MICRONESIA; NORTH AMERICA; OCEANIA; TRUST TERRITORY OF THE PACIFIC ISLANDS; USA; WEST INDIES
Subject Categories: 292000* -- Energy Planning & Policy -- Supply, Demand & Forecasting

10/5/730 (Item 430 from file: 103)
00940869 ERA-07-047963; EDB-82-115722
Title: Radiological cleanup of Enewetak Atoll
Corporate Source: Defense Nuclear Agency, Washington, DC (USA)
Publication Date: 1981 p 718
Report Number(s): AD-A-107997/9
Document Type: Report
Language: English
Journal Announcement: EDB8203
Availability: NTIS, PC A99/MF A01.
Subfile: ERA (Energy Research Abstracts).
Country of Origin: United States
Country of Publication: United States
Abstract: For 8 years, from 1972 until 1980, the United States planned and

carried out the radiological cleanup, rehabilitation, and resettlement of Enewetak Atoll in the Marshall Islands. This documentary records, from the perspective of DOD, the background, decisions, actions, and results of this major national and international effort. The documentary is designed: First, to provide a historical document which records with accuracy this major event in the history of Enewetak Atoll, the Marshall Islands, the Trust Territory of the Pacific Islands, Micronesia, the Pacific Basin, and the United States. Second, to provide a definitive record of the radiological contamination of the Atoll. Third, to provide a detailed record of the radiological exposure of the cleanup forces themselves. Fourth, to provide a useful guide for subsequent radiological cleanup efforts elsewhere.;
Major Descriptors: *ENIWETOK -- DECONTAMINATION
Descriptors: FISSION PRODUCTS; MARSHALL ISLANDS; NUCLEAR EXPLOSIONS; USA
Broader Terms: CLEANING; EXPLOSIONS; ISLANDS; ISOTOPES; MARSHALL ISLANDS; MATERIALS; MICRONESIA; NORTH AMERICA; OCEANIA; RADIOACTIVE MATERIALS
Subject Categories: 450200* -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives
510300 -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- (-1989)
520300 -- Environment, Aquatic -- Radioactive Materials Monitoring & Transport -- (1989)

10/5/731 (Item 431 from file: 103)
00936320 ERA-07-041631; INS-82-012537; EDB-82-111172
Title: Dynamics of radionuclide exchange in the calcareous algae Halimeda at Enewetak Atoll
Author(s): Spies, R.B. (Lawrence Livermore Lab., CA); Marsh, K.V.; Kercher, J.R.
Source: Limnol. Oceanogr. (United States) v 26:1. Coden: LIOCA
Publication Date: 1981 p 74-85
Contract Number (DOE): W-7405-ENG-48
Document Type: Journal Article
Language: English
Journal Announcement: EDB8207
Subfile: INS (US Atomindex input); ERA (Energy Research Abstracts).
Country of Origin: United States
Abstract: Measurements of /sup 239 +240/Pu in the detrital inclusions and in acid-soluble and acid-insoluble fractions of Halimeda macrophysa showed a 10-fold higher concentration in the acid-insoluble coenocytic filaments than in the acid-soluble fraction. In a depuration experiment with Halimeda incrassata at Enewetak Atoll the loss rate of six radionuclides was measured. Data for /sup 60/Co, /sup 137/Cs, and /sup 102//sup m/Rh were fit to loss curves by using one term for exponential loss; data for /sup 155/Eu, /sup 239 +240/Pu, and /sup 241/Am required two terms. For each radionuclide, compartment size and transfer functions were determined for the apropriate one- and two-compartment models. Of 26 possible two-compartment models, only seven gave solutions with our data. Nearly identical loss rates were obtained for /sup 155/Eu, /sup 239 +240/Pu, and /sup 241/Am in the fast-exchanging compartments for all seven models. The uptake rates for these nuclides were also similar when uptake rates were normalized to local sediment concentrations. The fast-exchanging compartment probably corresponds to the mucilage surface layer of the coenocytic filaments. The identity of the slow-exchanging compartment is less certain but it may correspond to the skeletal surface.;
Major Descriptors: *ALGAE -- RADIONUCLIDE KINETICS
Descriptors: AMERICIUM 241; CESIUM 137; COBALT 60; ENIWETOK; EUROPIUM 155; LOSSES; MATHEMATICAL MODELS; PLUTONIUM 239; PLUTONIUM 240; RHODIUM 102; SEDIMENTS; UPTAKE
Broader Terms: ACTINIDE ISOTOPES; ACTINIDE NUCLEI; ALKALI METAL ISOTOPES; ALPHA DECAY RADIOISOTOPES; AMERICIUM ISOTOPES; BETA DECAY RADIOISOTOPES; BETA-MINUS DECAY RADIOISOTOPES; BETA-PLUS DECAY RADIOISOTOPES; CESIUM ISOTOPES; COBALT ISOTOPES; DAYS LIVING RADIOISOTOPES; ELECTRON CAPTURE RADIOISOTOPES; EUROPIUM ISOTOPES; EVEN-EVEN NUCLEI; EVEN-ODD NUCLEI; HEAVY NUCLEI; INTERMEDIATE MASS NUCLEI; INTERNAL CONVERSION

RADIOISOTOPES; ISLANDS; ISOMERIC TRANSITION ISOTOPES; ISOTOPES; MARSHALL ISLANDS; MICRONESIA; MINUTES LIVING RADIOISOTOPES; NUCLEI; OCEANIA; ODD-EVEN NUCLEI; ODD-ODD NUCLEI; PLANTS; PLUTONIUM ISOTOPES; RADIOISOTOPES; RARE EARTH ISOTOPES; RARE EARTH NUCLEI; RHODIUM ISOTOPES ; YEARS LIVING RADIOISOTOPES
Subject Categories: 560174* -- Radiation Effects -- Nuclide Kinetics & Toxicology -- Microorganisms -- (-1987)
INIS Subject Categories: C21* -- Tissue Distribution, Metabolism, Toxicology & Removal of Radionuclides

10/5/732 (Item 432 from file: 103)
00910783 AIX-13-662302; ERA-07-034811; EDB-82-085629
Title: Historical review of radiation research in Japan
Author(s): Yamasaki, F. (Japan Radioisotope Association, Tokyo); Okada, S. (Tokyo Univ. (Japan). Faculty of Medicine); Imamura, M.; Terashima, T.; Yamaguchi, H. (eds.)
Title: Proceedings of the 6th international congress of radiation research
Conference Title: 6. international congress symposium on radiation research and stem cells
Conference Location: Tokyo, Japan Conference Date: 13 May 1979
Publisher: Japanese Association for Radiation Research,Tokyo, Japan
Publication Date: 1979 p 16-20
Report Number(s): CONF-790524-
Document Type: Analytic of a Book; Conference literature
Language: English
Journal Announcement: EDB8203
Subfile: ERA (Energy Research Abstracts).
Country of Origin: Japan
Country of Publication: Japan
Abstract: The outline of the history of radiation research in Japan is written in connection with the names of researchers. Yoshio Nishina was a pioneer, who derived the Klein-Nishina formula for the scattering of hard X-ray by free electrons. In 1935, the first nuclear experiment laboratory was constructed in the Institute of Physical and Chemical Research. Two cyclotrons, 26 in and 60 in pole face diameter, and a high voltage Cockcroft-Walton type ion accelerator were installed. Irradiation of insects and plants with fast neutrons was attempted to examine the biological effect. In August, 1945, atomic bombs exploded in Hiroshima and Nagasaki. In 1950, radioisotopes were available. In early March, 1954, Bikini accident occurred. One fishing vessel was contaminated by radioactive fallout, and to investigate the effect of radioactivity, a committee consisted of investigators of physics, chemistry, medicine, biology, fisheries and geophysics was organized. The Japan Atomic Energy Research Institute was established in June, 1956. Several institutions for the peaceful use of atomic energy were established. The hybrid spark chamber to image the distribution of ..beta..-emitting isotopes on a plane surface was constructed in Nagoya University. As for the national project on food irradiation, one laboratory has played the role in irradiation techniques. Researches on radiation chemistry in universities, governmental and commercial organizations have been progressing steadily, and the machines for nanosecond to picosecond pulse radiolysis are working.;
Major Descriptors: *A-BOMB SURVIVORS -- RESEARCH PROGRAMS; *BIOLOGICAL RADIATION EFFECTS -- RESEARCH PROGRAMS; *JAERI -- RESEARCH PROGRAMS; *JAPAN -- NUCLEAR INDUSTRY
Descriptors: ACCIDENTS; BIKINI; FALLOUT; HIROSHIMA; NAGASAKI; NUCLEAR EXPLOSIONS; RADIATION INJURIES; RADIOPASTEURIZATION
Broader Terms: ASIA; BIOLOGICAL EFFECTS; BIOLOGICAL RADIATION EFFECTS; EXPLOSIONS; HUMAN POPULATIONS; INDUSTRY; INJURIES; IRRADIATION; ISLANDS ; JAPAN; JAPANESE ORGANIZATIONS; MARSHALL ISLANDS; MICRONESIA; NATIONAL ORGANIZATIONS; OCEANIA; PASTEURIZATION; POPULATIONS; RADIATION EFFECTS
Subject Categories: 560100* -- Biomedical Sciences, Applied Studies -- Radiation Effects
054000 -- Nuclear Fuels -- Health & Safety
INIS Subject Categories: F61* -- Miscellaneous -- General Relevant Documents

10/5/733 (Item 433 from file: 103)
00910272 ERA-07-034634; EDB-82-085118
Author(s): Fragaszy, R.J.; Voss, M.E.
Title: Laboratory verification of blast-induced liquefaction mechanism. Final report Jan-Jul 81
Corporate Source: San Diego State Univ., CA (USA). Dept. of Civil Engineering
Publication Date: Oct 1981 p 59
Report Number(s): AD-A-109000/0
Document Type: Report
Language: English
Journal Announcement: EDB8203
Availability: NTIS, PC A04/MF A01.
Subfile: ERA (Energy Research Abstracts).
Country of Origin: United States
Country of Publication: United States
Abstract: A mechanism for blast-induced liquefaction was tested in a series of high pressure undrained, isotropic compression tests on saturated samples of Eniwetok beach sand and Ottawa sand. Theory, based on inelastic volume compressibility of sand, was shown to be valid for the case of quasi-static, isotropic loading. Specimens of Eniwetok sand subjected to an initial effective stress of 1 MPa were liquefied by a single cycle of loading of 34 MPa. Specimens of Ottawa sand, tested in the same manner, generated excess pore pressure but not enough to completely liquefy the soil. The errors introduced by flexibility of the testing systems were analyzed and found to be insignificant. Suggestions for future research were made.;
Major Descriptors: *NUCLEAR EXPLOSIONS -- SIMULATION; *SAND -- LIQUEFACTION ; *SOILS -- LIQUEFACTION
Descriptors: BLAST EFFECTS; DYNAMIC LOADS; ENIWETOK; FLUID MECHANICS; GROUND MOTION; HIGH PRESSURE; PRESSURE DEPENDENCE; SATURATION; SOIL MECHANICS; STATIC LOADS; STRESSES; VOLUME
Broader Terms: EXPLOSIONS; ISLANDS; MARSHALL ISLANDS; MECHANICS; MICRONESIA ; MOTION; OCEANIA; THERMOCHEMICAL PROCESSES
Subject Categories: 450200* -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives

10/5/734 (Item 434 from file: 103)
00892006 AIX-13-651221; ERA-07-028436; EDB-82-066849
Title: Low-level laboratory for alpha and gamma counting of environmental samples
Author(s): Schell, W.R.; Vick, C.E.; Wurtz, E.A. (Washington Univ., Seattle (USA). Lab. of Radiation Ecology)
Title: Methods of low-level counting and spectrometry. Proceedings Series
Conference Title: IAEA international symposium on methods of low-level counting and spectrometry
Conference Location: Berlin, F.R. Germany Conference Date: 6 Apr 1981
Publisher: IAEA,Vienna, Austria
Publication Date: 1981 p 125-149
Report Number(s): CONF-810409-; STI/PUB-592; IAEA-SM-252/22
Document Type: Analytic of a Book; Conference literature
Language: English
Journal Announcement: EDB8202
Subfile: ERA (Energy Research Abstracts); AIX (non-US Atomindex input).
Country of Origin: United States
Country of Publication: International Atomic Energy Agency <IAEA>
Abstract: The development of a low-level counting laboratory for the measurement of alpha- and gamma-ray emitting radionuclides in environmental samples is presented. A microcomputer-based counting system has been set up which consists of 12 Si-surface barrier detectors and four Ge(Li) detectors and associated analog-to-digital converters interfaced to a Nuclear Data Corporation ND6620 data acquisition and processing system. Sample preparation includes Ge(Li) detector calibration of a few container sizes and several counting matrix densities. A procedure for /sup 241/Pu analysis has been adapted

for a low-level liquid scintillation counter and used to measure samples collected at several atolls in the Marshall Islands. The /sup 241/Pu/sup 239,240/Pu ratio is generally approximately 20 when decay-corrected back to 1956. However, ratios of from 10 to 26 were measured, indicating that the /sup 241/Pu/sup 239,240/Pu ratios may be used to detect particular sources of plutonium isotopes, i.e., from different nuclear detonations or from nuclear waste disposal. Measurements of plutonium and /sup 210/Pb have been made of a nuclear waste disposal site 4000 m deep located off the coast of New York, USA. Because of the low-level activity of the plutonium present, measurement times often exceeded 10,000 min. The long-term reliability of the system is proved by these measurements and by the results of the interlaboratory calibration.;
Major Descriptors: *ENVIRONMENTAL MATERIALS -- ALPHA DETECTION; *ENVIRONMENTAL MATERIALS -- GAMMA DETECTION; *LOW LEVEL COUNTERS -- MICROPROCESSORS
Descriptors: AGE ESTIMATION; ALPHA SPECTRA; ANALOG-TO-DIGITAL CONVERTERS; BACKGROUND RADIATION; DATA ACQUISITION; DATA PROCESSING; GAMMA SPECTRA; LI-DRIFTED GE DETECTORS; LIQUID SCINTILLATION DETECTORS; LOW LEVEL COUNTING; NAI DETECTORS; PLUTONIUM 239; PLUTONIUM 240; PLUTONIUM 241; SAMPLE PREPARATION; SEAWATER; SI SEMICONDUCTOR DETECTORS; SURFACE BARRIER DETECTORS
Broader Terms: ACTINIDE ISOTOPES; ACTINIDE NUCLEI; ALPHA DECAY RADIOISOTOPES; BETA DECAY RADIOISOTOPES; BETA-MINUS DECAY RADIOISOTOPES ; CHARGED PARTICLE DETECTION; COMPUTERS; COUNTING TECHNIQUES; DETECTION ; ELECTRONIC CIRCUITS; ELECTRONIC EQUIPMENT; EQUIPMENT; EVEN-EVEN NUCLEI; EVEN-ODD NUCLEI; GE SEMICONDUCTOR DETECTORS; HEAVY NUCLEI; HYDROGEN COMPOUNDS; ISOTOPES; LI-DRIFTED DETECTORS; MATERIALS; MEASURING INSTRUMENTS; MICROELECTRONIC CIRCUITS; NUCLEI; OXYGEN COMPOUNDS; PLUTONIUM ISOTOPES; PROCESSING; RADIATION DETECTION; RADIATION DETECTORS; RADIATIONS; RADIOISOTOPES; SCINTILLATION COUNTERS; SEMICONDUCTOR DETECTORS; SOLID SCINTILLATION DETECTORS; SPECTRA; WATER; YEARS LIVING RADIOISOTOPES
Subject Categories: 440101* -- Radiation Instrumentation -- General Detectors or Monitors & Radiometric Instruments
520301 -- Environment, Aquatic -- Radioactive Materials Monitoring & Transport -- Water -- (1987)
400103 -- Radiometric & Radiochemical Procedures -- (-1987)
INIS Subject Categories: E41* -- Particle & Radiation Detection & Measuring Instruments & Methods

10/5/735 (Item 435 from file: 103)
00885705 EDB-82-060547
Title: Radiating paradise
Author(s): Heuseler, H.
Source: Plus (Germany, Federal Republic of) v 19. Coden: PLUSD
Publication Date: 6 May 1981 p 18-20
Document Type: Journal Article
Language: German
Journal Announcement: EDB8110
Subfile: DE (Federal Republic of Germany (sent to DOE from)).
Country of Origin: Germany, Federal Republic of
Abstract: Decades after the a-bomb experiments in the desert of Nevada, cases of illness occur more frequently: many former soldiers who had to observe the tests as spectators suffer from leukemia, skin and thyroid ulcers. Even worse are the late results of the nuclear weapon tests in the Pacific: on Bikini and Eniwetok, once paradise-like atolls, the death from radiation is waiting, an attempt to recultivate the bombed Bikini Atoll failed.;
Major Descriptors: *HUMAN POPULATIONS -- DELAYED RADIATION EFFECTS; *MILITARY PERSONNEL -- DELAYED RADIATION EFFECTS; *NUCLEAR EXPLOSIONS -- RADIATION HAZARDS
Descriptors: BIKINI; MAN; NEVADA TEST SITE; NUCLEAR WEAPONS
Broader Terms: ANIMALS; BIOLOGICAL EFFECTS; BIOLOGICAL RADIATION EFFECTS; EXPLOSIONS; HAZARDS; HEALTH HAZARDS; ISLANDS; MAMMALS; MARSHALL ISLANDS ; MICRONESIA; OCEANIA; PERSONNEL; POPULATIONS; PRIMATES; RADIATION

EFFECTS; VERTEBRATES; WEAPONS
Subject Categories: 560151* -- Radiation Effects on Animals -- Man
450202 -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/736 (Item 436 from file: 103)
00885702 AIX-13-653553; EDB-82-060544
Title: Tale of two islands: Bikini and Enewetak
Author(s): Alcalay, G. (Rutgers--the State Univ., New Brunswick, NJ (USA))
Source: Ecologist (United Kingdom) v 11:5. Coden: ECOGA
Publication Date: Sep-Oct 1981 p 222-227
Document Type: Journal Article
Language: English
Journal Announcement: EDB8202
Subfile: AIX (non-US Atomindex input).
Country of Origin: United States
Abstract: An account is given of (a) the transfer of the inhabitants of Bikini and Enewetok so that the US could use the islands for atomic bomb tests, and (b) the subsequent arrangements made for the return of the islanders. The effects of contamination of the islands and of fallout from the tests are described. Radiological and other problems are discussed.;
Major Descriptors: *BIKINI -- FALLOUT; *BIKINI -- HUMAN POPULATIONS; *ENIWETOK -- FALLOUT; *ENIWETOK -- HUMAN POPULATIONS
Descriptors: BIOLOGICAL RADIATION EFFECTS; CONTAMINATION; NUCLEAR EXPLOSIONS; RADIATION HAZARDS; SOILS; TRANSLOCATION
Broader Terms: BIOLOGICAL EFFECTS; EXPLOSIONS; HAZARDS; HEALTH HAZARDS; ISLANDS; MARSHALL ISLANDS; MICRONESIA; OCEANIA; POPULATIONS; RADIATION EFFECTS
Subject Categories: 560151* -- Radiation Effects on Animals -- Man
INIS Subject Categories: C20* -- Radionuclide Effects & Kinetics

10/5/737 (Item 437 from file: 103)
00884658 NTS-82-003547; ERA-07-023143; INS-82-005139; EDB-82-059500
Title: Aerial radiological and photographic survey of eleven atolls and two islands within the Northern Marshall Islands. Dates of surveys, July-November 1978
Corporate Source: EG and G, Inc., Las Vegas, NV (USA). Energy Measurements Group
Publication Date: Jun 1981 p 425
Report Number(s): EGG-1183-1758
Order Number: DE82005584
Contract Number (DOE): AC08-76NV01183
Document Type: Report; Numerical data
Language: English
Journal Announcement: EDB8201
Availability: NTIS, PC A18/MF A01.
Subfile: INS (US Atomindex input); ERA (Energy Research Abstracts); TIC (Technical Information Center).
Country of Origin: United States
Country of Publication: United States
Abstract: An aerial radiological survey was conducted over eleven atolls and two islands within the northern Marshall Islands between September and November 1978. This survey was part of a comprehensive radiological survey, which included extensive terrestrial and marine sampling, to determine possible residual contamination which might remain as a result of the United States nuclear testing program conducted at Bikini Enewetak Atolls between 1946 and 1958. A similar survey was conducted at Enewetak Atoll in 1972. The present survey covered those atolls known to have received direct fallout from the Bravo event, conducted in March 1954 at Bikini Atoll. These included Bikini, Rongelap, Rongerik, Ailinginae, Bikar, Taka, and Utirik Atolls. In addition, several atolls and islands which might have been at the fringes of the Bravo fallout were also surveyed, including Likiep and Ailuk Atolls, Jemo and Mejit Islands, and Wotho Atoll. Ujelang Atoll, which lies approximately 200 km southwest of Enewetak, was also surveyed. Island-averaged terrestrial exposure rates in the range of 30 to 50

..mu..R/h were observed over parts of Bikini Atoll, including Bikini Island, and over the northern part of Rongelap Atoll. Levels over southern Rongelap and over Rongerik Atoll ranged from 4 to 7 ..mu..R/h. Levels were somewhat lower at Ailinginae Atoll (approximately 2 ..mu..R/h) and at Utirik Atoll (approximately 0.7 ..mu..R/h). The variations observed were consistent with what might be expected from the fallout pattern of the Bravo event. Levels at Ailuk, Likiep, Wotho and Ujelang Atolls and at Mejit and Jemo Islands were consistent with /sup 137/Cs activity, due to worldwide fallout, observed within the United States and at other locations in the central Pacific. These four atolls and the two islands, therefore, do not appear to have recieved any significant direct contamination from the Bravo event or the other tests conducted at Bikini and Enewetak Atolls.;
Major Descriptors: *MARSHALL ISLANDS -- DOSE RATES; *MARSHALL ISLANDS -- RADIATION MONITORING
Descriptors: AERIAL MONITORING; CONTAMINATION; DATA COMPILATION; FALLOUT; IMAGES; MAPS; NUCLEAR EXPLOSIONS
Broader Terms: DATA; EXPLOSIONS; INFORMATION; ISLANDS; MICRONESIA; MONITORING; NUMERICAL DATA; OCEANIA
Subject Categories: 510302* -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- Terrestrial Ecosystems & Food Chains -- (-1987)
INIS Subject Categories: C22* -- Radionuclide Ecology

10/5/738 (Item 438 from file: 103)
00884643 NTS-82-003636; ERA-07-023144; INS-82-005132; EDB-82-059485
Author(s): Tipton, W.J.; Fritzsche, A.E.; Jaffe, R.J.; Villaire, A.E.
Title: In situ determination of /sup 241/Am on Enewetak Atoll. Date of survey: July 1977-December 1979
Corporate Source: EG and G, Inc., Las Vegas, NV (USA). Energy Measurements Group
Publication Date: Nov 1981 p 25
Report Number(s): EGG-1183-1778
Order Number: DE82007368
Contract Number (DOE): AC08-76NV01183
Document Type: Report; Numerical data
Language: English
Journal Announcement: EDB8201
Availability: NTIS, PC A02/MF A01.
Subfile: INS (US Atomindex input); ERA (Energy Research Abstracts); TIC (Technical Information Center).
Country of Origin: United States
Country of Publication: United States
Abstract: An in situ gamma ray spectrometer system was operated at Enewetak Atoll from July 1977 to December 1979 in support of the Enewetak Cleanup Project. The system employed a high purity germanium planar detector suspended at a height of 7.4 m above ground. Conversion factors were established to relate measured photopeak count rate data to source concentration in the soil. Data obtained for /sup 241/Am, together with plutonium-to-americium ratios obtained from soil sample analyses, were used to establish area-averaged surface (0 to 3 cm) transuranic concentration values. In areas which exceeded cleanup criteria, measurements were made in an iterative fashion to guide soil removal until levels were reduced below the cleanup criteria. Final measurements made after soil removal had been completed were used to document remaining surface transuranic concentration values and to establish external exposure rate levels due to /sup 137/Cs and /sup 60/Co.;
Major Descriptors: *AMERICIUM 241 -- RADIATION MONITORING; *ENIWETOK -- DECONTAMINATION; *SOILS -- RADIOACTIVITY
Descriptors: CESIUM 137; COBALT 60; DOSE RATES; EXPERIMENTAL DATA; GAMMA SPECTROMETERS; TABLES
Broader Terms: ACTINIDE ISOTOPES; ACTINIDE NUCLEI; ALKALI METAL ISOTOPES; ALPHA DECAY RADIOISOTOPES; AMERICIUM ISOTOPES; BETA DECAY RADIOISOTOPES; BETA-MINUS DECAY RADIOISOTOPES; CESIUM ISOTOPES; CLEANING; COBALT ISOTOPES; DATA; HEAVY NUCLEI; INFORMATION; INTERMEDIATE MASS NUCLEI;

INTERNAL CONVERSION RADIOISOTOPES; ISLANDS; ISOMERIC TRANSITION ISOTOPES; ISOTOPES; MARSHALL ISLANDS; MEASURING INSTRUMENTS; MICRONESIA ; MINUTES LIVING RADIOISOTOPES; MONITORING; NUCLEI; NUMERICAL DATA; OCEANIA; ODD-EVEN NUCLEI; ODD-ODD NUCLEI; RADIOISOTOPES; SPECTROMETERS; YEARS LIVING RADIOISOTOPES
Subject Categories: 510301* -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- Soil -- (-1987)
INIS Subject Categories: B31* -- Land

10/5/739 (Item 439 from file: 103)
00877005 ERA-07-023628; EDB-82-051846
Author(s): Daniels, F.B.; Harris, A.K.
Title: Effects of nuclear detonations on the ionosphere
Corporate Source: Evans Signal Lab., Belmar, NJ (USA)
Publication Date: 22 May 1957 p 75
Report Number(s): AD-361772
Document Type: Report
Language: English
Journal Announcement: EDB8107
Availability: NTIS, PC A04/MF A01.
Subfile: ERA (Energy Research Abstracts); NTS (NTIS).
Country of Origin: United States
Country of Publication: United States
Abstract: During Operation CASTLE, two ionosphere recorders were operated in the Marshall Islands -at Site Elmer, about 200 miles west of Bikini Atoll, and at Rongerik Atoll, about 150 miles east of Bikini -- in order to study the effects of the detonations on the ionosphere. Severe absorption was observed 200 miles west of all multimegaton shots, lasting several hours, presumably due to ionization caused by radioactive material carried by high-level winds. Turbulence in the E region after each major shot was indicated by the diffuse sporadic-E returns at Rongerik. Ionospheric disturbances were found up to 2,600 miles away, with indicated velocities of about 8 to 16 km/min.;
Major Descriptors: *CASTLE PROJECT; *E REGION -- DISTURBANCES
Descriptors: IONOSPHERE; NUCLEAR EXPLOSIONS; RADIOACTIVITY
Broader Terms: EARTH ATMOSPHERE; EXPLOSIONS; IONOSPHERE; NUCLEAR EXPLOSIONS ; PLANETARY IONOSPHERES
Subject Categories: 640202* -- Atmospheric Physics -- Effects of Nuclear Detonations
450200 -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives

10/5/740 (Item 440 from file: 103)
00876650 ERA-07-023550; EDB-82-051491
Title: Circulation in Enewetak Atoll lagoon
Author(s): Atkinson, M.; Smith, S.V.; Stroup, E.D.
Affiliation: Univ. of Hawaii, Kaneohe
Source: Limnol. Oceanogr. (United States) v 26:6. Coden: LIOCA
Publication Date: Nov 1981 p 1074-1083
Contract Number (DOE): EY-77-S-08-1529
Document Type: Journal Article
Language: English
Journal Announcement: EDB8202
Subfile: ERA (Energy Research Abstracts); SAI (Science Applications Inc.)
Country of Origin: United States
Abstract: Currents at Enewetak Atoll, Marshall Islands, were measured on the reef margins, in the channels, and in the lagoon. Lagoon circulation is dominated by wind-driven downwind surface flow and an upwind middepth return flow. This wind-driven flow has the characteristics of an Ekman spiral in an enclosed sea. Lagoon flushing is accomplished primarily by surf-driven water input over the windward (eastern) reefs and southerly drift out the South Channel. Mean water residence time is 1 month, while water entering the northern portion of the atoll takes about 4 months to exit.;
Major Descriptors: *ENIWETOK -- WATER CURRENTS

WIND
Broader Terms: CNIDARIA; CURRENTS; ISLANDS; MARSHALL ISLANDS; MICRONESIA; OCEANIA; SURFACE WATERS
Subject Categories: 580500* -- Oceanography -- (1980-1989)
520500 -- Environment, Aquatic -- Site Resource & Use Studies -- (-1989)

10/5/741 (Item 441 from file: 103)
00875456 ERA-07-023139; EDB-82-050297
Author(s): Heiskell, R.H.; Black, R.H.; Crew, R.J.; Fuller, R.K.; Kawahara, F.K.
Title: Shipboard radiological - countermeasure methods
Corporate Source: Naval Radiological Defense Lab., San Francisco, CA (USA)
Publication Date: 30 Jan 1959 p 86
Report Number(s): AD-362109
Document Type: Report; Numerical data
Language: English
Journal Announcement: EDB8107
Availability: NTIS, PC A05/MF A01.
Subfile: ERA (Energy Research Abstracts); NTS (NTIS).
Country of Origin: United States
Country of Publication: United States
Abstract: Various test surfaces and specimens were exposed on YAG-39 and YAG-40 to fallout from Shots Zuni, Flathead and Tewa. Contaminability-decontaminability (C-D) studies were conducted when the ships returned to Eniwetok Lagoon. Three days after Zuni the average reading in the nonwashdown area of the YAG-40 was approximately 350 mr/hr and in the washdown area approximately 90 mr/hr. When the decontamination studies were initiated, the average levels after Flathead were lower than those after Zuni by a factor of 10. The average nonwashdown reading was 35 mr/hr and the washdown reading, 10 mr/hr. The removal of the removable radiological protective coating (RRPC) after Zuni in the nonwashdown area removed all but 0.5 to 8.0% of the contaminant, while firehosing alone left a residual of 6 to 28%. ;
Major Descriptors: *NUCLEAR EXPLOSIONS -- FALLOUT; *RADIONUCLIDE MIGRATION; *SHIPS -- DECONTAMINATION
Descriptors: EXPERIMENTAL DATA; PERSONNEL; PROTECTIVE COATINGS; RADIATION HAZARDS; RADIATION MONITORING; RADIATION PROTECTION; SHIELDING MATERIALS; SURFACE CONTAMINATION
Broader Terms: CLEANING; COATINGS; CONTAMINATION; DATA; ENVIRONMENTAL TRANSPORT; EXPLOSIONS; HAZARDS; HEALTH HAZARDS; INFORMATION; MASS TRANSFER; MATERIALS; MONITORING; NUMERICAL DATA
Subject Categories: 510300* -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- (-1989)
520300 -- Environment, Aquatic -- Radioactive Materials Monitoring & Transport -- (1989)
500300 -- Environment, Atmospheric -- Radioactive Materials Monitoring & Transport -- (-1989)
450200 -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives

10/5/742 (Item 442 from file: 103)
00875455 ERA-07-023137; EDB-82-050296
Author(s): Sondhaus, C.A.; Bond, V.P.
Title: Physical factors and dosimetry in the Marshall Island radiation exposures
Corporate Source: Defense Atomic Support Agency, Washington, DC (USA)
Publication Date: Dec 1955 p 46
Report Number(s): AD-338337
Document Type: Report; Numerical data
Language: English
Journal Announcement: EDB8107
Availability: NTIS, PC A03/MF A01.

Country of Origin: United States
Country of Publication: United States
Abstract: The physical factors and dosimetry of the fallout on the Marshall Islands from the first shot of Operation CASTLE are discussed. Data was summarized from field Radiological Safety surveys, fallout radiochemical studies, and fallout gamma spectral measurements. The influence of these and other factors on an evaluation of sur vey meter response and total dose estimates was considered. Estimates of fallout duration times and energy distribution of the dose from a plane source were made and the effect of diffuse source-geometry on the depth-dose to air-dose relationship was considered. Superficial doses from soft gamma and beta radiation were also considered.;
Major Descriptors: *FALLOUT -- RADIATION HAZARDS; *FALLOUT -- RADIONUCLIDE MIGRATION; *HUMAN POPULATIONS -- RADIATION DOSES; *MARSHALL ISLANDS -- RADIOACTIVITY; *RADIONUCLIDE MIGRATION -- RADIATION DOSES
Descriptors: BETA DOSIMETRY; DEPTH DOSE DISTRIBUTIONS; EXPERIMENTAL DATA; GAMMA DOSIMETRY; RADIATION MONITORING
Broader Terms: DATA; DOSES; DOSIMETRY; ENVIRONMENTAL TRANSPORT; HAZARDS; HEALTH HAZARDS; INFORMATION; ISLANDS; MASS TRANSFER; MICRONESIA; MONITORING; NUMERICAL DATA; OCEANIA; POPULATIONS; RADIATION DOSE DISTRIBUTIONS; SPATIAL DOSE DISTRIBUTIONS
Subject Categories: 510300* -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- (-1989)
500300 -- Environment, Atmospheric -- Radioactive Materials Monitoring & Transport -- (-1989)
560151 -- Radiation Effects on Animals -- Man

10/5/743 (Item 443 from file: 103)
00875416 ERA-07-023117; EDB-82-050257
Author(s): Steton, R.L.; Schuert, E.A.; Perkins, W.W.; Shirasawa, T.H.; Chan, H.K.
Title: Distribution and intensity of fallout. Final report (Castle Project)
Corporate Source: Naval Radiological Defense Lab., San Francisco, CA (USA)
Publication Date: Jan 1956 p 172
Report Number(s): AD-361836
Document Type: Report; Numerical data
Language: English
Journal Announcement: EDB8107
Availability: NTIS, PC A08/MF A01.
Subfile: ERA (Energy Research Abstracts); NTS (NTIS).
Country of Origin: United States
Country of Publication: United States
Abstract: The objective of this project was to document the distribution and intensity of fallout from all shots at Operation CASTLE. Data were obtained for Shots 1, 2, 3, 4, and 6 by use of land stations, anchored lagoon stations, and free-floating sea stations. A complete analysis of the Shot 1 fallout to 300 nautical miles downwind including the development of an experimental model based on fallout particle trajectories is presented as well as data on Shot 2 fallout to 50 nautical miles downwind and the close-in fallout from Shots 3, 4, and 6.;
Major Descriptors: *CASTLE PROJECT; *FALLOUT -- RADIONUCLIDE MIGRATION; *NUCLEAR EXPLOSIONS -- FALLOUT; *RADIONUCLIDE MIGRATION
Descriptors: AIR POLLUTION; EXPERIMENTAL DATA; LAND POLLUTION; MATHEMATICAL MODELS; WATER POLLUTION
Broader Terms: DATA; ENVIRONMENTAL TRANSPORT; EXPLOSIONS; INFORMATION; MASS TRANSFER; NUCLEAR EXPLOSIONS; NUMERICAL DATA; POLLUTION
Subject Categories: 500300* -- Environment, Atmospheric -- Radioactive Materials Monitoring & Transport -- (-1989)
510301 -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- Soil -- (-1987)
520301 -- Environment, Aquatic -- Radioactive Materials Monitoring & Transport -- Water -- (1987)

Explosions & Explosives

10/5/744 (Item 444 from file: 103)
00875296 ERA-07-023045; EDB-82-050137
Author(s): Thompson, R.H.
Title: Instrumentation for Projects 1.2a, 1.3, and 1.7
Corporate Source: Sandia Corp., Albuquerque, NM (USA)
Publication Date: Jan 1945 p 42
Report Number(s): AD-361922
Document Type: Report
Language: English
Journal Announcement: EDB8107
Availability: NTIS, PC A03/MF A01.
Subfile: ERA (Energy Research Abstracts); NTS (NTIS).
Country of Origin: United States
Country of Publication: United States
Abstract: This is a report on the instrumentation for Projects 1.2a, 1.3, and 1.7 of Operation CASTLE. This instrumentation was devised to measure pressures, shock winds, and ground accelerations from large scale detonations. Project 1.2a measured pressures less than 75 psi, Project 1.3 recorded shock winds, and Project 1.7 was concerned with close-in ground accelerations. In addition to the formal instrumentation program field tests of several new type gages were made. All new gages had had laboratory tests but field tests were made to insure that the gages would perform under actual operating conditions. Records were taken on 112 information channels. Of these, 99 gave good information, six gave information up to arrival of the shock wave and seven gave no information.;
Major Descriptors: *CASTLE PROJECT -- MEASURING INSTRUMENTS
Descriptors: ACCELERATION; GROUND MOTION; NUCLEAR EXPLOSIONS; PRESSURE GAGES; SHOCK WAVES; TRANSDUCERS; WAVE PROPAGATION
Broader Terms: EXPLOSIONS; MEASURING INSTRUMENTS; MOTION; NUCLEAR EXPLOSIONS
Subject Categories: 450200* -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives

10/5/745 (Item 445 from file: 103)
00875295 ERA-07-023044; EDB-82-050136
Author(s): Triantafellu, R.
Title: Test of interim IBDA procedures. Report for March-May 1954
Corporate Source: Strategic Air Command, Offutt AFB, NE (USA)
Publication Date: Jan 1956 p 44
Report Number(s): AD-361832
Document Type: Report
Language: English
Journal Announcement: EDB8107
Availability: NTIS, PC A03/MF A01.
Subfile: ERA (Energy Research Abstracts); NTS (NTIS).
Country of Origin: United States
Country of Publication: United States
Abstract: The objective of Project 6.1 (CASTLE) was to determine whether the equipment-operating procedures used in obtaining radar scope photos for IBDA (Indirect Bomb Damage Assessment) of previous A-bomb tests were valid for thermonuclear weapons. The procedures for obtaining the radar photos involved positioning of bombers at a safe distance from ground zero at operational altitudes, with radar scanning ground zero during, and immediately after, the weapon burst. The photography obtained on each shot was generally good. The conclusions are that a high yield weapon burst can be readily detected by the bomber's radar, and that present equipment-operating techniques are adequate. These conclusions must be qualified.;
Major Descriptors: *CASTLE PROJECT; *THERMONUCLEAR EXPLOSIONS -- DETECTION; *THERMONUCLEAR EXPLOSIONS -- PHOTOGRAPHY
Descriptors: DAMAGE; RADAR
Broader Terms: EXPLOSIONS; MEASURING INSTRUMENTS; NUCLEAR EXPLOSIONS; RANGE

Subject Categories: 450200* -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives

10/5/746 (Item 446 from file: 103)
00875294 ERA-07-023043; EDB-82-050135
Author(s): Willey, R.L.; Young, G.A.; Aronson, C.J.
Title: Base surge measurements by photography
Corporate Source: Naval Ordnance Lab., White Oak, MD (USA)
Publication Date: Sep 1955 p 34
Report Number(s): AD-361766
Document Type: Report
Language: English
Journal Announcement: EDB8107
Availability: NTIS, PC A03/MF A01.
Subfile: ERA (Energy Research Abstracts); NTS (NTIS).
Country of Origin: United States
Country of Publication: United States
Abstract: The major objective of Project 1.1c was the study of base surge phenomena on the Operation CASTLE shots by means of photography. No pictures of base surges were obtained, but aerial photographs for other projects indicated that base surges might have formed at times when the illumination was inadequate for surface photography. This cannot be established with certainty. Radar scope photography proved to be useful for indicating the region of heavy fallout. Further studies of this type would be recommended only for tests conducted during daylight hours.;
Major Descriptors: *CASTLE PROJECT; *NUCLEAR EXPLOSIONS -- PHOTOGRAPHY
Descriptors: FALLOUT
Broader Terms: EXPLOSIONS; NUCLEAR EXPLOSIONS
Subject Categories: 450200* -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives

10/5/747 (Item 447 from file: 103)
00875293 ERA-07-023042; EDB-82-050134
Author(s): Rinnert, H.R.
Title: Ship-shielding studies
Corporate Source: Naval Radiological Defense Lab., San Francisco, CA (USA)
Publication Date: 5 Jul 1959 p 92
Report Number(s): AD-357967
Document Type: Report
Language: English
Journal Announcement: EDB8107
Availability: NTIS, PC A05/MF A01.
Subfile: ERA (Energy Research Abstracts); NTS (NTIS).
Country of Origin: United States
Country of Publication: United States
Abstract: The principal objectives of this project were to determine, for the types of nuclear detonations encountered during Operation Redwing, (1) the relative gamma radiation fields resulting from radioactive contaminants on a ship's weather surfaces, in the surrounding air envelope, and in the surrounding water envelope as a function of time and (2) characteristics of the interaction of gamma radiation with steel as a function of thickness and time after detonation. Shielded recording gamma-radiation detectors of known geometry were located on two YAG's to permit discrimination between the radiation fields resulting from water-borne and air-borne activities only. Unshielded detectors supplied data on the overall radiation fields on the weather decks. Recording radiation detectors inclosed in steel cylinders of various thicknesses supplied combined absorption and multiple scattering data as a function of time after detonation.;
Major Descriptors: *FALLOUT -- DEPOSITION; *NUCLEAR EXPLOSIONS -- FALLOUT; *REDWING PROJECT; *SHIPS -- SURFACE CONTAMINATION
Descriptors: EXTERNAL IRRADIATION; GAMMA RADIATION; PERSONNEL; RADIATION DOSES; RADIATION MONITORING; RADIATION PROTECTION; RADIOACTIVITY;

Broader Terms: ALLOYS; CONTAMINATION; DOSES; ELECTROMAGNETIC RADIATION; EXPLOSIONS; IONIZING RADIATIONS; IRON ALLOYS; IRON BASE ALLOYS; IRRADIATION; MATERIALS; MONITORING; RADIATIONS
Subject Categories: 450200* -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives

10/5/748 (Item 448 from file: 103)
00875292 ERA-07-023041; EDB-82-050133
Author(s): Miller, G.C.; Schlei, E.J.; Andrews, C.R.
Title: Operation Castle. Project 6.2a. Blast and thermal effects on B-36 aircraft in flight
Corporate Source: Defense Atomic Support Agency, Washington, DC (USA)
Publication Date: Jun 1956 p 166
Report Number(s): AD-338333
Document Type: Report
Language: English
Journal Announcement: EDB8107
Availability: NTIS, PC A08/MF A01.
Subfile: ERA (Energy Research Abstracts); NTS (NTIS).
Country of Origin: United States
Country of Publication: United States
Abstract: The responses of a B-36 aircraft to the effects of a nuclear detonation at levels approaching the thermal and blast limitations of the aircraft were determined. A B-36D aircraft was instrumented and flown in the vicinity of each of the six shots of the CASTLE sequence. Time-history input and response measurements constituted the main instru mentation effort. For the first five shots, the aircraft was positioned at predicted near-limiting inputs in a simulated delivery configuration, that is, flying away from the explosion. On Shot 6, the aircraft was headed toward the ex plosion to obtain initial experimental data for this orientation. In addition to the measured data, together with photographs and descriptions of the damage, this report contains pertinent ob servations as reported by the flight crew. Suf ficient dre obtained to fulfill the specific objective of the project. A comparison between the experimental data and theoretically-predicted responses is made.;
Major Descriptors: *AIRCRAFT -- BLAST EFFECTS; *AIRCRAFT -- TEMPERATURE EFFECTS; *CASTLE PROJECT; *NUCLEAR EXPLOSIONS -- SHOCK WAVES; *NUCLEAR EXPLOSIONS -- THERMAL RADIATION
Descriptors: GAMMA RADIATION; VULNERABILITY
Broader Terms: ELECTROMAGNETIC RADIATION; EXPLOSIONS; IONIZING RADIATIONS; NUCLEAR EXPLOSIONS; RADIATIONS
Subject Categories: 450200* -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives

10/5/749 (Item 449 from file: 103)
00874628 ERA-07-022746; EDB-82-049469
Author(s): Vine, F.S.; Owen, W.L.
Title: Standard recovery procedure for tactical decontamination of ships
Corporate Source: Bureau of Ships, Washington, DC (USA)
Publication Date: 20 Mar 1959 p 46
Report Number(s): AD-357962
Document Type: Report
Language: English
Journal Announcement: EDB8107
Availability: NTIS, PC A03/MF A01.
Subfile: ERA (Energy Research Abstracts); NTS (NTIS).
Country of Origin: United States
Country of Publication: United States
Abstract: The objectives of this project were (1) to proof test a proposed standard recovery procedure for the tactical decontamination of Navy ships and (2) to perform, as required, an operational decontamination of each of three test ships to enable them to make their next scheduled participation. Three washdown-equipped test ships, the YAG-39, the YAG-40, and the LST-611, served as fallout-collection stations and test

contaminated by radioactive fallout from Shots Zuni, Flathead, Navajo, and Tewa. Because of insufficient contamination aboard the ships on their arrival at Eniwetok Lagoon following their several missions, the primary objective was not fulfilled. Therefore, the function of Project 2.9 was generally restricted to operational decontamination between shots.;
Major Descriptors: *SHIPS -- DECONTAMINATION
Descriptors: CONTAMINATION; DOSE RATES; FALLOUT; NUCLEAR EXPLOSIONS; RADIATION DETECTORS
Broader Terms: CLEANING; EXPLOSIONS; MEASURING INSTRUMENTS
Subject Categories: 400702* -- Radiochemistry & Nuclear Chemistry -- Properties of Radioactive Materials
450202 -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/750 (Item 450 from file: 103)
00868113 ERA-07-019847; EDB-82-042953
Author(s): Sharp, R.; Chapman, W.H.
Title: Operation Castle - project 4.1 addendum. Report of the scientific director, exposure of Marshall Islanders and American military personnel to fallout. Extracted version
Corporate Source: Department of Energy, Washington, DC (USA)
Publication Date: 1 Feb 1980 p 42
Report Number(s): AD-A-995077
Document Type: Report
Language: English
Journal Announcement: EDB8107
Availability: NTIS, PC A03/MF A01.
Subfile: ERA (Energy Research Abstracts); NTS (NTIS).
Country of Origin: United States
Country of Publication: United States
Abstract: None;
Major Descriptors: *FALLOUT -- RADIATION MONITORING; *HUMAN POPULATIONS -- RADIATION DOSES; *MILITARY PERSONNEL -- RADIATION DOSES
Descriptors: BIKINI; DECONTAMINATION; DOSIMETRY; HEMATOLOGY; MARSHALL ISLANDS; NUCLEAR EXPLOSIONS; RADIATION INJURIES; RADIOACTIVE MATERIALS; THERAPY
Broader Terms: BIOLOGICAL EFFECTS; BIOLOGICAL RADIATION EFFECTS; CLEANING; DOSES; EXPLOSIONS; INJURIES; ISLANDS; MARSHALL ISLANDS; MATERIALS; MEDICINE; MICRONESIA; MONITORING; OCEANIA; PERSONNEL; POPULATIONS; RADIATION EFFECTS
Subject Categories: 560151* -- Radiation Effects on Animals -- Man

10/5/751 (Item 451 from file: 103)
00867486 AIX-12-641302; ERA-07-019667; EDB-82-042326
Title: Transuranic concentrations in reef and pelagic fish from the Marshall Islands
Author(s): Noshkin, V.E.; Eagle, R.J.; Wong, K.M.; Jokela, T.A. (California Univ., Livermore (USA). Lawrence Livermore National Lab.)
Title: Impacts of radionuclide releases into the marine environment. Proceedings of an international symposium jointly organized by the IAEA and the OECD NEA and held in Vienna 6-10 October 1980
Conference Title: International symposium on the impacts of radionuclide releases into the marine environment
Conference Location: Vienna, Austria Conference Date: 6 Oct 1980
Publisher: IAEA,Vienna, Austria
Publication Date: 1981 p 293-317
Report Number(s): CONF-801063-; IAEA-SM-248/146
Document Type: Analytic of a Book; Conference literature; Numerical data
Language: English
Journal Announcement: EDB8112
Subfile: ERA (Energy Research Abstracts); AIX (non-US Atomindex input).
Country of Origin: United States
Country of Publication: International Atomic Energy Agency <IAEA>
Abstract: Concentrations of sup(239+240)Pu are reported in tissues of several species of reef and pelagic fish caught at 14 different atolls

dependent are evident in the distribution of sup(239+240)Pu among different body tissues. Concentrations in liver always exceeded those in bone and concentrations were lowest in the muscle of all fish analysed. A progressive discrimination against sup(239+240)Pu was observed at successive trophic levels at all atolls except Bikini and Enewetak, where it was difficult to conclude if any real difference exists between the average concentration factor for sup(239+240)Pu among all fish, which include bottom-feeding and grazing herbivores, bottom-feeding carnivores and pelagic carnivores from different atoll locations. The average concentration of sup(239+240)Pu in the muscle of surgeonfish from Bikini and Enewetak was not significantly different from the average concentrations determined in these fish at the other lesser contaminated atolls. Concentrations among all 3rd, 4th and 5th trophic level species are highest at Bikini where higher environmental concentrations are found. The reasons for the anomalously low concentrations in herbivores from Bikini and Enewetak are not known.;
Major Descriptors: *AMERICIUM 241 -- RADIOECOLOGICAL CONCENTRATION; *PLUTONIUM 238 -- RADIOECOLOGICAL CONCENTRATION; *PLUTONIUM 239 -- RADIOECOLOGICAL CONCENTRATION; *PLUTONIUM 240 -- RADIOECOLOGICAL CONCENTRATION; *SEDIMENTS
Descriptors: BIKINI; BIOLOGICAL LOCALIZATION; COMPARATIVE EVALUATIONS; ENIWETOK; EXPERIMENTAL DATA; FISHES; LEVELS; TISSUES
Broader Terms: ACTINIDE ISOTOPES; ACTINIDE NUCLEI; ALPHA DECAY RADIOISOTOPES; AMERICIUM ISOTOPES; ANIMALS; AQUATIC ORGANISMS; BODY; DATA; ECOLOGICAL CONCENTRATION; EVEN-EVEN NUCLEI; EVEN-ODD NUCLEI; HEAVY NUCLEI; INFORMATION; ISLANDS; ISOTOPES; MARSHALL ISLANDS; MICRONESIA; NUCLEI; NUMERICAL DATA; OCEANIA; ODD-EVEN NUCLEI; PLUTONIUM ISOTOPES; RADIOISOTOPES; VERTEBRATES; YEARS LIVING RADIOISOTOPES
Subject Categories: 520302* -- Environment, Aquatic -- Radioactive Materials Monitoring & Transport -- Aquatic Ecosystems & Food Chains -- (-1987)
INIS Subject Categories: C22* -- Radionuclide Ecology

10/5/752 (Item 452 from file: 103)
00867481 AIX-12-641124; ERA-07-019662; EDB-82-042321
Title: Detection of cadmium radioactivity in the marine environment
Author(s): Noshkin, V.E.; Wong, K.M.; Eagle, R.J.; Anglin, D.L. (California Univ., Livermore (USA). Lawrence Livermore National Lab.)
Title: Impacts of radionuclide releases into the marine environment. Proceedings of an international symposium jointly organized by the IAEA and the OECD NEA and held in Vienna 6-10 October 1980
Conference Title: International symposium on the impacts of radionuclide releases into the marine environment
Conference Location: Vienna, Austria Conference Date: 6 Oct 1980
Publisher: IAEA,Vienna, Austria
Publication Date: 1981 p 685-694
Report Number(s): CONF-801063-; IAEA-SM-248/152
Document Type: Analytic of a Book; Conference literature; Numerical data
Language: English
Journal Announcement: EDB8112
Subfile: ERA (Energy Research Abstracts); AIX (non-US Atomindex input).
Country of Origin: United States
Country of Publication: International Atomic Energy Agency <IAEA>
Abstract: Sediment and tissues from different marine organisms recently collected at atolls of the Marshall Islands have been found to contain measurable amounts of /sup 113//sup m/Cd previously deposited to the atolls during the testing of nuclear devices at the Pacific Proving Grounds. Cadmium-113m has been also detected in some internal organs of mullet collected from the east coast of the United States of America in an area contaminated only with global fall-out debris. This is one of the few summaries to show that this long-lived radionuclide (Tsub(1/2) = 14.6 years) exists and persists in the marine environment. It is the dominate anthropogenic radionuclide in the liver of some pelagic fish from Bikini and Enewetak Atolls and is found concentrated in other tissues and organs of all fish analysed. Dose to man from /sup

should be carried out at any other global site where contamination by this radionuclide is suspected in the aquatic environment.;
Major Descriptors: *CADMIUM 113 -- RADIOECOLOGICAL CONCENTRATION; *MARSHALL ISLANDS -- RADIOACTIVITY
Descriptors: AQUATIC ECOSYSTEMS; EXPERIMENTAL DATA; ISOMERIC NUCLEI; ISOTOPE RATIO; PACIFIC OCEAN; RADIONUCLIDE MIGRATION; SEDIMENTS
Broader Terms: BETA DECAY RADIOISOTOPES; BETA-MINUS DECAY RADIOISOTOPES; CADMIUM ISOTOPES; DATA; ECOLOGICAL CONCENTRATION; ECOSYSTEMS; ENVIRONMENTAL TRANSPORT; EVEN-ODD NUCLEI; INFORMATION; INTERMEDIATE MASS NUCLEI; ISLANDS; ISOMERIC TRANSITION ISOTOPES; ISOTOPES; MASS TRANSFER; MICRONESIA; NUCLEI; NUMERICAL DATA; OCEANIA; RADIOISOTOPES; SEAS; STABLE ISOTOPES; SURFACE WATERS; YEARS LIVING RADIOISOTOPES
Subject Categories: 520302* -- Environment, Aquatic -- Radioactive Materials Monitoring & Transport -- Aquatic Ecosystems & Food Chains -- (-1987)
053000 -- Nuclear Fuels -- Environmental Aspects
INIS Subject Categories: B32* -- Water

10/5/753 (Item 453 from file: 103)
00867083 ERA-07-019401; EDB-82-041923
Title: Report to the US Atomic Energy Commission on Operation Sandstone atomic weapon proof tests. Part I. Volume I. Extracted version
Corporate Source: General Electric Co., Santa Barbara, CA (USA)
Publication Date: 1 Jan 1981 p 700
Report Number(s): AD-A-995107/0
Document Type: Report
Language: English
Journal Announcement: EDB8110
Availability: NTIS, PC A99/MF A01.
Subfile: ERA (Energy Research Abstracts); NTS (NTIS).
Country of Origin: United States
Country of Publication: United States
Abstract: None.;
Major Descriptors: *NUCLEAR WEAPONS -- TESTING
Descriptors: ENIWETOK; MANPOWER; MILITARY PERSONNEL; NUCLEAR EXPLOSIONS
Broader Terms: EXPLOSIONS; ISLANDS; MARSHALL ISLANDS; MICRONESIA; OCEANIA; PERSONNEL; WEAPONS
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/754 (Item 454 from file: 103)
00867048 ERA-07-019370; EDB-82-041888
Author(s): Mahoney, J.J.; Keough, D.D.; Goodwin, L.K.; Moles, D.W.; Thomas, W.B.
Title: Evaluation of self-recording thermal radiation instruments
Corporate Source: Army Chemical Corps Engineering Command, Army Chemical Center, MD (USA)
Publication Date: 19 Mar 1959 p 28
Report Number(s): AD-357964/6
Document Type: Report
Language: English
Journal Announcement: EDB8108
Availability: NTIS, PC A03/MF A01.
Subfile: ERA (Energy Research Abstracts); NTS (NTIS).
Country of Origin: United States
Country of Publication: United States
Abstract: The tests of the Type 1 and Type 2 Chemical Corps self-recording calorimeters on Shot Cherokee resulted in the conclusion that the Type 1 instruments were unsatisfactory and that the Type 2 instruments successfully integrated radiant exposures of long duration. Instrumentation with the self-recording calorimeters and the Kidde pulse recorder for a short-duration pulse, planned for Shot Blackfoot, was not feasible because of the station contamination resulting from a prior shot; therefore, instrument functioning for short-duration pulses was not determined, and the Kidde pulse recorder, which was designed

actual air zero for Shot Cherokee deviated considerably from the planned air zero, resulting in a significant angle of incidence of the thermal energy on the instruments. The data presented in this report represent the thermal radiant energy actually recorded by the thermal-radiation detection instruments at the various stations.;
Major Descriptors: *CALORIMETERS -- PERFORMANCE; *NUCLEAR EXPLOSIONS -- THERMAL RADIATION
Descriptors: BIKINI; DETECTION; ELECTRICAL INSULATION; RECORDING SYSTEMS; THERMISTORS
Broader Terms: ELECTROMAGNETIC RADIATION; EXPLOSIONS; ISLANDS; MARSHALL ISLANDS; MEASURING INSTRUMENTS; MICRONESIA; OCEANIA; RADIATIONS; SEMICONDUCTOR DEVICES
Subject Categories: 450200* -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives

10/5/755 (Item 455 from file: 103)
00848420 AIX-12-629386; ERA-07-012387; EDB-82-023258
Title: /sup 60/Co and /sup 137/Cs long-term biological removal rate constants for the Marshallese population
Author(s): Miltenberger, R.P.; Lessard, E.T.; Greenhouse, N.A. (Brookhaven National Lab., Upton, NY (USA))
Source: Health Phys. (United Kingdom) v 40:5. Coden: HLTPA
Publication Date: May 1981 p 615-623
Document Type: Journal Article
Language: English
Journal Announcement: EDB8110
Subfile: ERA (Energy Research Abstracts); AIX (non-US Atomindex input).
Country of Origin: United States
Abstract: Residents of Bikini Atoll were moved from their home Atoll on 31 August 1978. Since that time, they have been relocated either to Kili Island, or to Majuro and Ejit Islands at Majuro Atoll. Whole body counting and urine bioassay were performed on this population in January and May 1979, and body burdens for nuclides positively identified were determined from both techniques. Data from these measurements have been used to calculate long-term biological removal rate constants for /sup 137/Cs and /sup 60/Co and to relate the long-term rate constant for /sup 137/Cs to total body mass.;
Major Descriptors: *BIKINI -- HUMAN POPULATIONS; *CESIUM 137 -- BODY BURDEN ; *CESIUM 137 -- EXCRETION; *COBALT 60 -- BODY BURDEN; *COBALT 60 -- EXCRETION
Descriptors: RADIOACTIVITY; RADIONUCLIDE KINETICS; URINE; WHOLE-BODY COUNTING
Broader Terms: ALKALI METAL ISOTOPES; BETA DECAY RADIOISOTOPES; BETA-MINUS DECAY RADIOISOTOPES; BIOLOGICAL MATERIALS; BIOLOGICAL WASTES; BODY FLUIDS; CESIUM ISOTOPES; CLEARANCE; COBALT ISOTOPES; COUNTING TECHNIQUES; INTERMEDIATE MASS NUCLEI; INTERNAL CONVERSION RADIOISOTOPES ; ISLANDS; ISOMERIC TRANSITION ISOTOPES; ISOTOPES; MARSHALL ISLANDS; MATERIALS; MICRONESIA; MINUTES LIVING RADIOISOTOPES; NUCLEI; OCEANIA; ODD-EVEN NUCLEI; ODD-ODD NUCLEI; POPULATIONS; RADIOISOTOPES; WASTES; YEARS LIVING RADIOISOTOPES
Subject Categories: 560171* -- Radiation Effects -- Nuclide Kinetics & Toxicology -- Man -- (-1987)
INIS Subject Categories: C21* -- Tissue Distribution, Metabolism, Toxicology & Removal of Radionuclides

10/5/756 (Item 456 from file: 103)
00848350 EDB-82-023188
Title: Ash of Bikini and its effects on human body
Author(s): Kakehi, H.
(In Japanese)
Source: J. Japan Physicians Society (Japan) v 31:9.
Publication Date: 1954 p vp
Document Type: Journal Article
Language: Japanese
Journal Announcement: EDB8110

Country of Origin: Japan
Abstract: The physical and chemical composition of radioactive ashes which fell on the fishermen of the Fukuryu Maru are discussed and a clinical study of its effects is presented. Many measurements of activity are made on ship board at various times. Estimated radiation received by the fishermen in a two-week stay on ship as 200 r. The hazards of contaminated tuna are discussed.;
Major Descriptors: *HUMAN POPULATIONS -- BIOLOGICAL RADIATION EFFECTS; *NUCLEAR EXPLOSIONS -- RADIATION HAZARDS
Descriptors: ASHES; BIKINI; CHEMICAL COMPOSITION; CONTAMINATION; FALLOUT; MEDICAL SURVEILLANCE; PHYSICAL PROPERTIES; RADIATION DOSES; TUNA
Broader Terms: ANIMALS; AQUATIC ORGANISMS; BIOLOGICAL EFFECTS; DOSES; EXPLOSIONS; FISHES; HAZARDS; HEALTH HAZARDS; ISLANDS; MARSHALL ISLANDS; MICRONESIA; OCEANIA; POPULATIONS; RADIATION EFFECTS; RESIDUES; SURVEILLANCE; VERTEBRATES
Subject Categories: 560151* -- Radiation Effects on Animals -- Man
520302 -- Environment, Aquatic -- Radioactive Materials Monitoring & Transport -- Aquatic Ecosystems & Food Chains -- (-1987)
450200 -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives

10/5/757 (Item 457 from file: 103)
00840643 EDB-82-015480
Title: Atomic energy in its repercussions on life and health
(In French)
Conference Title: Scientific conference
Conference Location: Paris, France Conference Date: 1956
Source: L'Expansion Editeur (France)
Publication Date: 1956 p 1-254
Document Type: Journal Article; Conference literature
Language: French
Journal Announcement: EDB8111
Subfile: TIC (Technical Information Center).
Country of Origin: France
Abstract: The papers given at the July 1955 conference in Paris on the dangers of atomic energy and radiation are presented. The topics discussed include the dangers inherent in atomic equipment, the radioactive effects of atomic explosions, a review of the analyses made in Japan of the radioactive ash from the March 1954 Bikini explosions, long distance propagation and characteristics of the radioactive particles emitted in atomic explosions, eventual influences of atomic explosions on evolution, radioactivity in air and rain, radioactive clouds, meteorological effects of atomic explosions, a general review of the biological effects of ionizing radiation, medical problems posed by the immediate effects of atomic explosions, cataracts received from explosions or research in atomic energy, atomic radiation and aquatic life, biological danger from powders emitting ..beta.. rays, effect of weak doses of radiation, ionizing radiation and the gases in atomic industry, and therapy for radiolesions.;
Major Descriptors: *FALLOUT -- RADIATION HAZARDS; *HUMAN POPULATIONS -- BIOLOGICAL RADIATION EFFECTS; *HUMAN POPULATIONS -- RADIATION HAZARDS; *NUCLEAR EXPLOSIONS -- RADIATION HAZARDS; *NUCLEAR INDUSTRY -- RADIATION HAZARDS; *RADIATION HAZARDS -- MEETINGS
Descriptors: AIR; AQUATIC ECOSYSTEMS; BETA PARTICLES; BIKINI; CATARACTS; IONIZING RADIATIONS; JAPAN; METEOROLOGY; POST-IRRADIATION THERAPY; RADIATION DOSES; RADIOACTIVE AEROSOLS; RADIOACTIVE CLOUDS; RAIN; SPATIAL DISTRIBUTION
Broader Terms: AEROSOLS; ASIA; ATMOSPHERIC PRECIPITATIONS; BIOLOGICAL EFFECTS; CHARGED PARTICLES; CLOUDS; COLLOIDS; DISEASES; DISPERSIONS; DISTRIBUTION; DOSES; ECOSYSTEMS; EXPLOSIONS; FLUIDS; GASES; HAZARDS; HEALTH HAZARDS; INDUSTRY; ISLANDS; MARSHALL ISLANDS; MICRONESIA; OCEANIA; POPULATIONS; RADIATION EFFECTS; RADIATIONS; SENSE ORGANS DISEASES; SOLS; THERAPY
Subject Categories: 560151* -- Radiation Effects on Animals -- Man
560161 -- Radionuclide Effects, Kinetics, & Toxicology -- Man

& Transport -- Terrestrial Ecosystems & Food Chains -- (-1987)
520302 -- Environment, Aquatic -- Radioactive Materials Monitoring & Transport -- Aquatic Ecosystems & Food Chains -- (-1987)
500300 -- Environment, Atmospheric -- Radioactive Materials Monitoring & Transport -- (-1989)
450200 -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives

10/5/758 (Item 458 from file: 103)
00840580 ERA-07-005580; INS-82-001050; EDB-82-015417
Author(s): Conard, R.A.; Paglia, D.E.; Larsen, P.R.
Title: Review of medical findings in a Marshallese population twenty-six years after accidental exposure to radioactive fallout
Corporate Source: Brookhaven National Lab., Upton, NY (USA)
Publication Date: Jan 1980 p 152
Report Number(s): BNL-51261
Order Number: DE82003249
Contract Number (DOE): AC02-76CH00016
Document Type: Report; Numerical data
Language: English
Journal Announcement: EDB8112
Availability: NTIS, PC A08/MF A01.
Subfile: INS (US Atomindex input); ERA (Energy Research Abstracts); TIC (Technical Information Center).
Country of Origin: United States
Country of Publication: United States
Abstract: In March 1954, radioactive debris from a thermonuclear weapon test at Bikini Atoll deviated from predicted trajectories and contaminated several atolls in the northern Marshall Islands. As a result, 239 native inhabitants of these islands along with 28 American servicemen and 23 Japanese fishermen received variably severe exposures to diverse ionizing radiations. Fallout material consisted largely of mixed fission products with small amounts of neutron-induced radionuclides and minimal amounts of fissionable elements, producing a complex spectrum of electromagnetic and particulate radiation. Individuals were exposed to deeply penetrating, whole-body gamma irradiation, to internal radiation emitters assimilated either by inhalation or by ingestion of contaminated water and food, and to direct radiation from material accumulating on body surfaces. That accident initiated a cascade of events, medical, social and political, which continue in varying forms to this day. Most of these have been discussed in the open medical literature and in periodic reports issued by the medical team headquartered at Brookhaven National Laboratory. This report attempts to summarize some of the principal findings of medical significnce that have been observed during the subsequent 26 years with particular emphasis on the last six years.;
Major Descriptors: *HUMAN POPULATIONS -- DELAYED RADIATION EFFECTS; *HUMAN POPULATIONS -- EARLY RADIATION EFFECTS; *MARSHALL ISLANDS -- RADIATION ACCIDENTS
Descriptors: CHROMOSOMAL ABERRATIONS; CONTAMINATION; DATA COMPILATION; ENVIRONMENTAL EXPOSURE PATHWAY; FALLOUT; FISSION PRODUCTS; NEOPLASMS; NUCLEAR EXPLOSIONS; PARASITES; RADIATION DOSES; RADIATION MONITORING; THYROID
Broader Terms: ACCIDENTS; BIOLOGICAL EFFECTS; BIOLOGICAL RADIATION EFFECTS; BODY; DATA; DISEASES; DOSES; ENDOCRINE GLANDS; EXPLOSIONS; GLANDS; INFORMATION; ISLANDS; ISOTOPES; MATERIALS; MICRONESIA; MONITORING; MUTATIONS; NUMERICAL DATA; OCEANIA; ORGANS; POPULATIONS; RADIATION EFFECTS; RADIOACTIVE MATERIALS
Subject Categories: 560151* -- Radiation Effects on Animals -- Man
INIS Subject Categories: C15* -- Effects of External Radiation on Man

10/5/759 (Item 459 from file: 103)
00839873 EDB-82-014710
Title: Rain from South and snow from North
Author(s): Miyake, Y.

5003939

Publication Date: Dec 1954 p vp
Document Type: Journal Article
Language: Japanese
Journal Announcement: EDB8109
Subfile: TIC (Technical Information Center).
Country of Origin: Japan
Abstract: Detection of nuclear explosions by various methods including observations of fission product activity in the atmosphere is discussed. Deposition of 750 cpm on a vase-line coated paper (30 x 30 cm) on May 13 to 16, 1954 was recorded. Eighty-six thousand cpm/1 was observed in rain at Kyoto on May 14, apparently from the May 5 test at Bikini.;
Major Descriptors: *JAPAN -- RADIATION MONITORING; *NUCLEAR EXPLOSION DETECTION; *RAIN -- RADIOACTIVITY; *SNOW -- RADIOACTIVITY
Descriptors: BIKINI; EARTH ATMOSPHERE; FALLOUT; FISSION PRODUCTS; NUCLEAR EXPLOSIONS
Broader Terms: ASIA; ATMOSPHERIC PRECIPITATIONS; DETECTION; EXPLOSIONS; ISLANDS; ISOTOPES; MARSHALL ISLANDS; MATERIALS; MICRONESIA; MONITORING; OCEANIA; RADIOACTIVE MATERIALS
Subject Categories: 500300* -- Environment, Atmospheric -- Radioactive Materials Monitoring & Transport -- (-1989)
450300 -- Military Technology, Weaponry, & National Defense -- Nuclear Explosion Detection

10/5/760 (Item 460 from file: 103)
00831033 ERA-07-005717; EDB-82-005869
Author(s): Daniels, F.B.; Harris, A.K.
Title: Effects of nuclear detonations on the ionosphere
Corporate Source: Evans Signal Lab., Belmar, NJ (USA)
Publication Date: 22 May 1957 p 75
Report Number(s): AD-361772
Document Type: Report
Language: English
Journal Announcement: EDB8107
Availability: NTIS, PC A04/MF A01.
Subfile: ERA (Energy Research Abstracts); NTS (NTIS).
Country of Origin: United States
Country of Publication: United States
Abstract: During Operation CASTLE, two ionosphere recorders were operated in the Marshall Islands -at Site Elmer, about 200 miles west of Bikini Atoll, and at Rongerik Atoll, about 150 miles east of Bikini -- in order to study the effects of the detonations on the ionosphere. Severe absorption was observed 200 miles west of all multimegaton shots, lasting several hours, presumably due to ionization caused by radioactive material carried by high-level winds. Turbulence in the E region after each major shot was indicated by the diffuse sporadic-E returns at Rongerik. Ionospheric disturbances were found up to 2,600 miles away, with indicated velocities of about 8 to 16 km/min.;
Major Descriptors: *CASTLE PROJECT; *E REGION -- DISTURBANCES
Descriptors: IONOSPHERE; NUCLEAR EXPLOSIONS; RADIOACTIVITY
Broader Terms: EARTH ATMOSPHERE; EXPLOSIONS; IONOSPHERE; NUCLEAR EXPLOSIONS ; PLANETARY IONOSPHERES
Subject Categories: 640202* -- Atmospheric Physics -- Effects of Nuclear Detonations
450200 -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives

10/5/761 (Item 461 from file: 103)
00829786 ERA-07-005430; EDB-82-004622
Author(s): Heiskell, R.H.; Black, R.H.; Crew, R.J.; Fuller, R.K.; Kawahara, F.K.
Title: Shipboard radiological - countermeasure methods
Corporate Source: Naval Radiological Defense Lab., San Francisco, CA (USA)
Publication Date: 30 Jan 1959 p 86

Document Type: Report; Numerical data
Language: English
Journal Announcement: EDB8107
Availability: NTIS, PC A05/MF A01.
Subfile: ERA (Energy Research Abstracts); NTS (NTIS).
Country of Origin: United States
Country of Publication: United States
Abstract: Various test surfaces and specimens were exposed on YAG-39 and YAG-40 to fallout from Shots Zuni, Flathead and Tewa. Contaminability-decontaminability (C-D) studies were conducted when the ships returned to Eniwetok Lagoon. Three days after Zuni the average reading in the nonwashdown area of the YAG-40 was approximately 350 mr/hr and in the washdown area approximately 90 mr/hr. When the decontamination studies were initiated, the average levels after Flathead were lower than those after Zuni by a factor of 10. The average nonwashdown reading was 35 mr/hr and the washdown reading, 10 mr/hr. The removal of the removable radiological protective coating (RRPC) after Zuni in the nonwashdown area removed all but 0.5 to 8.0% of the contaminant, while firehosing alone left a residual of 6 to 28%. ;
Major Descriptors: *NUCLEAR EXPLOSIONS -- FALLOUT; *RADIONUCLIDE MIGRATION; *SHIPS -- DECONTAMINATION
Descriptors: EXPERIMENTAL DATA; PERSONNEL; PROTECTIVE COATINGS; RADIATION HAZARDS; RADIATION MONITORING; RADIATION PROTECTION; SHIELDING MATERIALS; SURFACE CONTAMINATION
Broader Terms: CLEANING; COATINGS; CONTAMINATION; DATA; ENVIRONMENTAL TRANSPORT; EXPLOSIONS; HAZARDS; HEALTH HAZARDS; INFORMATION; MASS TRANSFER; MATERIALS; MONITORING; NUMERICAL DATA
Subject Categories: 510300* -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- (-1989)
520300 -- Environment, Aquatic -- Radioactive Materials Monitoring & Transport -- (1989)
500300 -- Environment, Atmospheric -- Radioactive Materials Monitoring & Transport -- (-1989)
450200 -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives

10/5/762 (Item 462 from file: 103)
00829785 ERA-07-005428; EDB-82-004621
Author(s): Sondhaus, C.A.; Bond, V.P.
Title: Physical factors and dosimetry in the Marshall Island radiation exposures
Corporate Source: Defense Atomic Support Agency, Washington, DC (USA)
Publication Date: Dec 1955 p 46
Report Number(s): AD-338337
Document Type: Report; Numerical data
Language: English
Journal Announcement: EDB8107
Availability: NTIS, PC A03/MF A01.
Subfile: ERA (Energy Research Abstracts); NTS (NTIS).
Country of Origin: United States
Country of Publication: United States
Abstract: The physical factors and dosimetry of the fallout on the Marshall Islands from the first shot of Operation CASTLE are discussed. Data was summarized from field Radiological Safety surveys, fallout radiochemical studies, and fallout gamma spectral measurements. The influence of these and other factors on an evaluation of sur vey meter response and total dose estimates was considered. Estimates of fallout duration times and energy distribution of the dose from a plane source were made and the effect of diffuse source-geometry on the depth-dose to air-dose relationship was considered. Superficial doses from soft gamma and beta radiation were also considered.;
Major Descriptors: *FALLOUT -- RADIATION HAZARDS; *FALLOUT -- RADIONUCLIDE MIGRATION; *HUMAN POPULATIONS -- RADIATION DOSES; *MARSHALL ISLANDS -- RADIOACTIVITY; *RADIONUCLIDE MIGRATION -- RADIATION DOSES

GAMMA DOSIMETRY; RADIATION MONITORING
Broader Terms: DATA; DOSES; DOSIMETRY; ENVIRONMENTAL TRANSPORT; HAZARDS; HEALTH HAZARDS; INFORMATION; ISLANDS; MASS TRANSFER; MICRONESIA; MONITORING; NUMERICAL DATA; OCEANIA; POPULATIONS; RADIATION DOSE DISTRIBUTIONS; SPATIAL DOSE DISTRIBUTIONS
Subject Categories: 510300* -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- (-1989)
500300 -- Environment, Atmospheric -- Radioactive Materials Monitoring & Transport -- (-1989)
560151 -- Radiation Effects on Animals -- Man

10/5/763 (Item 463 from file: 103)
00829767 AIX-12-634580; EDB-82-004603
Title: /sup 210/Pb in surface air at Enewetak and the Asian dust flux to the Pacific
Author(s): Turekian, K.K.; Cochran, J.K. (Yale Univ., New Haven, CT (USA). Dept. of Geology and Geophysics)
Source: Nature (London) (United Kingdom) v 292:5823. Coden: NATUA
Publication Date: 6 Aug 1981 p 522-524
Document Type: Journal Article; Numerical data
Language: English
Journal Announcement: EDB8111
Subfile: AIX (non-US Atomindex input).
Country of Origin: United States
Abstract: Results are presented of measurements of /sup 210/Pb (and /sup 210/Po) collected during 1979 in an air filter system and a precipitation collector situated at Enewetak. The estimated /sup 210/Pb flux was found to be (0.15 +- 0.02 d.p.m. cm/sup -2/ yr/sup -1/) and the Asian dust flux (38 +- 20 ..mu..g cm/sup -2/ yr/sup -1/) at this location in the Pacific.;
Major Descriptors: *ASIA -- SURFACE AIR; *DUSTS -- RADIATION FLUX; *ENIWETOK -- SURFACE AIR; *LEAD 210 -- RADIOECOLOGICAL CONCENTRATION; *POLONIUM 210 -- RADIOECOLOGICAL CONCENTRATION; *SURFACE AIR -- RADIATION FLUX
Descriptors: EXPERIMENTAL DATA; RAIN
Broader Terms: AIR; ALPHA DECAY RADIOISOTOPES; ATMOSPHERIC PRECIPITATIONS; BETA DECAY RADIOISOTOPES; BETA-MINUS DECAY RADIOISOTOPES; DATA; DAYS LIVING RADIOISOTOPES; ECOLOGICAL CONCENTRATION; EVEN-EVEN NUCLEI; FLUIDS; GASES; HEAVY NUCLEI; INFORMATION; ISLANDS; ISOTOPES; LEAD ISOTOPES; MARSHALL ISLANDS; MICRONESIA; NUCLEI; NUMERICAL DATA; OCEANIA ; POLONIUM ISOTOPES; RADIOISOTOPES; YEARS LIVING RADIOISOTOPES
Subject Categories: 500300* -- Environment, Atmospheric -- Radioactive Materials Monitoring & Transport -- (-1989)
INIS Subject Categories: B33* -- Atmosphere

10/5/764 (Item 464 from file: 103)
00829749 ERA-07-005395; EDB-82-004585
Author(s): Steton, R.L.; Schuert, E.A.; Perkins, W.W.; Shirasawa, T.H.; Chan, H.K.
Title: Distribution and intensity of fallout. Final report
Corporate Source: Naval Radiological Defense Lab., San Francisco, CA (USA)
Publication Date: Jan 1956 p 172
Report Number(s): AD-361836
Document Type: Report; Numerical data
Language: English
Journal Announcement: EDB8107
Availability: NTIS, PC A08/MF A01.
Subfile: ERA (Energy Research Abstracts); NTS (NTIS).
Country of Origin: United States
Country of Publication: United States
Abstract: The objective of this project was to document the distribution and intensity of fallout from all shots at Operation CASTLE. Data were obtained for Shots 1, 2, 3, 4, and 6 by use of land stations, anchored lagoon stations, and free-floating sea stations. A complete analysis of

development of an experimental model based on fallout particle trajectories is presented as well as data on Shot 2 fallout to 50 nautical miles downwind and the close-in fallout from Shots 3, 4, and 6.;
Major Descriptors: *CASTLE PROJECT; *FALLOUT -- RADIONUCLIDE MIGRATION; *NUCLEAR EXPLOSIONS -- FALLOUT; *RADIONUCLIDE MIGRATION
Descriptors: AIR POLLUTION; EXPERIMENTAL DATA; LAND POLLUTION; MATHEMATICAL MODELS; WATER POLLUTION
Broader Terms: DATA; ENVIRONMENTAL TRANSPORT; EXPLOSIONS; INFORMATION; MASS TRANSFER; NUCLEAR EXPLOSIONS; NUMERICAL DATA; POLLUTION
Subject Categories: 500300* -- Environment, Atmospheric -- Radioactive Materials Monitoring & Transport -- (-1989)
510301 -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- Soil -- (-1987)
520301 -- Environment, Aquatic -- Radioactive Materials Monitoring & Transport -- Water -- (1987)
450200 -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives

10/5/765 (Item 465 from file: 103)
00829669 ERA-07-005354; EDB-82-004505
Author(s): Thompson, R.H.
Title: Instrumentation for Projects 1.2a, 1.3, and 1.7
Corporate Source: Sandia Corp., Albuquerque, NM (USA)
Publication Date: Jan 1945 p 42
Report Number(s): AD-361922
Document Type: Report
Language: English
Journal Announcement: EDB8107
Availability: NTIS, PC A03/MF A01.
Subfile: ERA (Energy Research Abstracts); NTS (NTIS).
Country of Origin: United States
Country of Publication: United States
Abstract: This is a report on the instrumentation for Projects 1.2a, 1.3, and 1.7 of Operation CASTLE. This instrumentation was devised to measure pressures, shock winds, and ground accelerations from large scale detonations. Project 1.2a measured pressures less than 75 psi, Project 1.3 recorded shock winds, and Project 1.7 was concerned with close-in ground accelerations. In addition to the formal instrumentation program field tests of several new type gages were made. All new gages had had laboratory tests but field tests were made to insure that the gages would perform under actual operating conditions. Records were taken on 112 information channels. Of these, 99 gave good information, six gave information up to arrival of the shock wave and seven gave no information.;
Major Descriptors: *CASTLE PROJECT -- MEASURING INSTRUMENTS
Descriptors: ACCELERATION; GROUND MOTION; NUCLEAR EXPLOSIONS; PRESSURE GAGES; SHOCK WAVES; TRANSDUCERS; WAVE PROPAGATION
Broader Terms: EXPLOSIONS; MEASURING INSTRUMENTS; MOTION; NUCLEAR EXPLOSIONS
Subject Categories: 450200* -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives

10/5/766 (Item 466 from file: 103)
00829668 ERA-07-005353; EDB-82-004504
Author(s): Triantafellu, R.
Title: Test of interim IBDA procedures. Report for March-May 1954
Corporate Source: Strategic Air Command, Offutt AFB, NE (USA)
Publication Date: Jan 1956 p 44
Report Number(s): AD-361832
Document Type: Report
Language: English
Journal Announcement: EDB8107
Availability: NTIS, PC A03/MF A01.
Subfile: ERA (Energy Research Abstracts); NTS (NTIS).

5003413

Country of Publication: United States
Abstract: The objective of Project 6.1 (CASTLE) was to determine whether the equipment-operating procedures used in obtaining radar scope photos for IBDA (Indirect Bomb Damage Assessment) of previous A-bomb tests were valid for thermonuclear weapons. The procedures for obtaining the radar photos involved positioning of bombers at a safe distance from ground zero at operational altitudes, with radar scanning ground zero during, and immediately after, the weapon burst. The photography obtained on each shot was generally good. The conclusions are that a high yield weapon burst can be readily detected by the bomber's radar, and that present equipment-operating techniques are adequate. These conclusions must be qualified.;
Major Descriptors: *CASTLE PROJECT; *THERMONUCLEAR EXPLOSIONS -- DETECTION; *THERMONUCLEAR EXPLOSIONS -- PHOTOGRAPHY
Descriptors: DAMAGE; RADAR
Broader Terms: EXPLOSIONS; MEASURING INSTRUMENTS; NUCLEAR EXPLOSIONS; RANGE FINDERS
Subject Categories: 450200* -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives

10/5/767 (Item 467 from file: 103)
00829667 ERA-07-005352; EDB-82-004503
Author(s): Willey, R.L.; Young, G.A.; Aronson, C.J.
Title: Base surge measurements by photography
Corporate Source: Naval Ordnance Lab., White Oak, MD (USA)
Publication Date: Sep 1955 p 34
Report Number(s): AD-361766
Document Type: Report
Language: English
Journal Announcement: EDB8107
Availability: NTIS, PC A03/MF A01.
Subfile: ERA (Energy Research Abstracts); NTS (NTIS).
Country of Origin: United States
Country of Publication: United States
Abstract: The major objective of Project 1.1c was the study of base surge phenomena on the Operation CASTLE shots by means of photography. No pictures of base surges were obtained, but aerial photographs for other projects indicated that base surges might have formed at times when the illumination was inadequate for surface photography. This cannot be established with certainty. Radar scope photography proved to be useful for indicating the region of heavy fallout. Further studies of this type would be recommended only for tests conducted during daylight hours.;
Major Descriptors: *CASTLE PROJECT; *NUCLEAR EXPLOSIONS -- PHOTOGRAPHY
Descriptors: FALLOUT
Broader Terms: EXPLOSIONS; NUCLEAR EXPLOSIONS
Subject Categories: 450200* -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives

10/5/768 (Item 468 from file: 103)
00829666 ERA-07-005351; EDB-82-004502
Author(s): Rinnert, H.R.
Title: Ship-shielding studies
Corporate Source: Naval Radiological Defense Lab., San Francisco, CA (USA)
Publication Date: 5 Jul 1959 p 92
Report Number(s): AD-357967
Document Type: Report
Language: English
Journal Announcement: EDB8107
Availability: NTIS, PC A05/MF A01.
Subfile: ERA (Energy Research Abstracts); NTS (NTIS).
Country of Origin: United States
Country of Publication: United States
Abstract: The principal objectives of this project were to determine, for

(1) the relative gamma radiation fields resulting from radioactive contaminants on a ship's weather surfaces, in the surrounding air envelope, and in the surrounding water envelope as a function of time and (2) characteristics of the interaction of gamma radiation with steel as a function of thickness and time after detonation. Shielded recording gamma-radiation detectors of known geometry were located on two YAG's to permit discrimination between the radiation fields resulting from water-borne and air-borne activities only. Unshielded detectors supplied data on the overall radiation fields on the weather decks. Recording radiation detectors inclosed in steel cylinders of various thicknesses supplied combined absorption and multiple scattering data as a function of time after detonation.;
Major Descriptors: *FALLOUT -- DEPOSITION; *NUCLEAR EXPLOSIONS -- FALLOUT; *REDWING PROJECT; *SHIPS -- SURFACE CONTAMINATION
Descriptors: EXTERNAL IRRADIATION; GAMMA RADIATION; PERSONNEL; RADIATION DOSES; RADIATION MONITORING; RADIATION PROTECTION; RADIOACTIVITY; SHIELDING MATERIALS; STEELS; TIME DEPENDENCE
Broader Terms: ALLOYS; CONTAMINATION; DOSES; ELECTROMAGNETIC RADIATION; EXPLOSIONS; IONIZING RADIATIONS; IRON ALLOYS; IRON BASE ALLOYS; IRRADIATION; MATERIALS; MONITORING; RADIATIONS
Subject Categories: 450200* -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives

10/5/769 (Item 469 from file: 103)
00829665 ERA-07-005350; EDB-82-004501
Author(s): Miller, G.C.; Schlei, E.J.; Andrews, C.R.
Title: Operation Castle. Project 6.2a. Blast and thermal effects on B-36 aircraft in flight
Corporate Source: Defense Atomic Support Agency, Washington, DC (USA)
Publication Date: Jun 1956 p 166
Report Number(s): AD-338333
Document Type: Report
Language: English
Journal Announcement: EDB8107
Availability: NTIS, PC A08/MF A01.
Subfile: ERA (Energy Research Abstracts); NTS (NTIS).
Country of Origin: United States
Country of Publication: United States
Abstract: The responses of a B-36 aircraft to the effects of a nuclear detonation at levels approaching the thermal and blast limitations of the aircraft were determined. A B-36D aircraft was instrumented and flown in the vicinity of each of the six shots of the CASTLE sequence. Time-history input and response measurements constituted the main instru mentation effort. For the first five shots, the aircraft was positioned at predicted near-limiting inputs in a simulated delivery configuration, that is, flying away from the explosion. On Shot 6, the aircraft was headed toward the ex plosion to obtain initial experimental data for this orientation. In addition to the measured data, together with photographs and descriptions of the damage, this report contains pertinent ob servations as reported by the flight crew. Suf ficient dre obtained to fulfill the specific objective of the project. A comparison between the experimental data and theoretically-predicted responses is made.;
Major Descriptors: *AIRCRAFT -- BLAST EFFECTS; *AIRCRAFT -- TEMPERATURE EFFECTS; *CASTLE PROJECT; *NUCLEAR EXPLOSIONS -- SHOCK WAVES; *NUCLEAR EXPLOSIONS -- THERMAL RADIATION
Descriptors: GAMMA RADIATION; VULNERABILITY
Broader Terms: ELECTROMAGNETIC RADIATION; EXPLOSIONS; IONIZING RADIATIONS; NUCLEAR EXPLOSIONS; RADIATIONS
Subject Categories: 450200* -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives

10/5/770 (Item 470 from file: 103)
00828869 ERA-07-004885; EDB-82-003705
Author(s): Vine, F.S.; Owen, W.L.

Corporate Source: Bureau of Ships, Washington, DC (USA)
Publication Date: 20 Mar 1959 p 46
Report Number(s): AD-357962
Document Type: Report
Language: English
Journal Announcement: EDB8107
Availability: NTIS, PC A03/MF A01.
Subfile: ERA (Energy Research Abstracts); NTS (NTIS).
Country of Origin: United States
Country of Publication: United States
Abstract: The objectives of this project were (1) to proof test a proposed standard recovery procedure for the tactical decontamination of Navy ships and (2) to perform, as required, an operational decontamination of each of three test ships to enable them to make their next scheduled participation. Three washdown-equipped test ships, the YAG-39, the YAG-40, and the LST-611, served as fallout-collection stations and test platforms for other Program 2 projects. These ships were successively contaminated by radioactive fallout from Shots Zuni, Flathead, Navajo, and Tewa. Because of insufficient contamination aboard the ships on their arrival at Eniwetok Lagoon following their several missions, the primary objective was not fulfilled. Therefore, the function of Project 2.9 was generally restricted to operational decontamination between shots.;
Major Descriptors: *SHIPS -- DECONTAMINATION
Descriptors: CONTAMINATION; DOSE RATES; FALLOUT; NUCLEAR EXPLOSIONS; RADIATION DETECTORS
Broader Terms: CLEANING; EXPLOSIONS; MEASURING INSTRUMENTS
Subject Categories: 400702* -- Radiochemistry & Nuclear Chemistry -- Properties of Radioactive Materials
450202 -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/771 (Item 471 from file: 103)
00823837 EDB-81-132108
Title: Atomic energy in its repercussions on life and health
(In French)
Conference Title: Scientific conference
Conference Location: Paris, France Conference Date: 1956
Source: L'Expansion Editeur (France)
Publication Date: 1956 p 1-254
Document Type: Journal Article; Conference literature
Language: French
Journal Announcement: EDB8111
Subfile: TIC (Technical Information Center).
Country of Origin: France
Abstract: The papers given at the July 1955 conference in Paris on the dangers of atomic energy and radiation are presented. The topics discussed include the dangers inherent in atomic equipment, the radioactive effects of atomic explosions, a review of the analyses made in Japan of the radioactive ash from the March 1954 Bikini explosions, long distance propagation and characteristics of the radioactive particles emitted in atomic explosions, eventual influences of atomic explosions on evolution, radioactivity in air and rain, radioactive clouds, meteorological effects of atomic explosions, a general review of the biological effects of ionizing radiation, medical problems posed by the immediate effects of atomic explosions, cataracts received from explosions or research in atomic energy, atomic radiation and aquatic life, biological danger from powders emitting ..beta.. rays, effect of weak doses of radiation, ionizing radiation and the gases in atomic industry, and therapy for radiolesions.;
Major Descriptors: *FALLOUT -- RADIATION HAZARDS; *HUMAN POPULATIONS -- BIOLOGICAL RADIATION EFFECTS; *HUMAN POPULATIONS -- RADIATION HAZARDS; *NUCLEAR EXPLOSIONS -- RADIATION HAZARDS; *NUCLEAR INDUSTRY -- RADIATION HAZARDS; *RADIATION HAZARDS -- MEETINGS
Descriptors: AIR; AQUATIC ECOSYSTEMS; BETA PARTICLES; BIKINI; CATARACTS; IONIZING RADIATIONS; JAPAN; METEOROLOGY; POST-IRRADIATION THERAPY;

SPATIAL DISTRIBUTION
Broader Terms: AEROSOLS; ASIA; ATMOSPHERIC PRECIPITATIONS; BIOLOGICAL EFFECTS; CHARGED PARTICLES; CLOUDS; COLLOIDS; DISEASES; DISPERSIONS; DISTRIBUTION; DOSES; ECOSYSTEMS; EXPLOSIONS; FLUIDS; GASES; HAZARDS; HEALTH HAZARDS; INDUSTRY; ISLANDS; MARSHALL ISLANDS; MICRONESIA; OCEANIA; POPULATIONS; RADIATION EFFECTS; RADIATIONS; SENSE ORGANS DISEASES; SOLS; THERAPY
Subject Categories: 560151* -- Radiation Effects on Animals -- Man
560161 -- Radionuclide Effects, Kinetics, & Toxicology -- Man
510302 -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- Terrestrial Ecosystems & Food Chains -- (-1987)
520302 -- Environment, Aquatic -- Radioactive Materials Monitoring & Transport -- Aquatic Ecosystems & Food Chains -- (-1987)
500300 -- Environment, Atmospheric -- Radioactive Materials Monitoring & Transport -- (-1989)
450200 -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives

10/5/772 (Item 472 from file: 103)
00823187 INS-81-017973; ERA-07-001007; EDB-81-131458
Title: Remote sensing of soil radionuclide fluxes in a tropical ecosystem
Author(s): Clegg, B.; Koranda, J.; Robinson, W.; Holladay, G.
Affiliation: Lawrence Livermore Lab., CA
Conference Title: IEEE nuclear science symposium
Conference Location: Orlando, FL, USA Conference Date: 5 Nov 1980
Source: IEEE Trans. Nucl. Sci. (United States) v NS-28:1. Coden: IETNA
Publication Date: Feb 1981 p 249-254
Report Number(s): CONF-801103-
Document Type: Journal Article; Conference literature
Language: English
Journal Announcement: EDB8110
Subfile: ERA (Energy Research Abstracts); INS (US Atomindex input); EI (COMPENDEX).
Country of Origin: United States
Abstract: Use is being made of a transponding geostationary satellite to collect surface environmental data to describe the fate of soil-borne radionuclides. The remote, former atomic testing grounds at the Enewetak and Bikini Atolls present a difficult environment in which to collect continuous field data. The land-based, solar-powered microprocessor and environmental data systems remotely acquire measurements of net and total solar radiation, rain, humidity, temperature, and soil-water potentials. A water flux model predicts wet season plant transpiration rates nearly equal to the 6-7 mm/d evaporation pan rate, which decreases to 2-3 mm/d for the dry season. Radioisotopic analysis confirms the microclimate-estimated 1:3 to 1:20 soil to plant /sup 137/Cs dry matter concentration ratio. 14 refs.;
Major Descriptors: *GOES SATELLITES; *RADIONUCLIDE MIGRATION -- REMOTE SENSING; *SOILS -- RADIONUCLIDE MIGRATION
Descriptors: ECOSYSTEMS; TROPICAL REGIONS
Broader Terms: ENVIRONMENTAL TRANSPORT; MASS TRANSFER; SATELLITES
Subject Categories: 510301* -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- Soil -- (-1987)
INIS Subject Categories: B31* -- Land

10/5/773 (Item 473 from file: 103)
00815223 EDB-81-123492
Title: Investigation of the atomic cloud
Author(s): Garrigue, H.
(In French)
Source: Publ. Sci. Tech. Minist. Air (Fr.) (France) v 228. Coden: PSTMA
Publication Date: 1949 p vp
Document Type: Journal Article
Language: French
Journal Announcement: EDB8111
Subfile: TIC (Technical Information Center).

Abstract: In three out of twenty-three flights at 6000 meters over France in July 1946, an unknown radioactive material with a half-life of 25 +- 5 h was detected. The average concentration was 0.013 x 10/sup -16/ curies/cm/sup 3/ radio equivalent. The first detection was on July 20, 1946, twenty days after the first explosion at Bikini. Similar material was detected in six out of fifteen flights in July 1948, the first on July 2, seventy-five days after the Eniwetok test.;
Major Descriptors: *FRANCE -- RADIATION MONITORING; *RADIOACTIVE CLOUDS -- AERIAL MONITORING
Descriptors: BIKINI; ENIWETOK; HALF-LIFE; NUCLEAR EXPLOSIONS; RADIOACTIVE MATERIALS
Broader Terms: CLOUDS; EUROPE; EXPLOSIONS; ISLANDS; MARSHALL ISLANDS; MATERIALS; MICRONESIA; MONITORING; OCEANIA; WESTERN EUROPE
Subject Categories: 500300* -- Environment, Atmospheric -- Radioactive Materials Monitoring & Transport -- (-1989)
450200 -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives

10/5/774 (Item 474 from file: 103)
00815220 EDB-81-123489
Title: Radioactive dust from nuclear detonation. Survey of the radioactive contamination of the No. 5 Fukuryu Maru
Author(s): Shimizu, S.; Akagi, H.; Goto, H.; Okamoto, S.; Ishida, T.; Kawai, Y.
Source: Bull. Inst. Chem. Res., Kyoto Univ. (Japan) Coden: BICRA
Publication Date: 1955 p 1-3
Document Type: Journal Article
Language: English
Journal Announcement: EDB8111
Subfile: TIC (Technical Information Center).
Country of Origin: Japan
Abstract: A collection of reports on investigation on No. 5 Fukuryu Maru, a fishing ship which was in the vicinity of the Bikini atoll when nuclear detonation occurred on March 1, 1954. The radiation dosage rate of contamination observed for combined ..beta..- and ..gamma..-radiation at every part of the ship on March 19, April 21, and May 16 is recorded. The average value of total ..gamma..-dosage for the crew was supposed to lie between 200 and 500 r.;
Major Descriptors: *HUMAN POPULATIONS -- RADIATION DOSES; *SHIPS -- CONTAMINATION; *SHIPS -- RADIATION MONITORING
Descriptors: BETA DETECTION; BIKINI; DOSE RATES; DUSTS; FALLOUT; GAMMA DETECTION; NUCLEAR EXPLOSIONS; RADIOACTIVITY
Broader Terms: CHARGED PARTICLE DETECTION; DETECTION; DOSES; EXPLOSIONS; ISLANDS; MARSHALL ISLANDS; MICRONESIA; MONITORING; OCEANIA; POPULATIONS ; RADIATION DETECTION
Subject Categories: 500300* -- Environment, Atmospheric -- Radioactive Materials Monitoring & Transport -- (-1989)
450200 -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives
560171 -- Radiation Effects -- Nuclide Kinetics & Toxicology -- Man -- (-1987)

10/5/775 (Item 475 from file: 103)
00803602 EDB-81-111869
Title: Contamination of the fishes caught by the No. 5 Fukuryu Maru and the foods manufactured from these fishes
Author(s): Kikuchi, T.; Goto, H.; Kono, T.; Fujioka, S.; Sano, T.; Matsuki, T.; Watanabe, M.; Fujio, M.; Akagi, H.; Wakisaka, G.
Source: Bull. Inst. Chem. Res., Kyoto Univ. (Japan) Coden: BICRA
Publication Date: 1954 p 35-38
Document Type: Journal Article
Language: English
Journal Announcement: EDB8110
Subfile: TIC (Technical Information Center).
Country of Origin: Japan

the vicinity of Bikini Atoll were studied. The contamination was caused directly by the radioactive ashes and was limited to the surface of the fish. No radioactivity was detected in muscles and bones. The contamination of tuna expressed as /sup 60/Co was 10/sup -2/ to 10/sup -3/ microcurie per sq. cm. of skin and 10/sup -1/ microcurie per g. scales.;
Major Descriptors: *FISHES -- CONTAMINATION; *FISHES -- RADIONUCLIDE KINETICS; *FOOD -- CONTAMINATION
Descriptors: ASHES; BIKINI; COBALT 60; FALLOUT; MUSCLES; NUCLEAR EXPLOSIONS ; RADIATION DOSES; SKELETON; SKIN; TUNA
Broader Terms: ANIMALS; AQUATIC ORGANISMS; BETA DECAY RADIOISOTOPES; BETA-MINUS DECAY RADIOISOTOPES; BODY; COBALT ISOTOPES; DOSES; EXPLOSIONS; FISHES; INTERMEDIATE MASS NUCLEI; INTERNAL CONVERSION RADIOISOTOPES; ISLANDS; ISOMERIC TRANSITION ISOTOPES; ISOTOPES; MARSHALL ISLANDS; MICRONESIA; MINUTES LIVING RADIOISOTOPES; NUCLEI; OCEANIA; ODD-ODD NUCLEI; ORGANS; RADIOISOTOPES; RESIDUES; VERTEBRATES; YEARS LIVING RADIOISOTOPES
Subject Categories: 520302* -- Environment, Aquatic -- Radioactive Materials Monitoring & Transport -- Aquatic Ecosystems & Food Chains -- (-1987)
560172 -- Radiation Effects -- Nuclide Kinetics & Toxicology -- Animals -- (-1987)
450200 -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives

10/5/776 (Item 476 from file: 103)
00803601 EDB-81-111868
Title: Radioactive substances found on the contaminated fish
Author(s): Kiba, T.; Ohashi, S.; Shibata, M.; Mizube, T.
Source: Bunseki Kagaku (Japan) v 3. Coden: BNSKA
Publication Date: 1954 p 361-363
Document Type: Journal Article
Language: English
Journal Announcement: EDB8110
Subfile: TIC (Technical Information Center).
Country of Origin: Japan
Abstract: Radiochemical investigation of the substance collected from the surface of tuna fish which were brought back by the No. 5 Fukuryu Maru was performed. Most of the radioactivity was found on the scales which could not be decontaminated by treating with H/sub 2/O; 80% of the activity was removed by washing the dried scales with 3N HCl. Paper chromatographic separation of the HCl fraction showed the presence of /sup 140/Ba, /sup 89/Sr, /sup 132/Te, and probably /sup 95/Zr, /sup 140/La, and rare earths.;
Major Descriptors: *BARIUM 140 -- CHROMATOGRAPHY; *LANTHANUM 140 -- CHROMATOGRAPHY; *STRONTIUM 90 -- CHROMATOGRAPHY; *TELLURIUM 132 -- CHROMATOGRAPHY; *TUNA -- CONTAMINATION; *TUNA -- RADIOCHEMICAL ANALYSIS ; *ZIRCONIUM 95 -- CHROMATOGRAPHY
Descriptors: BIKINI; DECONTAMINATION; FALLOUT; NUCLEAR EXPLOSIONS; RADIOACTIVITY; RARE EARTHS
Broader Terms: ALKALINE EARTH ISOTOPES; ANIMALS; AQUATIC ORGANISMS; BARIUM ISOTOPES; BETA DECAY RADIOISOTOPES; BETA-MINUS DECAY RADIOISOTOPES; CHEMICAL ANALYSIS; CLEANING; DAYS LIVING RADIOISOTOPES; ELEMENTS; EVEN-EVEN NUCLEI; EVEN-ODD NUCLEI; EXPLOSIONS; FISHES; INTERMEDIATE MASS NUCLEI; INTERNAL CONVERSION RADIOISOTOPES; ISLANDS; ISOTOPES; LANTHANUM ISOTOPES; MARSHALL ISLANDS; METALS; MICRONESIA; NUCLEI; OCEANIA; ODD-ODD NUCLEI; QUANTITATIVE CHEMICAL ANALYSIS; RADIOISOTOPES; RARE EARTH ISOTOPES; RARE EARTH NUCLEI; SEPARATION PROCESSES; STRONTIUM ISOTOPES; TELLURIUM ISOTOPES; VERTEBRATES; YEARS LIVING RADIOISOTOPES; ZIRCONIUM ISOTOPES
Subject Categories: 520302* -- Environment, Aquatic -- Radioactive Materials Monitoring & Transport -- Aquatic Ecosystems & Food Chains -- (-1987)
400102 -- Chemical & Spectral Procedures
450200 -- Military Technology, Weaponry, & National Defense -- Nuclear

10/5/777 (Item 477 from file: 103)
00803599 INS-81-016188; ERA-06-033829; EDB-81-111866
Author(s): Robison, W.L.; Noshkin, V.E.; Phillips, W.A.; Eagle, R.J.
Title: Northern Marshall Islands radiological survey: radionuclide concentrations in fish and clams and estimated doses via the marine pathway
Corporate Source: Lawrence Livermore National Lab., CA (USA)
Publication Date: 18 Aug 1981 p 36
Report Number(s): UCRL-53853-Pt.3
Order Number: DE81030471
Contract Number (DOE): W-7405-ENG-48
Document Type: Report; Numerical data
Language: English
Journal Announcement: EDB8110
Availability: NTIS, PC A03/MF A01.
Subfile: ERA (Energy Research Abstracts); INS (US Atomindex input); TIC (Technical Information Center).
Country of Origin: United States
Country of Publication: United States
Abstract: The survey consisted, in part, of an aerial radiological reconnaissance to map the external gamma-ray exposure rates. As a secondary phase, terrestrial and marine samples were collected to assess the radiological dose from pertinent food chains to atoll inhabitants. The marine sample collection, processing, and dose assessment methodology are presented as well as the concentration data for /sup 90/Sr, /sup 137/Cs, /sup 238/Pu, /sup 239 +240/Pu, /sup 241/Am, and any of the other gamma emitters in fish and clam muscle tissue from the different species collected. Doses are calculated from the average radionuclide concentrations in fish and clam muscle tissue assuming an average daily intake of 200 and 10 g, respectivelty. The /sup 90/Sr concentration in muscle tissue is very low and there is little difference in the average concentrations from the different fish from different atolls or islands. The /sup 239 +240/Pu concentration in the muscle tissue of all reef species, however, is higher than that in pelagic lagoon fish. In contrast, /sup 137/Cs concentrations are lowest in the muscle tissue of the bottom-feeding reef species and highest in pelagic logoon fish. Recent measurements of radionuclide concentrations in fish muscle tissue and other marine dietary items from international sources show that the average concentrations in species from the Marshall Islands are comparable to those in fish typically consumed as food in the United States and are generally lower than those in most international marine dietary items. The whole-body dose rates based on continuous consumption of 200 g/d of fish range from 0.028 to 0.1 mrem/y; the bone-marrow dose rates range from 0.029 to 0.12 mrem/y. The dose commitment, or 30-y integral doses, range from 0.00063 to 0.0022 rem for the whole body and from 0.00065 to 0.0032 rem for the bone marrow. (ERB);
Major Descriptors: *AMERICIUM 241 -- RADIOECOLOGICAL CONCENTRATION; *AQUATIC ECOSYSTEMS -- RADIONUCLIDE MIGRATION; *BODY -- RADIATION DOSES ; *BONE MARROW -- RADIATION DOSES; *CESIUM 137 -- RADIOECOLOGICAL CONCENTRATION; *FISHES -- RADIOACTIVITY; *FOOD CHAINS -- RADIONUCLIDE MIGRATION; *HUMAN POPULATIONS -- DOSE COMMITMENTS; *MARSHALL ISLANDS -- DOSE COMMITMENTS; *MARSHALL ISLANDS -- RADIATION DOSES; *MARSHALL ISLANDS -- RADIATION MONITORING; *MARSHALL ISLANDS -- RADIOECOLOGICAL CONCENTRATION; *MOLLUSCS -- RADIOACTIVITY; *PLUTONIUM 238 -- RADIOECOLOGICAL CONCENTRATION; *PLUTONIUM 239 -- RADIOECOLOGICAL CONCENTRATION; *PLUTONIUM 240 -- RADIOECOLOGICAL CONCENTRATION; *STRONTIUM 90 -- RADIOECOLOGICAL CONCENTRATION
Descriptors: DIET; EXPERIMENTAL DATA
Broader Terms: ACTINIDE ISOTOPES; ACTINIDE NUCLEI; ALKALI METAL ISOTOPES; ALKALINE EARTH ISOTOPES; ALPHA DECAY RADIOISOTOPES; AMERICIUM ISOTOPES; ANIMAL TISSUES; ANIMALS; AQUATIC ORGANISMS; BETA DECAY RADIOISOTOPES; BETA-MINUS DECAY RADIOISOTOPES; BODY; CESIUM ISOTOPES; DATA; DOSES; ECOLOGICAL CONCENTRATION; ECOSYSTEMS; ENVIRONMENTAL TRANSPORT;

INFORMATION; INTERMEDIATE MASS NUCLEI; INVERTEBRATES; ISLANDS; ISOTOPES ; MASS TRANSFER; MICRONESIA; MONITORING; NUCLEI; NUMERICAL DATA; OCEANIA; ODD-EVEN NUCLEI; ORGANS; PLUTONIUM ISOTOPES; POPULATIONS; RADIOISOTOPES; STRONTIUM ISOTOPES; TISSUES; VERTEBRATES; YEARS LIVING RADIOISOTOPES
Subject Categories: 520302* -- Environment, Aquatic -- Radioactive Materials Monitoring & Transport -- Aquatic Ecosystems & Food Chains -- (-1987)
560171 -- Radiation Effects -- Nuclide Kinetics & Toxicology -- Man -- (-1987)
INIS Subject Categories: C22* -- Radionuclide Ecology

10/5/778 (Item 478 from file: 103)
00803594 INS-81-016186; ERA-06-033828; EDB-81-111861
Author(s): Robison, W.L.; Conrado, C.L.; Eagle, R.J.; Stuart, M.L.
Title: Northern Marshall Islands radiological survey: sampling and analysis summary
Corporate Source: Lawrence Livermore National Lab., CA (USA)
Publication Date: 23 Jul 1981 p 102
Report Number(s): UCRL-52853-Pt.1
Order Number: DE81029429
Contract Number (DOE): W-7405-ENG-48
Document Type: Report; Numerical data
Language: English
Journal Announcement: EDB8110
Availability: NTIS, PC A06/MF A01.
Subfile: ERA (Energy Research Abstracts); INS (US Atomindex input); TIC (Technical Information Center).
Country of Origin: United States
Country of Publication: United States
Abstract: A radiological survey was conducted in the Northern Marshall Islands to document reamining external gamma exposures from nuclear tests conducted at Enewetak and Bikini Atolls. An additional program was later included to obtain terrestrial and marine samples for radiological dose assessment for current or potential atoll inhabitants. This report is the first of a series summarizing the results from the terrestrial and marine surveys. The sample collection and processing procedures and the general survey methodology are discussed; a summary of the collected samples and radionuclide analyses is presented. Over 5400 samples were collected from the 12 atolls and 2 islands and prepared for analysis including 3093 soil, 961 vegetation, 153 animal, 965 fish composite samples (average of 30 fish per sample), 101 clam, 50 lagoon water, 15 cistern water, 17 groundwater, and 85 lagoon sediment samples. A complete breakdown by sample type, atoll, and island is given here. The total number of analyses by radionuclide are 8840 for /sup 241/Am, 6569 for /sup 137/Cs, 4535 for /sup 239 +240/Pu, 4431 for /sup 90/Sr, 1146 for /sup 238/Pu, 269 for /sup 241/Pu, and 114 each for /sup 239/Pu and /sup 240/Pu. A complete breakdown by sample category, atoll or island, and radionuclide is also included.;
Major Descriptors: *AMERICIUM 241 -- RADIATION MONITORING; *ANIMALS -- RADIOACTIVITY; *CESIUM 137 -- RADIATION MONITORING; *FISHES -- RADIOACTIVITY; *MARSHALL ISLANDS -- RADIATION MONITORING; *MARSHALL ISLANDS -- RADIOACTIVITY; *PLANTS -- RADIOACTIVITY; *PLUTONIUM 238 -- RADIATION MONITORING; *PLUTONIUM 239 -- RADIATION MONITORING; *PLUTONIUM 240 -- RADIATION MONITORING; *PLUTONIUM 241 -- RADIATION MONITORING; *SOILS -- RADIOACTIVITY; *STRONTIUM 90 -- RADIATION MONITORING
Descriptors: AQUATIC ECOSYSTEMS; BIKINI; DATA COMPILATION; ENIWETOK; GAMMA RADIATION; GAMMA SPECTROSCOPY; GROUND WATER; RADIATION DOSES; SEDIMENTS ; SURFACE WATERS; TERRESTRIAL ECOSYSTEMS
Broader Terms: ACTINIDE ISOTOPES; ACTINIDE NUCLEI; ALKALI METAL ISOTOPES; ALKALINE EARTH ISOTOPES; ALPHA DECAY RADIOISOTOPES; AMERICIUM ISOTOPES; ANIMALS; AQUATIC ORGANISMS; BETA DECAY RADIOISOTOPES; BETA-MINUS DECAY RADIOISOTOPES; CESIUM ISOTOPES; DATA; DOSES; ECOSYSTEMS;

NUCLEI; HYDROGEN COMPOUNDS; INFORMATION; INTERMEDIATE MASS NUCLEI; IONIZING RADIATIONS; ISLANDS; ISOTOPES; MARSHALL ISLANDS; MICRONESIA; MONITORING; NUCLEI; NUMERICAL DATA; OCEANIA; ODD-EVEN NUCLEI; OXYGEN COMPOUNDS; PLUTONIUM ISOTOPES; RADIATIONS; RADIOISOTOPES; SPECTROSCOPY; STRONTIUM ISOTOPES; VERTEBRATES; WATER; YEARS LIVING RADIOISOTOPES
Subject Categories: 520300* -- Environment, Aquatic -- Radioactive Materials Monitoring & Transport -- (1989)
510300 -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- (-1989)
560170 -- Radiation Effects -- Nuclide Kinetics & Toxicology -- (-1987)
INIS Subject Categories: B32* -- Water

10/5/779 (Item 479 from file: 103)
00803550 EDB-81-111817
Title: First measurements of the radioactivity in atmospheric precipitations
Author(s): Santomauro, L.; Cigna, A.
Affiliation: Observatorio Brera, Milan, Italy
Source: Ann. Geofis. (Rome) (Italy) v 6. Coden: AGFRA
Publication Date: 1953 p 381-387
Document Type: Journal Article
Language: English
Journal Announcement: EDB8110
Subfile: TIC (Technical Information Center).
Country of Origin: Italy
Abstract: Measurements conducted between February 1951 and November 1952 showed that nuclear-weapon tests at Las Vegas, Eniwetok, and Montebello were followed, 1, 2, and 3 weeks later, respectively, by an increase in the radioactive content of rain and snow falling in Italy.;
Major Descriptors: *ITALY -- RADIATION MONITORING; *RAIN -- RADIOACTIVITY; *SNOW -- RADIOACTIVITY
Descriptors: ENIWETOK; FALLOUT; NEVADA TEST SITE; NUCLEAR EXPLOSIONS; NUCLEAR WEAPONS; TESTING
Broader Terms: ATMOSPHERIC PRECIPITATIONS; EUROPE; EXPLOSIONS; ISLANDS; MARSHALL ISLANDS; MICRONESIA; MONITORING; OCEANIA; WEAPONS; WESTERN EUROPE
Subject Categories: 500300* -- Environment, Atmospheric -- Radioactive Materials Monitoring & Transport -- (-1989)
450200 -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives

10/5/780 (Item 480 from file: 103)
00797893 ERA-06-032475; EDB-81-106159
Title: Abundance, diversity, and resource use in an assemblage of Conus species in Enewetak lagoon
Author(s): Kohn, A.J.
Source: Pac. Sci. (United States) v 34:4. Coden: PASCA
Publication Date: Oct 1980 p 359-369
Contract Number (DOE): AT-(29-2)-226; AT-(26-1)-628
Document Type: Journal Article
Language: English
Journal Announcement: EDB8109
Subfile: ERA (Energy Research Abstracts); TIC (Technical Information Center).
Country of Origin: United States
Abstract: Eight species of the gastropod genus Conus co-occur in sand substrate and an adjacent meadow of Halimeda stuposa in Enewetak lagoon, an unusually diverse assemblage for this type of habitat. Population density is high, and large species predominate; they represent all major feeding groups in the genus: predators on polychaetes, enteropneusts, gastropods, and fishes. Although the two most common Conus species eat primarily the same prey species, they mainly take prey of different sizes in different microhabitats. The results suggest that sufficient microhabitat heterogeneity and prey

different prey resources by the different Conus species present. Between-species dissimilarity in resource use thus agrees with previous observations on more diverse Conus assemblages of subtidal coral reef platforms. Prey species diversity is inversely related to body size, confirming and extending a previously identified pattern among Conus species that prey on sedentary polychaetes.;
Major Descriptors: *MOLLUSCS -- BEHAVIOR; *MOLLUSCS -- POPULATION DYNAMICS
Descriptors: AQUATIC ECOSYSTEMS; ENIWETOK; FOOD CHAINS; HABITAT; POPULATION DENSITY; PREDATOR-PREY INTERACTIONS; SPECIES DIVERSITY
Broader Terms: ANIMALS; AQUATIC ORGANISMS; ECOSYSTEMS; INVERTEBRATES; ISLANDS; MARSHALL ISLANDS; MICRONESIA; OCEANIA
Subject Categories: 550100* -- Behavioral Biology

10/5/781 (Item 481 from file: 103)
00797870 ERA-06-031224; INS-81-015380; EDB-81-106136
Author(s): Colin, P.L.; Harrison, J.T. III
Title: Mid-Pacific Research Laboratory. Annual report, 1 October 1979-30 September 1980
Corporate Source: Hawaii Univ., Honolulu (USA). Office of Research Administration
Publication Date: Apr 1981 p 38
Report Number(s): DOE/EV/00703-3
Order Number: DE81028362
Contract Number (DOE): AC08-76EV00703
Document Type: Report
Language: English
Journal Announcement: EDB8109
Availability: NTIS, PC A03/MF A01.
Subfile: INS (US Atomindex input); ERA (Energy Research Abstracts); TIC (Technical Information Center).
Country of Origin: United States
Country of Publication: United States
Abstract: Progress is reported in the research program which concentrates on sediment bottom communities of the Eniwetak lagoon. Biological and physical-chemical processes of the lagoon floor are relevant to radionuclide mobilization and redistribution. Because of the paucity of general information about the deep lagoon, initial studies were designed to assess benthic community distribution and structure. Two-hundred stations throughout the lagoon are being surveyed using a camera system designed and built at MPRL. These studies of benthic community distribution are augmented by a concurrent research effort to quantify benthic primary production, community metabolism, and cycling of nutrients between the sediments and the overlying water column. Net daily oxygen and nutrient flow data are tabulated. Facilities are described, community relations are discussed, and a plan for future research is given.;
Major Descriptors: *BENTHOS -- DISTRIBUTION; *ENIWETOK -- AQUATIC ECOSYSTEMS
Descriptors: IMAGES; METABOLISM; NUTRIENTS; OXYGEN; RADIONUCLIDE MIGRATION; RESEARCH PROGRAMS; SURFACE WATERS
Broader Terms: AQUATIC ORGANISMS; ECOSYSTEMS; ELEMENTS; ENVIRONMENTAL TRANSPORT; ISLANDS; MARSHALL ISLANDS; MASS TRANSFER; MICRONESIA; NONMETALS; OCEANIA
Subject Categories: 520500* -- Environment, Aquatic -- Site Resource & Use Studies -- (-1989)
520301 -- Environment, Aquatic -- Radioactive Materials Monitoring & Transport -- Water -- (1987)
520302 -- Environment, Aquatic -- Radioactive Materials Monitoring & Transport -- Aquatic Ecosystems & Food Chains -- (-1987)
INIS Subject Categories: C52* -- Radiation Hazards & Safety Evaluations of Nuclear Installations

10/5/782 (Item 482 from file: 103)
00797714 INS-81-015361; EDB-81-105980
Title: Paradise lost

Source: Bull. At. Sci. (United States) v 36:10. Coden: BASIA
Publication Date: Dec 1980 p 24-29
Document Type: Journal Article
Language: English
Journal Announcement: EDB8109
Subfile: INS (US Atomindex input); TIC (Technical Information Center).
Country of Origin: United States
Abstract: The United States conducted 66 atmospheric nuclear weapons tests in the Marshall Islands. Twenty-two years later the authorities continue to disagree on when the islands will be safe for resettlement. This article discusses the events that have occurred in the past 30 years.;
Major Descriptors: *ATMOSPHERIC EXPLOSIONS -- HEALTH HAZARDS; *HUMAN POPULATIONS -- RADIATION DOSES; *MARSHALL ISLANDS -- NUCLEAR EXPLOSIONS ; *PUBLIC HEALTH -- RECOMMENDATIONS
Descriptors: FALLOUT; PLUTONIUM 239; PLUTONIUM 240; SOILS
Broader Terms: ACTINIDE ISOTOPES; ACTINIDE NUCLEI; ALPHA DECAY RADIOISOTOPES; DOSES; EVEN-EVEN NUCLEI; EVEN-ODD NUCLEI; EXPLOSIONS; HAZARDS; HEAVY NUCLEI; ISLANDS; ISOTOPES; MICRONESIA; NUCLEI; OCEANIA; PLUTONIUM ISOTOPES; POPULATIONS; RADIOISOTOPES; YEARS LIVING RADIOISOTOPES
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)
560161 -- Radionuclide Effects, Kinetics, & Toxicology -- Man
INIS Subject Categories: E14* -- Nuclear Explosions

10/5/783 (Item 483 from file: 103)
00793163 ERA-06-031330; EDB-81-101428
Author(s): Daniels, F.B.; Harris, A.K.; Goldman, D.T.
Title: Effects of atomic explosions on the ionosphere
Corporate Source: Army Electronics Labs., Fort Monmouth, NJ (USA)
Publication Date: Aug 1954 p 64
Report Number(s): AD-363391
Document Type: Report
Language: English
Journal Announcement: EDB8106
Availability: NTIS, PC A04/MF A01.
Subfile: ERA (Energy Research Abstracts); NTS (NTIS).
Country of Origin: United States
Country of Publication: United States
Abstract: During Operation Ivy an ionosphere recorder was operated at some distance from the test site. In addition, hf radio transmissions with paths nearly over the blast area were monitored. A new phenomenon was observed in connection with the larger shot. It consisted of a sustained rise in the virtual height of the F2 layer, lasting more than 3 hr, and a simultaneous depression from normal values of the F2 critical frequency. These effects, although only relatively local in extent, are likened to those normally observed over large portions of the earth during magnetic storms. A possible physical explanation is propounded, based upon the hypothesis that much of the vertically propagated infrasonic energy produced by an explosion of this size is converted into heat in the lower portion of the F2 region. Other effects on the ionosphere, observed during both shots, were similar to those recorded during earlier operations and corrobrated previous theory attributing them to local changes of ion density caused by the sonic wave acting on the ionized layers. No major disturbance to ionospheric communications was found. However, some attenuation of all radio waves passing through the D and E regions in the vicinity of the blast was observed, lasting only 15 min or thereabouts.;
Major Descriptors: *IONOSPHERE -- BLAST EFFECTS; *IONOSPHERE -- TEMPERATURE EFFECTS; *NUCLEAR EXPLOSIONS -- SHOCK WAVES
Descriptors: D REGION; E REGION; F REGION; ION DENSITY; IVY PROJECT; RECORDING SYSTEMS
Broader Terms: EARTH ATMOSPHERE; EXPLOSIONS; IONOSPHERE; NUCLEAR EXPLOSIONS ; PLANETARY IONOSPHERES

Detonations

10/5/784 (Item 484 from file: 103)
00792662 EDB-81-100927
Title: Experiences with radioactive injuries of Japanese fishermen on account of Bikini ashes
Author(s): Tsuzuki, M.
Source: Muench. Med. Wochenschr. (Germany, Federal Republic of) v 97:31.
Coden: MMWOA
Publication Date: 1955 p 1-22
Document Type: Journal Article
Language: German
Journal Announcement: EDB8109
Subfile: TIC (Technical Information Center).
Country of Origin: Germany, Federal Republic of
Abstract: Short description of our clinical experiences with radioactive injuries of the 23 fishermen during one year is presented. All of the 23 fishermen in the boat were afflicted with acute radioactive-sickness as a result of contact with radioactive rain and ashes. They were injured through the combination of external as well as internal radiation.;
Major Descriptors: *HUMAN POPULATIONS -- RADIATION INJURIES; *RADIATION SYNDROME -- PATHOLOGY
Descriptors: ASHES; BIKINI; BIOLOGICAL RADIATION EFFECTS; EXTERNAL IRRADIATION; FALLOUT; INTERNAL IRRADIATION; NUCLEAR EXPLOSIONS; RAIN
Broader Terms: ATMOSPHERIC PRECIPITATIONS; BIOLOGICAL EFFECTS; BIOLOGICAL RADIATION EFFECTS; EXPLOSIONS; INJURIES; IRRADIATION; ISLANDS; MARSHALL ISLANDS; MICRONESIA; OCEANIA; POPULATIONS; RADIATION EFFECTS; RESIDUES
Subject Categories: 560151* -- Radiation Effects on Animals -- Man
560161 -- Radionuclide Effects, Kinetics, & Toxicology -- Man
450200 -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives

10/5/785 (Item 485 from file: 103)
00792661 EDB-81-100926
Title: Pathological findings in the fatal case (the late Mr. Kuboyama) of the radiation sickness caused by Bikini ashes
Author(s): Ohashi, S.; Hashimoto, K.; Fukushima, N.; Tashiro, K.; Sugano, H.; Mori, W.
(In Japanese)
Source: Iryo (Japan) v 9. Coden: IRYOA
Publication Date: 1955 p 46-55
Document Type: Journal Article
Language: Japanese
Journal Announcement: EDB8109
Subfile: TIC (Technical Information Center).
Country of Origin: Japan
Abstract: Autopsy findings and the case history are summarized from a case diagnosed as radiation sickness caused by exposure to fall-out from a thermonuclear explosion. The patient died 207 days following exposure while on a fishing boat said to be located about 100 mi east of Bikini at the time of the explosion. Evidence was also found of a secondary virus hepatitis and aspergillus fumigatus pneumonia.;
Major Descriptors: *HEPATITIS -- RADIOINDUCTION; *MAN -- BIOLOGICAL RADIATION EFFECTS; *PNEUMONIA -- RADIOINDUCTION; *RADIATION SYNDROME -- PATHOLOGY
Descriptors: AUTOPSY; BIKINI; DEATH; FALLOUT; MEDICAL RECORDS; NUCLEAR EXPLOSIONS
Broader Terms: ANIMALS; BIOLOGICAL EFFECTS; DIAGNOSTIC TECHNIQUES; DIGESTIVE SYSTEM DISEASES; DISEASES; EXPLOSIONS; ISLANDS; MAMMALS; MARSHALL ISLANDS; MICRONESIA; OCEANIA; PRIMATES; RADIATION EFFECTS; RESPIRATORY SYSTEM DISEASES; VERTEBRATES
Subject Categories: 560151* -- Radiation Effects on Animals -- Man
560161 -- Radionuclide Effects, Kinetics, & Toxicology -- Man
450200 -- Military Technology, Weaponry, & National Defense -- Nuclear

10/5/786 (Item 486 from file: 103)
00792343 EDB-81-100608
Title: Radioactivity in the pelagic fish. I. Distribution of radioactivity in various tissues of fish
Author(s): Amano, K.; Yamada, K.; Bito, M.; Takase, A.; Tanaka, S.
Source: Nippon Suisan Gakkaishi (Japan) v 20. Coden: NSUGA
Publication Date: 1955 p 907-915
Document Type: Journal Article
Language: English
Journal Announcement: EDB8109
Subfile: TIC (Technical Information Center).
Country of Origin: Japan
Abstract: Pelagic fishes caught after an atomic explosion experiment at Bikini Atolls in the Pacific were examined by radiochemical techniques. Generally the radioactivity was large in liver, kidney, gall bladder and heart, and then in pyloric ceca, stomach, intestine, and gonad; there was little activity in skin, bone, and muscles. This order varied with species. Large radioactivity of the stomach contents did not necessarily mean large activity in the tissues, indicating considerable participation of diffusion of sea water into the fish body. Muscles from various sites showed slight difference in the activity. The dark muscle, however, showed several times as large activity as ordinary muscle.;
Major Descriptors: *FISHES -- RADIONUCLIDE KINETICS; *FISSION PRODUCTS -- TISSUE DISTRIBUTION
Descriptors: BIKINI; BILIARY TRACT; GONADS; HEART; INTESTINES; KIDNEYS; LIVER; MUSCLES; NUCLEAR EXPLOSIONS; PACIFIC OCEAN; RADIOACTIVITY; RADIOCHEMICAL ANALYSIS; SKELETON; SKIN; STOMACH
Broader Terms: ANIMALS; AQUATIC ORGANISMS; BODY; CARDIOVASCULAR SYSTEM; CHEMICAL ANALYSIS; DIGESTIVE SYSTEM; DISTRIBUTION; EXPLOSIONS; GASTROINTESTINAL TRACT; GLANDS; ISLANDS; ISOTOPES; MARSHALL ISLANDS; MATERIALS; MICRONESIA; OCEANIA; ORGANS; QUANTITATIVE CHEMICAL ANALYSIS; RADIOACTIVE MATERIALS; SEAS; SURFACE WATERS; VERTEBRATES
Subject Categories: 520302* -- Environment, Aquatic -- Radioactive Materials Monitoring & Transport -- Aquatic Ecosystems & Food Chains -- (-1987)
560172 -- Radiation Effects -- Nuclide Kinetics & Toxicology -- Animals -- (-1987)
450200 -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives

10/5/787 (Item 487 from file: 103)
00792342 EDB-81-100607
Title: Distribution of the radioactivity in the sea around Bikini Atoll in June 1954
Author(s): Miyake, Y.; Sugiura, Y.; Kaneda, K.
Affiliation: Meteorol. Research Inst., Tokyo, Japan
Source: Rec. Oceanogr. Works Jpn. (Japan) v 2:1. Coden: ROWJA
Publication Date: 1955 p 33-44
Document Type: Journal Article
Language: English
Journal Announcement: EDB8109
Subfile: TIC (Technical Information Center).
Country of Origin: Japan
Abstract: Vertical and horizontal profiles are given. The active substances are apparently in true solution as ionic or colloidal species.;
Major Descriptors: *RADIOACTIVITY -- SPATIAL DISTRIBUTION; *SEAS -- RADIOACTIVITY
Descriptors: BIKINI; COLLOIDS; IONS; NUCLEAR EXPLOSIONS
Broader Terms: CHARGED PARTICLES; DISPERSIONS; DISTRIBUTION; EXPLOSIONS; ISLANDS; MARSHALL ISLANDS; MICRONESIA; OCEANIA; SURFACE WATERS
Subject Categories: 520301* -- Environment, Aquatic -- Radioactive Materials Monitoring & Transport -- Water -- (1987)
450200 -- Military Technology, Weaponry, & National Defense -- Nuclear

10/5/788 (Item 488 from file: 103)
00792294 EDB-81-100559
Title: Why fishing boats were contaminated by radiation
Author(s): Tajima, E.
(In Japanese)
Source: Shizen (Japan) Coden: SHIZA
Publication Date: Dec 1954 p vp
Document Type: Journal Article
Language: Japanese
Journal Announcement: EDB8109
Subfile: TIC (Technical Information Center).
Country of Origin: Japan
Abstract: Many Japanese fishing boats were examined with a G-M counter following the Bikini test of 1954. Decks and other washable parts were weakly irradiated. Directional relationships of contaminants on individual ships coincided with those of the prevailing winds. Ships to the west of Bikini averaged 123 cpm; those to the east 1800 cpm.;
Major Descriptors: *FALLOUT -- SPATIAL DISTRIBUTION; *SHIPS -- RADIATION MONITORING
Descriptors: BIKINI; CONTAMINATION; GEIGER-MUELLER COUNTERS; NUCLEAR EXPLOSIONS; WIND
Broader Terms: DISTRIBUTION; EXPLOSIONS; ISLANDS; MARSHALL ISLANDS; MEASURING INSTRUMENTS; MICRONESIA; MONITORING; OCEANIA; RADIATION DETECTORS
Subject Categories: 500300* -- Environment, Atmospheric -- Radioactive Materials Monitoring & Transport -- (-1989)
450200 -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives

10/5/789 (Item 489 from file: 103)
00792292 EDB-81-100557
Title: Electron microscopy of the Bikini ash which covered the fishing boat, fifth Fukuryu Maru
Author(s): Suito, E.; Takiyama, K.
Source: Kagaku (Tokyo) (Japan) v 25. Coden: KAGTA
Publication Date: 1955 p 39-40
Document Type: Journal Article
Language: English
Journal Announcement: EDB8109
Subfile: TIC (Technical Information Center).
Country of Origin: Japan
Abstract: The electron microscopy diffraction study of the ash produced by the H-bomb experiment revealed that the fine white powder had a nearly uniform diameter of particles (about 0.3 mm) and was identified as calcite crystals. A coral reef of aragonite might have been decomposed into CaO or into an atonic state owing to the bomb explosion and then recrystallized into calcite by the action of H/sub 2/O and CO/sub 2/ in the air occluding radioactive elements.;
Major Descriptors: *FALLOUT -- ELECTRON MICROSCOPY
Descriptors: ARAGONITE; ASHES; BIKINI; CALCITE; CALCIUM OXIDES; CARBON DIOXIDE; CHEMICAL REACTIONS; CORALS; CRYSTALLIZATION; CRYSTALLOGRAPHY; NUCLEAR EXPLOSIONS; WATER
Broader Terms: ALKALINE EARTH METAL COMPOUNDS; CALCIUM CARBONATES; CALCIUM COMPOUNDS; CARBON COMPOUNDS; CARBON OXIDES; CARBONATES; CHALCOGENIDES; CNIDARIA; EXPLOSIONS; HYDROGEN COMPOUNDS; ISLANDS; MARSHALL ISLANDS; MICRONESIA; MICROSCOPY; MINERALS; OCEANIA; OXIDES; OXYGEN COMPOUNDS; PHASE TRANSFORMATIONS; RESIDUES
Subject Categories: 500300* -- Environment, Atmospheric -- Radioactive Materials Monitoring & Transport -- (-1989)
450200 -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives

10/5/790 (Item 490 from file: 103)
00792290 EDB-81-100555

Title: Radioactivity in rain water and the air observed in Japan 1954-1955
Series/Collection Title: Paper 1055
Conference Title: International conference on the peaceful uses of atomic energy
Conference Location: Geneva, Switzerland Conference Date: 1955
Publisher: United Nations,New York, NY
Publication Date: 1955 p v
Document Type: Book; Conference literature
Language: English
Journal Announcement: EDB8109
Subfile: TIC (Technical Information Center).
Country of Origin: United Nations (UN)
Country of Publication: United Nations (UN)
Abstract: Radioactivity was detected in the rain in southern Japan beginning May 14, 1954, reaching a maximum of 1 c/l on May 16 at Kyoto University. Trajectories indicate air came from Bikini via the Philippines and Formosa. Activity from May to Sep 1954, was always stronger on the Pacific side of Japan than on Japan sea side, maximum concentrated at the beginning of rain.;
Major Descriptors: *JAPAN -- RADIATION MONITORING; *RAIN -- RADIOACTIVITY
Descriptors: BIKINI; EARTH ATMOSPHERE; FALLOUT; NUCLEAR EXPLOSIONS; SPATIAL DISTRIBUTION
Broader Terms: ASIA; ATMOSPHERIC PRECIPITATIONS; DISTRIBUTION; EXPLOSIONS; ISLANDS; MARSHALL ISLANDS; MICRONESIA; MONITORING; OCEANIA
Subject Categories: 500300* -- Environment, Atmospheric -- Radioactive Materials Monitoring & Transport -- (-1989)
450200 -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives

10/5/791 (Item 491 from file: 103)
00792220 AIX-11-570886; EDB-81-100485
Title: Radioactive paradise
Author(s): Heussler, H.
Source: Kosmos (Stuttgart) (Germany, Federal Republic of) v 76:8. Coden: KSMSA
Publication Date: Aug 1980 p 600-608
Document Type: Journal Article
Language: German
Journal Announcement: EDB8101
Subfile: AIX (non-US Atomindex input).
Country of Origin: Germany, Federal Republic of
Abstract: Most of us will still remember with horror: In March 1954, a US H-bomb exploded directly over Bikini atoll. What has become of this island that used to be so romantic. And what has become of Eniwetok and all the small Robinson islands which are radioactive today. Can people live there again. A scientific investigation now destroys all illusions.;
Major Descriptors: *BIKINI -- DECONTAMINATION; *BIKINI -- NUCLEAR EXPLOSIONS; *HUMAN POPULATIONS -- BIOLOGICAL RADIATION EFFECTS; *NUCLEAR EXPLOSIONS
Descriptors: AGRICULTURE; ENIWETOK; FOOD; LEUKEMIA; PLUTONIUM; RADIATION HAZARDS; RADIOACTIVE WASTES; THYROIDECTOMY; USA
Broader Terms: ACTINIDES; BIOLOGICAL EFFECTS; CLEANING; DISEASES; ELEMENTS; EXPLOSIONS; HAZARDS; HEALTH HAZARDS; HEMIC DISEASES; INDUSTRY; ISLANDS; MARSHALL ISLANDS; MATERIALS; MEDICINE; METALS; MICRONESIA; NEOPLASMS; NORTH AMERICA; OCEANIA; POPULATIONS; RADIATION EFFECTS; RADIOACTIVE MATERIALS; SURGERY; TRANSURANIUM ELEMENTS; WASTES
Subject Categories: 450200* -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives
560151 -- Radiation Effects on Animals -- Man
INIS Subject Categories: E14* -- Nuclear Explosions

10/5/792 (Item 492 from file: 103)
00792216 ERA-06-031174; EDB-81-100481
Author(s): Maynard, R.H.; Servis, J.D.

Corporate Source: Los Alamos Scientific Lab., NM (USA)
Publication Date: Jan 1953 p 103
Report Number(s): AD-363620
Document Type: Report
Language: English
Journal Announcement: EDB8106
Availability: NTIS, PC A06/MF A01.
Subfile: ERA (Energy Research Abstracts); NTS (NTIS).
Country of Origin: United States
Country of Publication: United States
Abstract: This report contains a narrative description of the activities of Task Unit 7 (TU 7), the Radiological Safety (Rad-Safe) Unit of Task Group 132.1, during Operation Ivy. Chapters are devoted to the general discussion of the organization and activities of the scientific sections necessary to implement an atomic-test radiological-safety organization. The appendices contain specific details of operational procedures. Since radiological safety is a technical service and not a specific scientific program, objectives, procedures, and major results cannot be presented in abstract form other than to say that no serious radiation exposures occurred as a result of Operation Ivy.;
Major Descriptors: *IVY PROJECT -- RADIATION MONITORING; *PERSONNEL -- RADIATION PROTECTION
Descriptors: IMPLEMENTATION; NUCLEAR EXPLOSIONS; RADIATION HAZARDS; SAFETY
Broader Terms: EXPLOSIONS; HAZARDS; HEALTH HAZARDS; MONITORING; NUCLEAR EXPLOSIONS
Subject Categories: 450200* -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives
500200 -- Environment, Atmospheric -- Chemicals Monitoring & Transport -- (-1989)

10/5/793 (Item 493 from file: 103)
00785518 ERA-06-029250; INS-81-014204; EDB-81-093782
Author(s): Noshkin, V.E.; Eagle, R.J.; Wong, K.M.; Jokela, T.A.; Brunk, J.L.; Marsh, K.V.
Title: Concentrations of radionuclides in reef and lagoon pelagic fish from the Marshall Islands
Corporate Source: California Univ., Berkeley (USA) Lawrence Livermore National Lab., CA (USA)
Publication Date: Jul 1981 p 65
Report Number(s): UCID-19028
Order Number: DE81026319
Contract Number (DOE): W-7405-ENG-48
Document Type: Report; Numerical data
Language: English
Journal Announcement: EDB8108
Availability: NTIS, PC A04/MF A01.
Subfile: INS (US Atomindex input); ERA (Energy Research Abstracts); TIC (Technical Information Center).
Country of Origin: United States
Country of Publication: United States
Abstract: A radiological survey was conducted from September through November of 1978 to assess the concentrations of persistent man-made radionuclides in the terrestrial and marine environments of 11 atolls and 2 islands of the Northern Marshall Islands. The atolls and islands include Rongelap, Utirik, Taka, Bikar, Rongerik, Ailinginae, Likiep, Jemo, Ailuk, Mejet, Wotho, Ujelang and Bikini. Over 4000 terrestrial and marine samples were collected for radionuclide analysis from 76 different islands. Soils, vegetation, indigenous animals, and cistern and groundwater were collected from the islands. Reef fish, pelagic species, clams, lagoon water, and sediments were obtained from the lagoons. A report is given of all available concentration data for /sup 137/Cs, /sup 90/Sr, /sup 239+240/Pu, /sup 238/Pu, /sup 241/Am as well as naturally occurring /sup 40/K and other gamma emitting radionuclides in tissues and organs of different species of fish collected from the atolls.;

MONITORING; *MOLLUSCS -- RADIOACTIVITY; *PLANTS -- RADIOACTIVITY; *SOILS -- RADIOACTIVITY
Descriptors: AMERICIUM 241; AQUATIC ORGANISMS; CESIUM 137; COASTAL WATERS; DATA COMPILATION; GAMMA RADIATION; NATURAL RADIOACTIVITY; ORGANS; PLUTONIUM 238; PLUTONIUM 239; PLUTONIUM 240; POTASSIUM 40; RADIOISOTOPES; SEDIMENTS; STRONTIUM 90; SURFACE WATERS; TISSUES
Broader Terms: ACTINIDE ISOTOPES; ACTINIDE NUCLEI; ALKALI METAL ISOTOPES; ALKALINE EARTH ISOTOPES; ALPHA DECAY RADIOISOTOPES; AMERICIUM ISOTOPES; ANIMALS; AQUATIC ORGANISMS; BETA DECAY RADIOISOTOPES; BETA-MINUS DECAY RADIOISOTOPES; BETA-PLUS DECAY RADIOISOTOPES; BODY; CESIUM ISOTOPES; DATA; ELECTROMAGNETIC RADIATION; ELECTRON CAPTURE RADIOISOTOPES; EVEN-EVEN NUCLEI; EVEN-ODD NUCLEI; HEAVY NUCLEI; INFORMATION; INTERMEDIATE MASS NUCLEI; INVERTEBRATES; IONIZING RADIATIONS; ISLANDS; ISOTOPES; LIGHT NUCLEI; MICRONESIA; MONITORING; NUCLEI; NUMERICAL DATA; OCEANIA; ODD-EVEN NUCLEI; ODD-ODD NUCLEI; PLUTONIUM ISOTOPES; POTASSIUM ISOTOPES; RADIATIONS; RADIOACTIVITY; RADIOISOTOPES; STRONTIUM ISOTOPES; SURFACE WATERS; VERTEBRATES; YEARS LIVING RADIOISOTOPES
Subject Categories: 520302* -- Environment, Aquatic -- Radioactive Materials Monitoring & Transport -- Aquatic Ecosystems & Food Chains -- (-1987)
560172 -- Radiation Effects -- Nuclide Kinetics & Toxicology -- Animals -- (-1987)
510302 -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- Terrestrial Ecosystems & Food Chains -- (-1987)
INIS Subject Categories: C22* -- Radionuclide Ecology

10/5/794 (Item 494 from file: 103)
00774742 AIX-12-591882; EDB-81-083004
Title: Aftermath of Bikini
Author(s): Alcalay, G.H.
Source: Ecologist (United Kingdom) v 10:10. Coden: ECOGA
Publication Date: Dec 1980 p 346-351
Document Type: Journal Article
Language: English
Journal Announcement: EDB8103
Subfile: AIX (non-US Atomindex input).
Country of Origin: United Kingdom
Abstract: An account is given of the effects of the US atomic weapons testing programme on the life and health of the Marshall Islanders.;
Major Descriptors: *BIKINI -- NUCLEAR EXPLOSIONS; *HUMAN POPULATIONS -- BIOLOGICAL RADIATION EFFECTS
Descriptors: ECONOMY; FALLOUT; PERSONNEL; SOCIOLOGY
Broader Terms: BIOLOGICAL EFFECTS; EXPLOSIONS; ISLANDS; MARSHALL ISLANDS; MICRONESIA; OCEANIA; POPULATIONS; RADIATION EFFECTS
Subject Categories: 560151* -- Radiation Effects on Animals -- Man
INIS Subject Categories: C52* -- Radiation Hazards & Safety Evaluations of Nuclear Installations

10/5/795 (Item 495 from file: 103)
00768584 ERA-06-022726; INS-81-010765; EDB-81-076845
Author(s): Buddemeier, R.W.
Title: Geohydrology of Enewetak Atoll islands and reefs
Corporate Source: Lawrence Livermore National Lab., CA (USA)
Conference Title: 4. international coral reef symposium
Conference Location: Manila, Philippines Conference Date: 18 May 1981
Publication Date: 6 May 1981 p 17
Report Number(s): UCRL-85411; CONF-810547-1
Contract Number (DOE): W-7405-ENG-48
Document Type: Report; Conference literature
Language: English
Journal Announcement: EDB8106
Availability: NTIS, PC A02/MF A01.
Subfile: INS (US Atomindex input); ERA (Energy Research Abstracts); TIC (Technical Information Center).
Country of Origin: United States

Abstract: Extensive tidal studies in island wells and the lagoon at Enewetak Atoll have shown that island ground water dynamics are controlled by a layered aquifer system. The surface aquifer of unconsolidated Holocene material extends to a depth of approximately 15 m, and has a hydraulic conductivity K = 60 m/day. From 15 to 60 m (approximate lagoon depth) the reef structure consists of successive layers of altered Pleistocene materials, with bulk permeability substantially higher than that of the surface aquifer. Because of wave set-up over the windward reef and the limited pass area for outflow at the south end of the atoll, lagoon tides rise in phase with the ocean tides but fall later than the ocean water level. This results in a net lagoon-to-ocean head which can act as the driving force for outflow through the permeable Pleistocene aquifer. This model suggests that fresh water, nutrients or radioactive contaminants found in island ground water or reef interstitial water may be discharged primarily into the ocean rather than the lagoon. Atoll island fresh water resources are controlled by recharge, seawater dilution due to vertical tidal mixing between the surface and deeper aquifers, and by loss due to entrainment by the outflowing water in the deeper aquifers. Estimated lagoon-ot-ocean transit times through the deep aquifer are on the order of a few years, which corresponds well to the freshwater residence time estimates based on inventory and recharge. Islands in close proximity to reef channels have more fresh ground water than others, which is consistent with a locally reduced hydraulic gradient and slower flow through the Pleistocene aquifers.;
Major Descriptors: *ENIWETOK -- HYDROLOGY; *GROUND WATER -- ENVIRONMENTAL TRANSPORT
Descriptors: AQUIFERS; FLUID FLOW; SEAWATER; TIDE
Broader Terms: HYDROGEN COMPOUNDS; ISLANDS; MARSHALL ISLANDS; MASS TRANSFER ; MICRONESIA; OCEANIA; OXYGEN COMPOUNDS; WATER
Subject Categories: 580100* -- Geology & Hydrology -- (-1989)
INIS Subject Categories: B31* -- Land

10/5/796 (Item 496 from file: 103)
00768442 ERA-06-024347; ERA-06-024347; EDB-81-076703
Title: Dynamics of radionuclide exchange in the calcareous algae Halimeda at Enewetak Atoll
Author(s): Spies, R.B.; Marsh, K.V.; Kercher, J.R.
Affiliation: Univ. of California, Livermore
Source: Limnol. Oceanogr. (United States) v 26:1. Coden: LIOCA
Publication Date: Jan 1981 p 74-85
Contract Number (DOE): W-7405-ENG-48
Document Type: Journal Article; Numerical data
Language: English
Journal Announcement: EDB8107
Subfile: ERA (Energy Research Abstracts); TIC (Technical Information Center).
Country of Origin: United States
Abstract: Measurements of /sup 239+240/Pu in the detrital inclusions and in acid-soluble and acid-insoluble fractions of Halimeda macrophysa showed a 10-fold higher concentration in the acid-insoluble coenocytic filaments than in the acid-soluble fraction. In a depuration experiment with Halimeda incrassata at Enewetak Atoll the loss rate of six radionuclides was measured. Data for /sup 60/Co, /sup 137/Cs, and /sup 102m/Rh were fit to loss curves by using one term for exponential loss; data for /sup 155/Eu, /sup 239+240/Pu, and /sup 241/Am required two terms. For each radionuclide, compartment size and transfer functions were determined for the appropriate one- and two-compartment models. Of 26 possible two-compartment models, only seven gave solutions with our data. Nearly identical loss rates were obtained for /sup 155/Eu, /sup 239+240/Pu, and /sup 241/Am in the fast-exchanging compartments for all seven models. The uptake rates for these nuclides were also similar when uptake rates were normalized to local sediment concentrations. The fast-exchanging compartment probably corresponds to the mucilage surface layer of the coenocytic filaments. The identity of the

the skeletal surface.;
Major Descriptors: *ALGAE -- RADIONUCLIDE MIGRATION; *AMERICIUM 241 -- UPTAKE; *CESIUM 137 -- UPTAKE; *COBALT 60 -- UPTAKE; *EUROPIUM 155 -- UPTAKE; *PLUTONIUM 239 -- UPTAKE; *PLUTONIUM 240 -- UPTAKE; *RHODIUM 102 -- UPTAKE
Descriptors: DISTRIBUTION; ENIWETOK; EXPERIMENTAL DATA; MATHEMATICAL MODELS ; RADIONUCLIDE KINETICS
Broader Terms: ACTINIDE ISOTOPES; ACTINIDE NUCLEI; ALKALI METAL ISOTOPES; ALPHA DECAY RADIOISOTOPES; AMERICIUM ISOTOPES; BETA DECAY RADIOISOTOPES ; BETA-MINUS DECAY RADIOISOTOPES; BETA-PLUS DECAY RADIOISOTOPES; CESIUM ISOTOPES; COBALT ISOTOPES; DATA; DAYS LIVING RADIOISOTOPES; ELECTRON CAPTURE RADIOISOTOPES; ENVIRONMENTAL TRANSPORT; EUROPIUM ISOTOPES; EVEN-EVEN NUCLEI; EVEN-ODD NUCLEI; HEAVY NUCLEI; INFORMATION; INTERMEDIATE MASS NUCLEI; INTERNAL CONVERSION RADIOISOTOPES; ISLANDS; ISOMERIC TRANSITION ISOTOPES; ISOTOPES; MARSHALL ISLANDS; MASS TRANSFER ; MICRONESIA; MINUTES LIVING RADIOISOTOPES; NUCLEI; NUMERICAL DATA; OCEANIA; ODD-EVEN NUCLEI; ODD-ODD NUCLEI; PLANTS; PLUTONIUM ISOTOPES; RADIOISOTOPES; RARE EARTH ISOTOPES; RARE EARTH NUCLEI; RHODIUM ISOTOPES ; YEARS LIVING RADIOISOTOPES
Subject Categories: 560174* -- Radiation Effects -- Nuclide Kinetics & Toxicology -- Microorganisms -- (-1987)

10/5/797 (Item 497 from file: 103)
00767799 ERA-06-022573; EDB-81-076060
Title: Survey of ciguatera at Enewetak and Bikini, Marshall Islands, with notes on the systematics and food habits of ciguatoxic fishes
Author(s): Randall, J.E.
Affiliation: Bernice P. Bishop Museum, Honolulu, HI
Source: Fish. Bull. (United States) v 78:2. Coden: FSYBA
Publication Date: Apr 1980 p 201-249
Document Type: Journal Article
Language: English
Journal Announcement: EDB8106
Subfile: ERA (Energy Research Abstracts); TIC (Technical Information Center).
Country of Origin: United States
Abstract: A total of 551 specimens of 48 species of potentially ciguatoxic fishes from Enewetak and 256 specimens of 23 species from Bikini, Marshall Islands, were tested for ciguatoxin by feeding liver or liver and viscera from these fishes to mongooses at 10% body weight (except for sharks, when only muscle tissue was used). The fishes are representatives of the following families: Orectolobidae, Carcharhinidae, Dasyatidae, Muraenidae, Holocentridae, Sphyraenidae, Mugilidae, Serranidae, Lutjanidae, Lethrinidae, Carangidae, Scombridae, Labridae, Scaridae, Acanthuridae, and Balistidae. The species selected were all ones for which toxicity can be expected, including the worst offenders from reports of ciguatera throughout Oceania; only moderate to large-sized adults were tested. In all, 37.3% of the fishes from Enewetak and 19.7% from Bikini gave a positive reaction for ciguatoxin. Because liver and other viscera are more toxic than muscle, the percentage of positive reactions at the level which might cause illness in humans eating only the flesh of these fishes collectively would drop to 16.2 for Enewetak and 1.4 for Bikini. This level of toxicity is not regarded as high for Pacific islands, in general. Because ciguatoxin is acquired through feeding, the food habits of these fishes were investigated. Most of the highly toxic species, including seven of the eight causing severe illness or death in the test animals (Lycodontis javanicus, Cephalopholis argus, Epinephelus hoedtii, E. microdon, Plectropomus leopardus, Aprion virescens, and Lutjanus bohar) are primarily piscivorous.;
Major Descriptors: *FISHES -- TOXINS; *TOXINS -- HEALTH HAZARDS
Descriptors: BEHAVIOR; COMPARATIVE EVALUATIONS; DIET; ENVIRONMENTAL EXPOSURE PATHWAY; FOOD CHAINS; INGESTION; LABORATORY ANIMALS; LIVER; MARSHALL ISLANDS; METABOLISM; POISONING; PUBLIC HEALTH; QUANTITY RATIO; SENSITIVITY; TOXICITY

; GLANDS; HAZARDS; INTAKE; ISLANDS; MATERIALS; MICRONESIA; OCEANIA; ORGANS; TOXIC MATERIALS; VERTEBRATES
Subject Categories: 520100* -- Environment, Aquatic -- Basic Studies -- (-1989)
552000 -- Public Health
550200 -- Biochemistry

10/5/798 (Item 498 from file: 103)
00767695 INS-81-010696; EDB-81-075956
Title: Origin of particulate organic carbon in the marine atmosphere as indicated by it stable carbon isotopic composition
Author(s): Chesselet, R.; Fontugne, M.; Buat-Menard, P.; Ezat, U.; Lambert, C.E.
Affiliation: Centre des Faibles Radioactivites, Laboratoire mixte CNRS-CEA, 91190 Gif-sur-Yvette, France
Source: Geophys. Res. Lett. (United States) v 8:4. Coden: GPRLA
Publication Date: Apr 1981 p 345-348
Document Type: Journal Article
Language: English
Journal Announcement: EDB8106
Subfile: INS (US Atomindex input); AIP (SPIN).
Country of Origin: France
Abstract: Organic carbon concentration and isotopic composition were determined in samples of atmospheric particulate matter collected in 1979 at remote marine locations (Enewetak atoll, Sargasso Sea) during the SEAREX (Sea-Air Exchange) program field experiments. Atmospheric Particulate Organic Carbon (POC) concentrations were found to be in the range of 0.3 to 1.2 mg. m/sup -3/, in agreement with previous literature data. The major mass of POC was found on the smallest particles (r<0.5 mm). The /sup 13/C//sup 12/C of the small particles is close to the one expected (d/sup 13/C = 26 +- 2/sup 0///sub infinity/) for atmospheric POC of continental origin. For all the samples analysed so far, it appears that more than 80% of atmospheric POC over remote marine areas is of continental origin. This can be explained either by long-range transport of small sized continental organic aserosols or by the production of POC in the marine atmosphere from a vapor phase organic carbon pool of continental origin. The POC in the large size fraction of marine aerosols (<20% of the total concentration) is likely to have a direct marine origin since its carbon isotopic composition is close to the expected value (d/sup 13/C = -21 +- 2/sup 0///sub 00/) for POC associated with sea-salt droplets transported to the marine atmosphere.;
Major Descriptors: *CARBON -- ISOTOPE RATIO; *CARBON -- QUANTITY RATIO; *EARTH ATMOSPHERE -- ISOTOPE RATIO
Descriptors: ENIWETOK; ORGANIC COMPOUNDS; SARGASSO SEA
Broader Terms: ATLANTIC OCEAN; ELEMENTS; ISLANDS; MARSHALL ISLANDS; MICRONESIA; NONMETALS; OCEANIA; SEAS; SURFACE WATERS
Subject Categories: 500200* -- Environment, Atmospheric -- Chemicals Monitoring & Transport -- (-1989)
INIS Subject Categories: C52* -- Radiation Hazards & Safety Evaluations of Nuclear Installations

10/5/799 (Item 499 from file: 103)
00761550 ERA-06-021022; INS-81-009524; EDB-81-069810
Author(s): Noshkin, V.E.; Eagle, R.J.; Wong, K.M.; Jokela, T.A.; Robison, W.L.
Title: Radionuclide concentrations and dose assessment of cistern water and groundwater at the Marshall Islands
Corporate Source: Lawrence Livermore National Lab., CA (USA)
Publication Date: 16 Mar 1981 p 37
Report Number(s): UCRL-52853(Pt.2)
Contract Number (DOE): W-7405-ENG-48
Document Type: Report
Language: English
Journal Announcement: EDB8106

Subfile: INS (US Atomindex input); ERA (Energy Research Abstracts); TIC (Technical Information Center).
Country of Origin: United States
Country of Publication: United States
Abstract: A radiological survey was conducted from September through November of 1978 to determine the concentrations of radionuclides in the terrestrial and marine environments of 11 atolls and 2 islands in the Northern Marshall Islands. More than 70 cistern and groundwater samples were collected at the atolls; the volume of each sample was between 55 and 100 l. The concentration of /sup 90/Sr in cistern water at most atolls is that expected from world-wide fallout in wet deposition. Except for Bikini and Rongelap, /sup 137/Cs concentrations in cistern water are in agreement with the average predicted concentrations from wet deposition. The /sup 239 +240/Pu concentrations are everywhere less than the predicted fallout concentrations except at Rongelap, Ailinginae, and Bikini where the measured and predicted concentrations are in general agreement. During the period sampled, most groundwater concentrations of /sup 90/Sr and /sup 137/Cs were everywhere higher than the concentrations in cistern water. Concentrations of the transurancies in filtered groundwater solution were everywhere comparable to or less than the concentrations in cistern water. It is concluded that the concentrations of radionuclides detected during any single period may not necessarily reflect the long-term average concentrations or the concentrations that might be observed if a lined well were extended above the surface. In any case, at all atolls the /sup 90/Sr and /sup 137/Cs concentrations in groundwater are below the concentration guidelines for drinking water recommended by the Environmental Protection Agency. The maximum annual dose rates and the 30- and 50-y integral doses are calculated for the intake of both cistern water and groundwater for each of the atolls.;
Major Descriptors: *CESIUM 137 -- RADIOACTIVITY; *MARSHALL ISLANDS -- RADIATION MONITORING; *MARSHALL ISLANDS -- WATER RESERVOIRS; *PLUTONIUM 239 -- RADIOACTIVITY; *PLUTONIUM 240 -- RADIOACTIVITY; *STRONTIUM 90 -- RADIOACTIVITY; *WATER RESERVOIRS -- RADIATION MONITORING
Descriptors: AQUATIC ECOSYSTEMS; GROUND WATER; RADIATION DOSES; TERRESTRIAL ECOSYSTEMS
Broader Terms: ACTINIDE ISOTOPES; ACTINIDE NUCLEI; ALKALI METAL ISOTOPES; ALKALINE EARTH ISOTOPES; ALPHA DECAY RADIOISOTOPES; BETA DECAY RADIOISOTOPES; BETA-MINUS DECAY RADIOISOTOPES; CESIUM ISOTOPES; DOSES; ECOSYSTEMS; EVEN-EVEN NUCLEI; EVEN-ODD NUCLEI; HEAVY NUCLEI; HYDROGEN COMPOUNDS; INTERMEDIATE MASS NUCLEI; ISLANDS; ISOTOPES; MICRONESIA; MONITORING; NUCLEI; OCEANIA; ODD-EVEN NUCLEI; OXYGEN COMPOUNDS; PLUTONIUM ISOTOPES; RADIOISOTOPES; STRONTIUM ISOTOPES; SURFACE WATERS; WATER; YEARS LIVING RADIOISOTOPES
Subject Categories: 520302* -- Environment, Aquatic -- Radioactive Materials Monitoring & Transport -- Aquatic Ecosystems & Food Chains -- (-1987)
520301 -- Environment, Aquatic -- Radioactive Materials Monitoring & Transport -- Water -- (1987)
INIS Subject Categories: C22* -- Radionuclide Ecology

10/5/800 (Item 500 from file: 103)
00756501 ERA-06-019278; INS-81-008898; EDB-81-064760
Title: In vivo measurements of exposed individuals
Author(s): Cohen, N,
Title: In vivo measurements of bone-seeking radionuclides. Progress report, 1977-1980
Corporate Source: New York Univ., NY (USA). Inst. of Environmental Medicine
Publication Date: 1980 p VI.1-VI.27
Report Number(s): DOE/EV/04326-3
Document Type: Analytic of a Report
Language: English
Journal Announcement: EDB8105
Availability: NTIS, PC A08/MF A01.

(Technical Information Center).
Country of Origin: United States
Country of Publication: United States
Abstract: This section describes several studies of exposed individuals and the actual in vivo measurements made at this laboratory during the past three years. In all cases, the nuclides being measured are bone seekers and were measured with NaI(Tl)-CsI(Tl) detectors above the thorax or surrounding the head. The studies include the measurement of occupational contamination for /sup 241/Am, metabolic studies of /sup 241/Am in a child and his father, estimation of employee exposures to compounds of depleted uranium, measurements of residents of the Marshall Islands and measurement of occupational contamination for lead (Pb-210). (KRM);
Major Descriptors: *AMERICIUM 241 -- TISSUE DISTRIBUTION; *BONE SEEKERS -- WHOLE-BODY COUNTING; *CHEST -- BODY BURDEN; *LIVER -- BODY BURDEN; *LUNGS -- BODY BURDEN; *SKULL -- BODY BURDEN
Descriptors: CESIUM 137; CHILDREN; ENERGY SPECTRA; INHALATION; LEAD 210; MARSHALL ISLANDS; MEN; PERSONNEL; PLUTONIUM 239; SOLID SCINTILLATION DETECTORS; THORIUM 234; URANIUM 234; URANIUM 235; URANIUM 238; URANIUM OXIDES U3O8; URANIUM TETRAFLUORIDE
Broader Terms: ACTINIDE COMPOUNDS; ACTINIDE ISOTOPES; ACTINIDE NUCLEI; AGE GROUPS; ALKALI METAL ISOTOPES; ALPHA DECAY RADIOISOTOPES; AMERICIUM ISOTOPES; ANIMALS; BETA DECAY RADIOISOTOPES; BETA-MINUS DECAY RADIOISOTOPES; BODY; BODY AREAS; CESIUM ISOTOPES; CHALCOGENIDES; COUNTING TECHNIQUES; DAYS LIVING RADIOISOTOPES; DIGESTIVE SYSTEM; DISTRIBUTION; EVEN-EVEN NUCLEI; EVEN-ODD NUCLEI; FLUORIDES; FLUORINE COMPOUNDS; GLANDS; HALIDES; HALOGEN COMPOUNDS; HEAVY NUCLEI; INTAKE; ISLANDS; ISOMERIC TRANSITION ISOTOPES; ISOTOPES; LEAD ISOTOPES; MALES; MAMMALS; MAN; MEASURING INSTRUMENTS; MICRONESIA; MINUTES LIVING RADIOISOTOPES; NUCLEI; OCEANIA; ODD-EVEN NUCLEI; ORGANS; OXIDES; OXYGEN COMPOUNDS; PLUTONIUM ISOTOPES; PRIMATES; RADIATION DETECTORS; RADIOISOTOPES; RESPIRATORY SYSTEM; SCINTILLATION COUNTERS; SKELETON; SPECTRA; THORIUM ISOTOPES; URANIUM COMPOUNDS; URANIUM FLUORIDES; URANIUM ISOTOPES; URANIUM OXIDES; VERTEBRATES; YEARS LIVING RADIOISOTOPES
Subject Categories: 560171* -- Radiation Effects -- Nuclide Kinetics & Toxicology -- Man -- (-1987)
560161 -- Radionuclide Effects, Kinetics, & Toxicology -- Man
440102 -- Radiation Instrumentation -- Radiation Dosemeters
INIS Subject Categories: C21* -- Tissue Distribution, Metabolism, Toxicology & Removal of Radionuclides

10/5/801 (Item 501 from file: 103)
00755900 ERA-06-019230; INS-81-008776; EDB-81-064159
Author(s): Clegg, B.; Koranda, J.; Robinson, W.; Holladay, G.
Title: Remote sensing of soil radionuclide fluxes in a tropical ecosystem
Corporate Source: Lawrence Livermore National Lab., CA (USA)
Publication Date: 6 Nov 1980 p 7
Report Number(s): UCRL-84501
Contract Number (DOE): W-7405-ENG-48
Document Type: Report; Numerical data
Language: English
Journal Announcement: EDB8106
Availability: NTIS, PC A02/MF A01.
Subfile: INS (US Atomindex input); ERA (Energy Research Abstracts); TIC (Technical Information Center).
Country of Origin: United States
Country of Publication: United States
Abstract: We are using a transponding geostationary satellite to collect surface environmental data to describe the fate of soil-borne radionuclides. The remote, former atomic testing grounds at the Eniwetok and Bikini Atolls present a difficult environment in which to collect continuous field data. Our land-based, solar-powered microprocessor and environmental data systems remotely acquire measurements of net and total solar radiation, rain, humidity,

flux model predicts wet season plant transpiration rates nearly equal to the 6 to 7 mm/d evaporation pan rate, which decreases to 2 to 3 mm/d for the dry season. Radioisotopic analysis confirms the microclimate-estimated 1:3 to 1:20 soil to plant /sup 137/Cs dry matter concentration ratio. This ratio exacerbates the dose to man from intake of food plants. Nephelometer measurements of airborne particulates presently indicate a minimum respiratory radiological dose.;
Major Descriptors: *BIKINI -- REMOTE SENSING; *ENIWETOK -- REMOTE SENSING; *FISSION PRODUCTS -- BIOLOGICAL ACCUMULATION; *FISSION PRODUCTS -- ENVIRONMENTAL EXPOSURE PATHWAY; *FISSION PRODUCTS -- RADIONUCLIDE MIGRATION
Descriptors: AMBIENT TEMPERATURE; CESIUM 137; CONTAMINATION; DATA COMPILATION; DUSTS; FOOD CHAINS; HUMIDITY; MOISTURE; RADIATION MONITORING; RADIOACTIVE AEROSOLS; RAIN; SOILS; SOLAR RADIATION
Broader Terms: AEROSOLS; ALKALI METAL ISOTOPES; ATMOSPHERIC PRECIPITATIONS; BETA DECAY RADIOISOTOPES; BETA-MINUS DECAY RADIOISOTOPES; CESIUM ISOTOPES; COLLOIDS; DATA; DISPERSIONS; ENVIRONMENTAL TRANSPORT; INFORMATION; ISLANDS; ISOTOPES; MARSHALL ISLANDS; MASS TRANSFER; MATERIALS; MICRONESIA; MONITORING; NUCLEI; NUMERICAL DATA; OCEANIA; ODD-EVEN NUCLEI; RADIATIONS; RADIOACTIVE MATERIALS; RADIOISOTOPES; SOLS ; STELLAR RADIATION; YEARS LIVING RADIOISOTOPES
Subject Categories: 510302* -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- Terrestrial Ecosystems & Food Chains -- (-1987)
INIS Subject Categories: C22* -- Radionuclide Ecology

10/5/802 (Item 502 from file: 103)
00750474 ERA-06-017422; INS-81-007616; EDB-81-058732
Author(s): Robison, W.L.; Phillips, W.A.; Mount, M.E.; Clegg, B.R.; Conrado, C.L.
Title: Reassessment of the potential radiological doses for residents resettling Enewetak Atoll
Corporate Source: Lawrence Livermore National Lab., CA (USA)
Publication Date: 30 Oct 1980 p 97
Report Number(s): UCRL-53066
Contract Number (DOE): W-7405-ENG-48
Document Type: Report; Numerical data
Language: English
Journal Announcement: EDB8105
Availability: NTIS, PC A05/MF A01.
Subfile: INS (US Atomindex input); ERA (Energy Research Abstracts); TIC (Technical Information Center).
Country of Origin: United States
Country of Publication: United States
Abstract: The purpose of this report is to refine the dose predictions, subsequent to the cleanup effort, for alternate living patterns proposed for resettlement of Enewetak Atoll. The most recent data developed from projects at Enewetak and Bikini Atolls for concentration and uptake of Cs, Sr, Pu, and Am were used in conjunction with recent dietary information and current dose models to predict annual dose rates and 30- and 50-y integral doses (dose commitments). The terrestrial food chain in the most significant exposure pathway - it contributes more than 50% of the total dose - and external gamma exposure is the second most significant pathway. Other pathways evaluated are the marine food chain, drinking water, and inhalation.;
Major Descriptors: *AMERICIUM 241 -- RADIOECOLOGICAL CONCENTRATION; *CESIUM 137 -- RADIOECOLOGICAL CONCENTRATION; *CHILDREN -- DIET; *COBALT 60 -- RADIOECOLOGICAL CONCENTRATION; *DIET -- CONTAMINATION; *ENIWETOK -- DIET; *ENIWETOK -- HEALTH HAZARDS; *ENIWETOK -- LAND RECLAMATION; *ENIWETOK -- RADIOACTIVITY; *FEMALES -- DIET; *HUMAN POPULATIONS -- RADIATION DOSES; *LAND RECLAMATION -- HEALTH HAZARDS; *MALES -- DIET; *PLUTONIUM 239 -- RADIOECOLOGICAL CONCENTRATION; *PLUTONIUM 240 -- RADIOECOLOGICAL CONCENTRATION; *STRONTIUM 90 -- RADIOECOLOGICAL CONCENTRATION
Descriptors: DOSIMETRY; ENVIRONMENTAL EXPOSURE PATHWAY; INGESTION;

RADIATION PROTECTION; SEAFOOD; SOCIO-ECONOMIC FACTORS; VEGETABLES
Broader Terms: ACTINIDE ISOTOPES; ACTINIDE NUCLEI; AGE GROUPS; ALKALI METAL ISOTOPES; ALKALINE EARTH ISOTOPES; ALPHA DECAY RADIOISOTOPES; AMERICIUM ISOTOPES; ANIMALS; BETA DECAY RADIOISOTOPES; BETA-MINUS DECAY RADIOISOTOPES; CESIUM ISOTOPES; COBALT ISOTOPES; DOSES; ECOLOGICAL CONCENTRATION; EVEN-EVEN NUCLEI; EVEN-ODD NUCLEI; EXPLOSIONS; FISH PRODUCTS; FOOD; HAZARDS; HEAVY NUCLEI; INSTITUTIONAL FACTORS; INTAKE; INTERMEDIATE MASS NUCLEI; INTERNAL CONVERSION RADIOISOTOPES; ISLANDS; ISOMERIC TRANSITION ISOTOPES; ISOTOPES; MAMMALS; MAN; MARSHALL ISLANDS; MICRONESIA; MINUTES LIVING RADIOISOTOPES; NUCLEI; OCEANIA; ODD-EVEN NUCLEI; ODD-ODD NUCLEI; PLUTONIUM ISOTOPES; POPULATIONS; PRIMATES; RADIOISOTOPES; STRONTIUM ISOTOPES; VERTEBRATES; YEARS LIVING RADIOISOTOPES
Subject Categories: 510302* -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- Terrestrial Ecosystems & Food Chains -- (-1987)
530100 -- Environmental-Social Aspects of Energy Technologies -- Social & Economic Studies -- (-1989)
560171 -- Radiation Effects -- Nuclide Kinetics & Toxicology -- Man -- (-1987)
560151 -- Radiation Effects on Animals -- Man
560161 -- Radionuclide Effects, Kinetics, & Toxicology -- Man
570000 -- Health & Safety
INIS Subject Categories: C22* -- Radionuclide Ecology

10/5/803 (Item 503 from file: 103)
00750449 ERA-06-017409; INS-81-007600; EDB-81-058707
Title: Statistical aspects of the cleanup of Enewetak Atoll
Author(s): Giacomini, J.J.; Miller, F.L. Jr.; Cristy, G.A.; Jernigan, H.C. (eds.)
Affiliation: Univ of Nevada, Las Vegas
Title: Environmental decontamination
Corporate Source: Oak Ridge National Lab., TN (USA)
Conference Title: Environmental decontamination workshop
Conference Location: Oak Ridge, TN, USA Conference Date: 4 Dec 1979
Publication Date: Feb 1981 p 100-103
Report Number(s): CONF-791234-
Document Type: Analytic of a Report; Conference literature
Language: English
Journal Announcement: EDB8105
Availability: NTIS, PC A12/MF A01.
Subfile: INS (US Atomindex input); ERA (Energy Research Abstracts); TIC (Technical Information Center).
Country of Origin: United States
Country of Publication: United States
Abstract: The Desert Research Institute participated in the Enewetak Atoll Radiological Cleanup by providing data-base management and statistical analysis support for the Department of Energy team. The data-base management responsibilities included both design and implementation of a system for recording (in machine-retrievable form) all radiological measurements made during the cleanup, excluding personnel dosimetry. Statistical analyses were performed throughout the cleanup and were used to guide excavation activities.;
Major Descriptors: *ENIWETOK -- DECONTAMINATION
Descriptors: DATA BASE MANAGEMENT; DESIGN; DOSIMETRY; EARTHMOVING EQUIPMENT ; EXCAVATION; INFORMATION RETRIEVAL; RADIOLOGICAL PERSONNEL; SAMPLING; SOILS; STATISTICS
Broader Terms: CLEANING; EQUIPMENT; ISLANDS; MANAGEMENT; MARSHALL ISLANDS; MATERIALS HANDLING EQUIPMENT; MATHEMATICS; MICRONESIA; OCEANIA; PERSONNEL
Subject Categories: 510300* -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- (-1989)
INIS Subject Categories: B31* -- Land

10/5/804 (Item 504 from file: 103)

Author(s): Naidu, J.R.; Greenhouse, N.A.; Knight, G.; Craighead, E.C.
Title: Marshall Islands: a study of diet and living patterns
Corporate Source: Brookhaven National Lab., Upton, NY (USA)
Publication Date: Jul 1980 p 76
Report Number(s): BNL-51313
Contract Number (DOE): AC02-76CH00016
Document Type: Report
Language: English
Journal Announcement: EDB8105
Availability: NTIS, PC A05/MF A01.
Subfile: ERA (Energy Research Abstracts); INS (US Atomindex input); TIC (Technical Information Center).
Country of Origin: United States
Country of Publication: United States
Abstract: This study summarizes information on diet and living patterns for the Marshallese. The data was derived from literature, answers to questionnaires, personal observations while living with the Marshallese for periods extending from months to years, and from direct participation in their activities. The results reflect the complex interactions of many influences, such as, the gathering of local foods the receipt of food aid through programs, such as, school-lunch, typhoon-relief, food distributed to populations displaced as a result of nuclear testing, and in recent times the availability of cash for the purchase of imported foods. The results identify these influences and are therefore restricted to local food diets while recognizing that the living patterns are changing as local food gathering is replaced by other food supplies. The data will therefore provide the necessary information for input into models that will assess the radiological impacts attributable to the inhabitation of the Marshall Islands. It is recommended that this study should be continued for at least two to three years in order to more accurately identify trends in local food consumption and living patterns.;
Major Descriptors: *HUMAN POPULATIONS -- QUALITY OF LIFE; *MARSHALL ISLANDS -- DIET; *MARSHALL ISLANDS -- LIFE STYLES
Broader Terms: ISLANDS; MICRONESIA; OCEANIA; POPULATIONS
Subject Categories: 570000* -- Health & Safety
INIS Subject Categories: C52* -- Radiation Hazards & Safety Evaluations of Nuclear Installations

10/5/805 (Item 505 from file: 103)
00744017 ERA-06-017421; EDB-81-052274
Title: Regulatory analysis
Author(s): Baalman, R.W.; Hays, I.D. (eds.)
Title: Pacific Northwest Laboratory annual report for 1980 to the DOE Assistant Secretary for Environment. Part 5. Environmental assessment, control, health and safety
Publication Date: Feb 1981 p 1
Report Number(s): PNL-3700(Pt.5)
Document Type: Analytic of a Report
Language: English
Journal Announcement: EDB8105
Availability: NTIS, PC A05/MF A01.
Subfile: ERA (Energy Research Abstracts); TIC (Technical Information Center).
Country of Origin: United States
Country of Publication: United States
Abstract: Pacific Northwest Laboratory supported the Regulatory Analysis Division in the review of some proposed radiation protection regulations. However, the principal effort conducted under this part of the program concerned the preparation of a booklet to support a DOE presentation to the people of Bikini Atoll in the Marshall Islands. The Meaning of Radiation at Bikini Atoll describes current radiological conditions resulting from nuclear weapons tests and was drafted in English and translated into Marshallese. (DLS);
Major Descriptors: *BIKINI -- LOCAL FALLOUT; *NUCLEAR EXPLOSIONS --

Descriptors: DATA PROCESSING; EPIDEMIOLOGY; HUMAN POPULATIONS; NUCLEAR WEAPONS; POPULATION RELOCATION; RADIATION HAZARDS; RADIATION PROTECTION ; RADIOECOLOGICAL CONCENTRATION; TRANSURANIUM ELEMENTS; US DOE
Broader Terms: ECOLOGICAL CONCENTRATION; ELEMENTS; EXPLOSIONS; FALLOUT; HAZARDS; HEALTH HAZARDS; ISLANDS; MARSHALL ISLANDS; MICRONESIA; NATIONAL ORGANIZATIONS; OCEANIA; POPULATIONS; PROCESSING; US ORGANIZATIONS; WEAPONS
Subject Categories: 510300* -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- (-1989)
520300 -- Environment, Aquatic -- Radioactive Materials Monitoring & Transport -- (1989)
500300 -- Environment, Atmospheric -- Radioactive Materials Monitoring & Transport -- (-1989)
552000 -- Public Health

10/5/806 (Item 506 from file: 103)
00739803 AIX-12-585036; EDB-81-048059
Title: Whole body counting results from 1974 to 1979 for Bikini Island residents
Author(s): Miltenberger, R.P.; Greenhouse, N.A.; Lessard, E.T. (Brookhaven National Lab., Upton, NY (USA))
Source: Health Phys. (United Kingdom) v 39:3. Coden: HLTPA
Publication Date: Sep 1980 p 395-407
Document Type: Journal Article; Numerical data
Language: English
Journal Announcement: EDB8103
Subfile: AIX (non-US Atomindex input).
Country of Origin: United States
Abstract: Three body burden measurements of the Bikini Island population were conducted from 1974 to 1978 at Bikini Island. During this time, the mean /sup 137/Cs body burden of the adult Bikini population increased by a factor of 20. This dramatic elevation of the body burden appears to be solely attributable to increased availability of locally grown food products, specifically coconuts and coconut plant products. In January 1979, 45% of the individuals that were whole body counted in April 1978 were recounted approx. 145 days after the Bikini Island population departed from Bikini Atoll. These results show that the adult population /sup 137/Cs body burden decreased by a factor of 2.9 between the April 1978 and January 1979 in vivo measurements.;
Major Descriptors: *ADULTS -- BODY BURDEN; *CESIUM 137 -- BODY BURDEN; *HUMAN POPULATIONS -- DOSE COMMITMENTS
Descriptors: BIKINI; BODY COMPOSITION; CHILDREN; COBALT 60; COCONUT PALMS; COCONUTS; CROPS; DIET; EVALUATED DATA; EXPERIMENTAL DATA; FALLOUT DEPOSITS; POTASSIUM; POTASSIUM 40; TIME DEPENDENCE; WHOLE-BODY COUNTING
Broader Terms: AGE GROUPS; ALKALI METAL ISOTOPES; ALKALI METALS; ANIMALS; BETA DECAY RADIOISOTOPES; BETA-MINUS DECAY RADIOISOTOPES; BETA-PLUS DECAY RADIOISOTOPES; CESIUM ISOTOPES; COBALT ISOTOPES; COUNTING TECHNIQUES; DATA; ELECTRON CAPTURE RADIOISOTOPES; ELEMENTS; FALLOUT; FOOD; FRUITS; INFORMATION; INTERMEDIATE MASS NUCLEI; INTERNAL CONVERSION RADIOISOTOPES; ISLANDS; ISOMERIC TRANSITION ISOTOPES; ISOTOPES; LIGHT NUCLEI; MAMMALS; MAN; MARSHALL ISLANDS; METALS; MICRONESIA; MINUTES LIVING RADIOISOTOPES; NUCLEI; NUMERICAL DATA; OCEANIA; ODD-EVEN NUCLEI; ODD-ODD NUCLEI; PLANTS; POPULATIONS; POTASSIUM ISOTOPES; PRIMATES; RADIOISOTOPES; TREES; VERTEBRATES; YEARS LIVING RADIOISOTOPES
Subject Categories: 560171* -- Radiation Effects -- Nuclide Kinetics & Toxicology -- Man -- (-1987)
INIS Subject Categories: C21* -- Tissue Distribution, Metabolism, Toxicology & Removal of Radionuclides

10/5/807 (Item 507 from file: 103)
00733681 EDB-81-041936
Author(s): Tsunoda, R.T.
Title: Magnetic-field-aligned characteristics of plasma bubbles in the nighttime equatorial ionosphere. Topical report no. 3, 2 Apr-1 Jul 79

5003969

Publication Date: 1 Jul 1979 p 33
Report Number(s): AD-A-088365
Contract Number (DOE): DNA001-79-C-0153
Document Type: Report
Language: English
Journal Announcement: EDB8012
Availability: NTIS, PC A03/MF A01.
Subfile: NTS (NTIS).
Country of Origin: United States
Country of Publication: United States
Abstract: During the past three years, the Defense Nuclear Agency (DNA) has conducted a series of rocket experiments from the Kwajalein Atoll, Marshall Islands, to investigate the character of intense, scintillation-producing irregularities that occur in the nighttime equatorial ionosphere. Because the source mechanism of equatorial irregularities, believed to be the Rayleigh-Taylor instability, is analogous to that which generates plasma-density striations in a nuclear-induced environment, there is considerable interest in the underlying physics that controls the characteristics of these irregularities. A primary objective of ALTAIR investigations of equatorial irregularities is to seek an understanding of the underlying physics by establishing the relationship between meter-scale irregularities (detected by ALTAIR), and large-scale plasma depletions (or 'bubbles') that contain the kilometer-scale, scintillation-producing irregularities. An important application of this relationship has been the use of ALTAIR as a real-time locator of intense irregularities for the purpose of rocket launch criteria.;
Major Descriptors: *IONOSPHERIC STORMS -- SCINTILLATIONS
Descriptors: ALIGNMENT; BUBBLES; ELECTRON DENSITY; F REGION; MAGNETIC FIELDS; VOIDS
Broader Terms: EARTH ATMOSPHERE; IONOSPHERE; PLANETARY IONOSPHERES
Subject Categories: 640201* -- Atmospheric Physics -- Auroral, Ionospheric, & Magetospheric Phenomena

10/5/808 (Item 508 from file: 103)
00733350 EDB-81-041605
Title: Absorption by plants of unseparated fission products derived from the hydrogen bomb detonated in the spring of 1954 at Bikini Atoll
Author(s): Yatazawa, M.; Ishihara, T.
Source: Nippon Nogei Kagaku Kaishi (Japan) v 29. Coden: NNKKA
Publication Date: 1955 p 229-234
Document Type: Journal Article
Language: English
Journal Announcement: EDB8103
Subfile: TIC (Technical Information Center).
Country of Origin: Japan
Abstract: In a radiochemical survey on the contamination of white clover grown in a field, sample plants were obtained from the same grass land at 3 different times. The ash of each sample was analyzed. It was concluded that radioactive alkaline earths, especially /sup 89/Sr and /sup 90/Sr were selectively accumulated in plants. The selective absorption of Bikini ash by rice plants was also studied. Noncontaminated rice plants were cultivated in the radioactive solution produced from Bikini ash for 20 days. Then the absorption by plants of radioactive elements was examined by chromatographic exchange. From the elution curve and ratio of radioactivity of each separation group, it has become clear that rice plants accumulated larger parts of fission products in their roots and selectively absorbed and translocated radioactive alkaline earths in their shoots even if the absorption ratio of Bikini fission products was comparatively small.;
Major Descriptors: *CLOVER -- RADIONUCLIDE KINETICS; *FISSION PRODUCTS -- ROOT ABSORPTION; *RICE -- RADIONUCLIDE KINETICS; *STRONTIUM 89 -- BIOLOGICAL ACCUMULATION; *STRONTIUM 90 -- BIOLOGICAL ACCUMULATION
Descriptors: ALKALINE EARTH ISOTOPES; ASHES; BIKINI; CHROMATOGRAPHY; GROWTH ; PLANTS; RADIOCHEMICAL ANALYSIS; ROOTS; THERMONUCLEAR EXPLOSIONS;

Broader Terms: ABSORPTION; ALKALINE EARTH ISOTOPES; BETA DECAY RADIOISOTOPES; BETA-MINUS DECAY RADIOISOTOPES; CEREALS; CHEMICAL ANALYSIS; DAYS LIVING RADIOISOTOPES; EVEN-EVEN NUCLEI; EVEN-ODD NUCLEI; EXPLOSIONS; GRAMINEAE; GRASS; INTERMEDIATE MASS NUCLEI; ISLANDS; ISOTOPES; LEGUMINOSAE; MARSHALL ISLANDS; MATERIALS; MICRONESIA; NUCLEAR EXPLOSIONS; NUCLEI; OCEANIA; PLANTS; QUANTITATIVE CHEMICAL ANALYSIS; RADIOACTIVE MATERIALS; RADIOISOTOPES; RESIDUES; SEPARATION PROCESSES; STRONTIUM ISOTOPES; UPTAKE; YEARS LIVING RADIOISOTOPES
Subject Categories: 560173* -- Radiation Effects -- Nuclide Kinetics & Toxicology -- Plants -- (-1987)
510302 -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- Terrestrial Ecosystems & Food Chains -- (-1987)
450200 -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives

10/5/809 (Item 509 from file: 103)
00733349 EDB-81-041604
Title: Radioactivity in animal thyroid glands
Author(s): Wolff, A.H.
Source: Public Health Rep. (United States) v 72. Coden: PHRPA
Publication Date: 1957 p 1121-1126
Document Type: Journal Article
Language: English
Journal Announcement: EDB8103
Subfile: TIC (Technical Information Center).
Country of Origin: United States
Abstract: Iodine-131 activity was readily found in thyroid glands from grazing animals in Arizona, Pennsylvania, Ohio, and Oregon within 2 weeks following the start of the 1956 US Pacific atomic weapons tests. A progressive increase was noted in the proportion of samples which were active from mid-May to mid-October, at which time the study was terminated. Based on the Arizona and Ohio data, the average weekly dosages from mid-May to mid-October to cattle and sheep were 35 and 120 milli-roentgen equivalent physical, respectively, apparently harmless to the health of animals. It is suggested that the average cattle /sup 131/I level found in this study is approximately the average continuously existing in US cattle during the past 2 or 3 years. Theoretical considerations indicate that with the levels of /sup 131/I found in cattle thyroids, detectable amounts of /sup 131/I would have been secreted with the fresh milk produced in these areas.;
Major Descriptors: *CATTLE -- RADIATION MONITORING; *SHEEP -- RADIATION MONITORING; *THYROID -- RADIOACTIVITY
Descriptors: ARIZONA; FALLOUT; IODINE 131; MARSHALL ISLANDS; MILK; NUCLEAR EXPLOSIONS; OHIO; OREGON; PENNSYLVANIA; RADIATION DOSES
Broader Terms: ANIMALS; BETA DECAY RADIOISOTOPES; BETA-MINUS DECAY RADIOISOTOPES; BIOLOGICAL MATERIALS; BODY; BODY FLUIDS; CENTRAL REGION; DAYS LIVING RADIOISOTOPES; DOMESTIC ANIMALS; DOSES; ENDOCRINE GLANDS; EXPLOSIONS; FOOD; GLANDS; GREAT LAKES REGION; INTERMEDIATE MASS NUCLEI; IODINE ISOTOPES; ISLANDS; ISOTOPES; MAMMALS; MATERIALS; MICRONESIA; MONITORING; NORTH AMERICA; NUCLEI; OCEANIA; ODD-EVEN NUCLEI; ORGANS; PACIFIC NORTHWEST REGION; RADIOISOTOPES; RUMINANTS; USA; VERTEBRATES; WESTERN REGION
Subject Categories: 560172* -- Radiation Effects -- Nuclide Kinetics & Toxicology -- Animals -- (-1987)
510302 -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- Terrestrial Ecosystems & Food Chains -- (-1987)
450200 -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives

10/5/810 (Item 510 from file: 103)
00732817 ERA-06-014758; EDB-81-041072
Title: Environmental surveillance in the Marshall Islands: an application of alternative energy sources in the Third World
Author(s): Greenhouse, N.A. Jr.
Affiliation: Brookhaven National Lab., Upton, NY

Publication Date: Sum 1980 p 38-44
Document Type: Journal Article
Language: English
Journal Announcement: EDB8104
Subfile: ERA (Energy Research Abstracts); TIC (Technical Information Center).
Country of Origin: United States
Abstract: Recent assessments of potential radiation exposure pathways at Bikini and Enewetak have indicated that doses in excess of current radiation protection guidelines are possible or even likely for persons living in these areas. Rongelap and Utirik Atolls, which were downwind of the 1954 BRAVO event, also received significant fallout; potential radiological problems exist in these areas as well. In view of this prospect, followup environmental monitoring and personnel monitoring programs are being established to maintain our cognizance of radiological conditions, and to take corrective action where necessary. Various aspects of this program require the operation of scientific equipment in remote areas which have no electrical power. In order to solve this problem, windpowered electrical generators were installed on three islands in a planned program through which they will be turned over to the local inhabitants for community use after about two years. This paper describes environmental surveillance efforts for the inhabitants of Pacific Islands who were the recipients of radioactive fallout from US nuclear weapons tests in the Pacific.;
Major Descriptors: *FALLOUT -- ENVIRONMENTAL EXPOSURE PATHWAY; *MARSHALL ISLANDS -- RADIATION MONITORING; *RADIATION MONITORING -- WIND TURBINES ; *RADIOISOTOPES -- RADIOECOLOGICAL CONCENTRATION
Descriptors: AIR SAMPLERS; DOSE RATES; ELECTRIC GENERATORS; FOOD CHAINS; NUCLEAR EXPLOSIONS
Broader Terms: ECOLOGICAL CONCENTRATION; EQUIPMENT; EXPLOSIONS; ISLANDS; ISOTOPES; LABORATORY EQUIPMENT; MACHINERY; MICRONESIA; MONITORING; OCEANIA; SAMPLERS; TURBINES; TURBOMACHINERY
Subject Categories: 510302* -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- Terrestrial Ecosystems & Food Chains -- (-1987)

10/5/811 (Item 511 from file: 103)
00732808 ERA-06-012798; INS-81-004922; EDB-81-041063
Author(s): Robison, W.L.; Noshkin, V.E.
Title: Analysis of core soil and water samples from the Cactus Crater Disposal Site at Enewetak atoll
Corporate Source: California Univ., Livermore (USA). Lawrence Livermore National Lab.
Publication Date: 18 Feb 1981 p 8
Report Number(s): UCID-18935
Contract Number (DOE): W-7405-ENG-48
Document Type: Report; Numerical data
Language: English
Journal Announcement: EDB8103
Availability: NTIS, PC A02/MF A01.
Subfile: INS (US Atomindex input); ERA (Energy Research Abstracts); TIC (Technical Information Center).
Country of Origin: United States
Country of Publication: United States
Abstract: Core soil samples and water samples were collected from the Cactus Crater Disposal Site at Enewetak for analysis of /sup 137/Cs, /sup 90/Sr, /sup 239 +240/Pu and /sup 241/Am by both gamma spectroscopy and, through a contractor laboratory, by wet chemistry procedures. The samples processing methods, the analytical methods and the analytical quality control are all procedures developed for the continuing Marshall Island radioecology and dose assessment work.;
Major Descriptors: *AMERICIUM 241 -- RADIOECOLOGICAL CONCENTRATION; *CESIUM 137 -- RADIOECOLOGICAL CONCENTRATION; *PLUTONIUM 239 -- RADIOECOLOGICAL CONCENTRATION; *PLUTONIUM 240 -- RADIOECOLOGICAL CONCENTRATION; *STRONTIUM 90 -- RADIOECOLOGICAL CONCENTRATION

RADIONUCLIDE MIGRATION; SOILS; TABLES; WATER
Broader Terms: ACTINIDE ISOTOPES; ACTINIDE NUCLEI; ALKALI METAL ISOTOPES; ALKALINE EARTH ISOTOPES; ALPHA DECAY RADIOISOTOPES; AMERICIUM ISOTOPES; BETA DECAY RADIOISOTOPES; BETA-MINUS DECAY RADIOISOTOPES; CESIUM ISOTOPES; DATA; ECOLOGICAL CONCENTRATION; ENVIRONMENTAL TRANSPORT; EVEN-EVEN NUCLEI; EVEN-ODD NUCLEI; HEAVY NUCLEI; HYDROGEN COMPOUNDS; INFORMATION; INTERMEDIATE MASS NUCLEI; ISLANDS; ISOTOPES; MARSHALL ISLANDS; MASS TRANSFER; MICRONESIA; NUCLEI; NUMERICAL DATA; OCEANIA; ODD-EVEN NUCLEI; OXYGEN COMPOUNDS; PLUTONIUM ISOTOPES; RADIOISOTOPES; STRONTIUM ISOTOPES; YEARS LIVING RADIOISOTOPES
Subject Categories: 510301* -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- Soil -- (-1987)
520301 -- Environment, Aquatic -- Radioactive Materials Monitoring & Transport -- Water -- (1987)
INIS Subject Categories: B31* -- Land
B32 -- Water

10/5/812 (Item 512 from file: 103)
00727111 INS-81-004057; EDB-81-035365
Title: 1954 Bikini atoll incident: an update of the findings in the Marshallese people
Author(s): Conard, R.A.; Huebner, K.F.; Fry, S.A. (eds.)
Affiliation: Brookhaven National Lab., Upton, NY
Title: Medical basis for radiation accident preparedness
Conference Title: Radiation accident preparedness conference
Conference Location: Oak Ridge, TN, USA Conference Date: 19 Oct 1979
Publisher: Elsevier North Holland, Inc.,New York, NY
Publication Date: 1980 p 55-58
Report Number(s): CONF-791085-
Document Type: Analytic of a Book; Conference literature
Language: English
Journal Announcement: EDB8103
Subfile: INS (US Atomindex input); TIC (Technical Information Center).
Country of Origin: United States
Country of Publication: United States
Abstract: The thyroid findings in the Marshallese people accidentally exposed to fallout from the detonation of a nuclear device at Bikini in 1954 are updated. These findings include depression of leukocytes and erythrocytes levels, burns of the skin, and internal adsorption of radionuclides along with the development of thyroid abnormalities and myelogenous leukemia. (DLS);
Major Descriptors: *ERYTHROCYTES -- BIOLOGICAL RADIATION EFFECTS; *HUMAN POPULATIONS -- MEDICAL SURVEILLANCE; *LEUKOCYTES -- BIOLOGICAL RADIATION EFFECTS; *SKIN -- BIOLOGICAL RADIATION EFFECTS; *THYROID -- BIOLOGICAL RADIATION EFFECTS
Descriptors: AGE DEPENDENCE; BIKINI; EPIDEMIOLOGY; FALLOUT; IODINE ISOTOPES ; LEUKEMIA; MARSHALL ISLANDS; RADIATION ACCIDENTS; RADIATION DOSES; RADIOCHEMICAL ANALYSIS; RADIOINDUCTION; URINE
Broader Terms: ACCIDENTS; BIOLOGICAL EFFECTS; BIOLOGICAL MATERIALS; BIOLOGICAL WASTES; BLOOD; BLOOD CELLS; BODY; BODY FLUIDS; CHEMICAL ANALYSIS; DISEASES; DOSES; ENDOCRINE GLANDS; GLANDS; HEMIC DISEASES; ISLANDS; ISOTOPES; MARSHALL ISLANDS; MATERIALS; MICRONESIA; NEOPLASMS; OCEANIA; ORGANS; POPULATIONS; QUANTITATIVE CHEMICAL ANALYSIS; RADIATION EFFECTS; SURVEILLANCE; WASTES
Subject Categories: 560151* -- Radiation Effects on Animals -- Man
552000 -- Public Health
INIS Subject Categories: C15* -- Effects of External Radiation on Man
C50 -- Health, Safety & Environment

10/5/813 (Item 513 from file: 103)
00727110 ERA-06-011650; EDB-81-035364
Title: Follow-up studies over a 25-year period on the Japanese fishermen exposed to radioactive fallout in 1954
Author(s): Kumatori, T. (National Inst. of Radiological Sciences, Chibaa-shi, Japan); Ishihara, T.; Hirashima, K.; Sugiyama, H.;

Title: Medical basis for radiation accident preparedness
Conference Title: Radiation accident preparedness conference
Conference Location: Oak Ridge, TN, USA Conference Date: 19 Oct 1979
Publisher: Elsevier North Holland, Inc.,New York, NY
Publication Date: 1980 p 33-54
Report Number(s): CONF-791085-
Document Type: Analytic of a Book; Conference literature
Language: English
Journal Announcement: EDB8103
Subfile: ERA (Energy Research Abstracts); TIC (Technical Information Center).
Country of Origin: Japan
Country of Publication: United States
Abstract: Medical surveillance of Japanese fisherman exposed to fallout from a thermonuclear test explosion in 1954 is reported for a twenty-five year period. Internal and external dose estimates are discussed in light of radiochemical analysis of urine, thyroid glands, and organs of fatal cases along with medical records of biological radiation effects to skin, hematological system, bone marrow, spermatocytes, eyes, thyroid, and liver. (DLS);
Major Descriptors: *FALLOUT -- MEDICAL SURVEILLANCE; *PERSONNEL -- BIOLOGICAL RADIATION EFFECTS
Descriptors: ABSCESSES; BIKINI; EPIDEMIOLOGY; EXTERNAL IRRADIATION; FISHING INDUSTRY; ICRP CRITICAL GROUP; RADIATION ACCIDENTS; RADIATION DOSES; RADIOACTIVE CLOUDS; RADIOCHEMICAL ANALYSIS; RADIONUCLIDE KINETICS; SKIN ; THYROID; URINE; WORKING CONDITIONS
Broader Terms: ACCIDENTS; BIOLOGICAL EFFECTS; BIOLOGICAL MATERIALS; BIOLOGICAL WASTES; BODY; BODY FLUIDS; CHEMICAL ANALYSIS; CLOUDS; DOSES; ENDOCRINE GLANDS; GLANDS; INDUSTRY; IRRADIATION; ISLANDS; MARSHALL ISLANDS; MATERIALS; MICRONESIA; OCEANIA; ORGANS; PATHOLOGICAL CHANGES; QUANTITATIVE CHEMICAL ANALYSIS; RADIATION EFFECTS; SURVEILLANCE; WASTES
Subject Categories: 560151* -- Radiation Effects on Animals -- Man
552000 -- Public Health

10/5/814 (Item 514 from file: 103)
00727075 EDB-81-035329
Title: Operation Hardtack. Volume II. Radiological safety. Extracted version. Final report
Corporate Source: General Electric Co., Santa Barbara, CA (USA)
Publication Date: 1 Oct 1979 p 161
Report Number(s): AD-A-085318
Contract Number (DOE): DNA001-79-C-0455
Document Type: Report
Language: English
Journal Announcement: EDB8009
Availability: NTIS, MF A01.
Subfile: NTS (NTIS).
Country of Origin: United States
Country of Publication: United States
Abstract: This is the final report of the RADSAFE operation during the HARDTACK Series of nuclear tests in the Pacific. Forecast and actual fallout is presented.;
Major Descriptors: *HARDTACK PROJECT -- RADIATION HAZARDS
Descriptors: BIKINI; ENIWETOK; FALLOUT; METEOROLOGY; NUCLEAR EXPLOSIONS; NUCLEAR EXPLOSIVES; OCCUPATIONAL SAFETY; PERSONNEL; RADIATION DOSES; RADIATION MONITORING
Broader Terms: DOSES; EXPLOSIONS; EXPLOSIVES; HAZARDS; HEALTH HAZARDS; ISLANDS; MARSHALL ISLANDS; MICRONESIA; MONITORING; NUCLEAR EXPLOSIONS; OCEANIA; SAFETY
Subject Categories: 560151* -- Radiation Effects on Animals -- Man

10/5/815 (Item 515 from file: 103)
00727074 ERA-06-011631; EDB-81-035328
Author(s): Bond, V.P.; Conard, R.A.; Robertson, J.S.; Weden, E.A. Jr.
Title: Medical examination of Rongelap people six months after exposure to

Corporate Source: Naval Medical Research Inst., Bethesda, MD (USA)
Publication Date: Apr 1955 p 46
Report Number(s): AD-465292
Document Type: Report
Language: English
Journal Announcement: EDB8012
Availability: NTIS, PC A03/MF A01.
Subfile: ERA (Energy Research Abstracts); NTS (NTIS).
Country of Origin: United States
Country of Publication: United States
Abstract: Follow-up medical examinations were made of the Marshallese inhabitants of Rongelap Atoll 6 months after they had been exposed to atomic bomb fallout radiation during the Operation CASTLE test series in March, 1954. During the early acute period following exposure, these people had shown systemic effects and marked hematological changes resulting from penetrating gamma radiation; extensive superficial skin lesions and epilation associated principally with beta and soft gamma radiation from fallout material deposited on uncovered skin areas; and minimal internal contamination with fission products, resulting principally from ingestion of fallout material. At the time of the 6-month resurvey the individuals, in general, appeared healthy and normally active, and no deaths had occurred in the interim period. Chest X-rays of all individuals revealed no abnormalities ascribable to the fallout radiation. Analysis of hematological data obtained failed to demonstrate a significant effect of measles on the peripheral blood count. Neutrophile, lymphocyte, and platelet counts were not significantly different from counts taken on the 74th post-exposure day, and none of these values had returned to control levels.;
Major Descriptors: *FALLOUT -- RADIATION HAZARDS; *HUMAN POPULATIONS -- RADIATION INJURIES
Descriptors: BIOLOGICAL RADIATION EFFECTS; BLOOD COUNT; BONE MARROW; FISSION PRODUCTS; GAMMA RADIATION; MARSHALL ISLANDS; MEDICAL SURVEILLANCE; NUCLEAR EXPLOSIONS; PACIFIC OCEAN; PATHOLOGY; PIGMENTS; RESPIRATORY SYSTEM; SKIN
Broader Terms: ANIMAL TISSUES; BIOLOGICAL EFFECTS; BIOLOGICAL RADIATION EFFECTS; BODY; ELECTROMAGNETIC RADIATION; EXPLOSIONS; HAZARDS; HEALTH HAZARDS; HEMATOPOIETIC SYSTEM; INJURIES; IONIZING RADIATIONS; ISLANDS; ISOTOPES; MATERIALS; MICRONESIA; OCEANIA; ORGANS; POPULATIONS; RADIATION EFFECTS; RADIATIONS; RADIOACTIVE MATERIALS; SEAS; SURFACE WATERS; SURVEILLANCE; TISSUES
Subject Categories: 560151* -- Radiation Effects on Animals -- Man
560161 -- Radionuclide Effects, Kinetics, & Toxicology -- Man

10/5/816 (Item 516 from file: 103)
00726709 ERA-06-011571; INS-81-004000; EDB-81-034963
Author(s): Clegg, B.; Koranda, J.; Robison, W.; Holladay, G.
Title: Equatorial hydrology studies by satellite telemetry
Corporate Source: California Univ., Livermore (USA). Lawrence Livermore Lab.
Publication Date: 30 Dec 1980 p 22
Report Number(s): UCID-18869
Contract Number (DOE): W-7405-ENG-48
Document Type: Report; Numerical data
Language: English
Journal Announcement: EDB8103
Availability: NTIS, PC A02/MF A01.
Subfile: INS (US Atomindex input); ERA (Energy Research Abstracts); TIC (Technical Information Center).
Country of Origin: United States
Country of Publication: United States
Abstract: We are using a geostationary satellite functioning as a transponder to collect surface environmental data to describe the fate of soil-borne radionuclides. The remote, former atomic testing grounds at the Enewetak and Bikini Atolls present a difficult environment in which to collect continuous field data. Our land-based, solar-powered

total solar radiation, rain, humidity, temperature, and soil-water potentials. For the past year, our water-flux model predicted wet season plant-transpiration rates nearly equal to the 6- to 7-mm/d evaporation-pan rate, which decreases to 2 to 3 mm/d for the dry season. From the microclimate data we estimated a 1:3 and 1:20 /sup 137/Cs dry-matter concentration ratio, which was later confirmed by radioisotopic analysis. This ratio exacerbates the dose to man from intake of food plants. Nephelometer measurements of airborne particulates presently indicate a minimum respiratory radiological dose.;
Major Descriptors: *BIKINI -- REMOTE SENSING; *ENIWETOK -- REMOTE SENSING; *FISSION PRODUCTS -- BIOLOGICAL ACCUMULATION; *FISSION PRODUCTS -- ENVIRONMENTAL EXPOSURE PATHWAY; *FISSION PRODUCTS -- RADIONUCLIDE MIGRATION
Descriptors: AMBIENT TEMPERATURE; CESIUM 137; CONTAMINATION; DATA COMPILATION; DUSTS; FOOD CHAINS; HUMIDITY; MOISTURE; RADIATION MONITORING; RADIOACTIVE AEROSOLS; RAIN; SOILS; SOLAR RADIATION
Broader Terms: AEROSOLS; ALKALI METAL ISOTOPES; ATMOSPHERIC PRECIPITATIONS; BETA DECAY RADIOISOTOPES; BETA-MINUS DECAY RADIOISOTOPES; CESIUM ISOTOPES; COLLOIDS; DATA; DISPERSIONS; ENVIRONMENTAL TRANSPORT; INFORMATION; ISLANDS; ISOTOPES; MARSHALL ISLANDS; MASS TRANSFER; MATERIALS; MICRONESIA; MONITORING; NUCLEI; NUMERICAL DATA; OCEANIA; ODD-EVEN NUCLEI; RADIATIONS; RADIOACTIVE MATERIALS; RADIOISOTOPES; SOLS ; STELLAR RADIATION; YEARS LIVING RADIOISOTOPES
Subject Categories: 510302* -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- Terrestrial Ecosystems & Food Chains -- (-1987)
INIS Subject Categories: C22* -- Radionuclide Ecology

10/5/817 (Item 517 from file: 103)
00726658 ERA-06-011562; EDB-81-034912
Title: Health Division Organization (1979)
Author(s): Petersen, D.F. (comp.)
Title: Biomedical and Environmental Research Program of the LASL Life Sciences and Health Divisions. Progress report, January-December 1979
Publication Date: Oct 1980 p 88-109
Report Number(s): LA-8577-PR
Document Type: Analytic of a Report
Language: English
Journal Announcement: EDB8103
Availability: NTIS, PC A07/MF A01.
Subfile: ERA (Energy Research Abstracts); TIC (Technical Information Center).
Country of Origin: United States
Country of Publication: United States
Abstract: In the first three papers of this section, interim soil limits for decontamination and decommissioning projects, information to the Eniwetak people and toxicology studies of selected materials of interest to the oil shale industry are summarized. The remainder of this section is devoted to research done at the Los Alamos National Environmental Research Park. A range of disturbed and undisturbed areas exists which affords investigations into EIK migratory patterns, fire ecology and the status of flora in the park. In addition, radionuclide tracer studies of soils and vegetation have been done. (KRM);
Major Descriptors: *PLANTS -- SAMPLING; *PLANTS -- ENVIRONMENTAL EXPOSURE PATHWAY; *SOILS -- EVALUATION; *SOILS -- SOILS; *LAND POLLUTION -- DECONTAMINATION; *RADIOACTIVITY -- ACTIVITY LEVELS; *LYMPHOCYTES -- ENZYME ACTIVITY; *OIL SHALE INDUSTRY -- INDUSTRIAL MEDICINE; *URINE -- MUTAGEN SCREENING; *RUMINANTS -- MIGRATION; *RUMINANTS -- POPULATION DYNAMICS; *TELEMETRY -- COMPUTER GRAPHICS; *FIRES -- ENVIRONMENTAL IMPACTS; *ENDANGERED SPECIES -- EVALUATION; *FRESH WATER -- WATER CHEMISTRY; *FRESH WATER -- WATER QUALITY; *BACKGROUND RADIATION -- SEASONAL VARIATIONS; *BACKGROUND RADIATION -- THERMOLUMINESCENT DOSIMETRY; *GASEOUS WASTES -- THERMOLUMINESCENT DOSIMETRY; *ANTIMONY 125 -- RADIONUCLIDE MIGRATION; *CERIUM 141 -- RADIONUCLIDE MIGRATION;