*SCANDIUM 46 -- RADIONUCLIDE MIGRATION; *TANTALUM 182 -- RADIONUCLIDE MIGRATION; *METEOROLOGY -- HOURLY VARIATIONS
Descriptors: ENIWETOK; PERSONNEL; DAUGHTER PRODUCTS; URANIUM 235; URANIUM 238; HYDROXYLASES; TERRESTRIAL ECOSYSTEMS; CACTI; ACID CARBONATES; CALCIUM; CHLORIDES; GAMMA RADIATION; LAMPF LINAC;
Broader Terms: ACCELERATORS; ACTINIDE ISOTOPES; ACTINIDE NUCLEI; ALKALINE EARTH METALS; ALPHA DECAY RADIOISOTOPES; ANIMAL CELLS; ANIMALS; ANTIMONY ISOTOPES; BETA DECAY RADIOISOTOPES; BETA-MINUS DECAY RADIOISOTOPES; BIOLOGICAL MATERIALS; BIOLOGICAL WASTES; BLOOD; BLOOD CELLS; BODY FLUIDS; CERIUM ISOTOPES; CHLORINE COMPOUNDS; CLEANING; COMMUNICATIONS; CONNECTIVE TISSUE CELLS; DATA TRANSMISSION; DAYS LIVING RADIOISOTOPES; DOSIMETRY; ECOSYSTEMS; ELECTROMAGNETIC RADIATION; ELEMENTS; ENVIRONMENTAL QUALITY; ENVIRONMENTAL TRANSPORT; ENZYMES; EVEN-EVEN NUCLEI; EVEN-ODD NUCLEI; HALIDES; HALOGEN COMPOUNDS; HEAVY NUCLEI; HYDROGEN COMPOUNDS; INDUSTRY; INTERMEDIATE MASS NUCLEI; INTERNAL CONVERSION RADIOISOTOPES; IONIZING RADIATIONS; ISLANDS; ISOMERIC TRANSITION ISOTOPES; ISOTOPE APPLICATIONS; ISOTOPES; LEUKOCYTES; LINEAR ACCELERATORS; MAMMALS; MARSHALL ISLANDS; MASS TRANSFER; MATERIALS; MEDICINE; MESON FACTORIES; METALS; MICRONESIA; MINUTES LIVING RADIOISOTOPES; NUCLEI; OCEANIA; ODD-EVEN NUCLEI; ODD-ODD NUCLEI; OXIDOREDUCTASES; OXYGEN COMPOUNDS; PLANTS; POLLUTION; RADIATIONS; RADIOISOTOPES; RARE EARTH ISOTOPES; RARE EARTH NUCLEI; SCANDIUM ISOTOPES; SCREENING; SECONDS LIVING RADIOISOTOPES; SOMATIC CELLS; TANTALUM ISOTOPES; URANIUM ISOTOPES; VARIATIONS; VERTEBRATES; WASTES; WATER; YEARS LIVING RADIOISOTOPES
Subject Categories: 510101* -- Environment, Terrestrial -- Basic Studies -- Radiometric Techniques -- (-1989)
510302 -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- Terrestrial Ecosystems & Food Chains -- (-1987)
560306 -- Chemicals Metabolism & Toxicology -- Man -- (-1987)

10/5/818 (Item 518 from file: 103)
00726622 INS-81-003993; EDB-81-034876
Title: Transuranium radionuclides in components of the benthic environment of Enewetak Atoll
Author(s): Noshkin, V.E.; Hanson, W.C. (ed.)
Affiliation: Lawrence Livermore Lab., CA
Title: Transuranic elements in the environment
Publisher: Technical Information Center,Oak Ridge, TN
Publication Date: 1980 p 578-601
Document Type: Analytic of a Book
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: Data on the concentrations and distributions of transuranium radionuclides in the marine environment of Enewetak Atoll are reviewed. The distributions of the transuranics in the lagoon are very heterogeneous. The quantities of transuranics generated during the nuclear-test years at the Atoll and now associated with various sediment components are discussed. Whenever possible, concentrations of /sup 241/Am and /sup 239+240/Pu are compared.;
Major Descriptors: *AMERICIUM 241 -- AQUATIC ECOSYSTEMS; *PLUTONIUM 239 -- AQUATIC ECOSYSTEMS; *PLUTONIUM 240 -- AQUATIC ECOSYSTEMS; *TRANSURANIUM ELEMENTS -- AQUATIC ECOSYSTEMS
Descriptors: BENTHOS; DATA; ENIWETOK; NUCLEAR EXPLOSIONS; SEDIMENTS
Broader Terms: ACTINIDE ISOTOPES; ACTINIDE NUCLEI; ALPHA DECAY RADIOISOTOPES; AMERICIUM ISOTOPES; AQUATIC ORGANISMS; ECOSYSTEMS; ELEMENTS; EVEN-EVEN NUCLEI; EVEN-ODD NUCLEI; EXPLOSIONS; HEAVY NUCLEI; INFORMATION; ISLANDS; ISOTOPES; MARSHALL ISLANDS; MICRONESIA; NUCLEI; OCEANIA; ODD-EVEN NUCLEI; PLUTONIUM ISOTOPES; RADIOISOTOPES; YEARS LIVING RADIOISOTOPES
Subject Categories: 500300* -- Environment, Atmospheric -- Radioactive Materials Monitoring & Transport -- (-1989)
520302 -- Environment, Aquatic -- Radioactive Materials Monitoring &

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Transport -- Aquatic Ecosystems & Food Chains -- (-1987)
INIS Subject Categories: B33* -- Atmosphere
C22 -- Radionuclide Ecology

10/5/819 (Item 519 from file: 103)
00726621 INS-81-003992; EDB-81-034875
Title: Geochemistry of transuranic elements at Bikini Atoll
Author(s): Schell, W.R. (Univ. of Washington, Seattle); Lowman, F.G.; Marshall, R.P.; Hanson, W.C. (ed.)
Title: Transuranic elements in the environment
Publisher: Technical Information Center,Oak Ridge, TN
Publication Date: 1980 p 541-577
Document Type: Analytic of a Book
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 distribution of transuranic and other radionuclides in the marine environment at Bikini Atoll was studied to better understand the geochemical cycling of radionuclides produced by nuclear testing between 1946 and 1958. The reef areas, which are washed continually by clean ocean water, have low levels of radionuclide concentrations. Radionuclides are contained in fallout particles of pulverized coral. In the water these particles may dissolve, be transported by currents within the Atoll, or enter the North Equatorial Current by tidal exchange of water in the lagoon. The transuranic elements are distributed widely in sediments over the northwest quadrant of the Atoll, which suggests that this area serves as a settling basin for particles. The distribution of plutonium in the water column indicates that plutonium in the sediments is released to the bottom waters and then is transported and diluted by the prevailing currents. Upon interaction with the lagoon environment, plutonium occurs in several physicochemical states. Laboratory tests and field studies at Bikini show that approximately 15% of the plutonium is associated with the colloidal fraction.;
Major Descriptors: *TRANSURANIUM ELEMENTS -- GEOCHEMISTRY
Descriptors: AQUATIC ECOSYSTEMS; BIKINI; CORALS; FALLOUT DEPOSITS; NUCLEAR EXPLOSIONS; PLUTONIUM; REEFS; SEAWATER; SEDIMENTS; WATER CURRENTS
Broader Terms: ACTINIDES; CHEMISTRY; CNIDARIA; CURRENTS; ECOSYSTEMS; ELEMENTS; EXPLOSIONS; FALLOUT; GEOLOGIC STRUCTURES; HYDROGEN COMPOUNDS; ISLANDS; MARSHALL ISLANDS; METALS; MICRONESIA; OCEANIA; OXYGEN COMPOUNDS; TRANSURANIUM ELEMENTS; WATER
Subject Categories: 500300* -- Environment, Atmospheric -- Radioactive Materials Monitoring & Transport -- (-1989)
510300 -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- (-1989)
520302 -- Environment, Aquatic -- Radioactive Materials Monitoring & Transport -- Aquatic Ecosystems & Food Chains -- (-1987)
INIS Subject Categories: B33* -- Atmosphere
B31 -- Land
C22 -- Radionuclide Ecology

10/5/820 (Item 520 from file: 103)
00726452 AIX-11-565378; EDB-81-034706
Title: Way to the extinction of nuclear weapons, Chapter 4
Title: Hiroshima-Nagasaki no genbaku saigai
Publisher: Iwanami Shoten,Tokyo, Japan
Publication Date: Jul 1979 p 385-484
Document Type: Analytic of a Book
Language: Japanese
Journal Announcement: EDB8012
Subfile: AIX (non-US Atomindex input).
Country of Origin: Japan
Country of Publication: Japan
Abstract: The atomic bomb disasters in Hiroshima and Nagasaki are reviewed,

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investigated and reported. The surveys and investigations related to the medical and natural scientific problems are classified into the investigations immediately after having been bombed, the investigating activities by universities and laboratories in the early days after having been bombed, the activities of special study committee for the atomic bomb disasters in the learning research conference, the establishment and activities of the Japan-USA cooperative study group, the documentary film of the Japan Cinema Company and the investigating group of the US Strategic Bombing Survey, the establishment of the Atomic Bomb Casualty Commission (ABCC) and its activity, the re-starting of the studies after the end of occupation system, the evolution after the Bikini explosion, the establishment of the laboratories for the atomic bombing investigation and the establishment of the radiation influence research laboratory. The investigations concerning the humanity and social scientific problems are also classified into the systematic organization of the studies on the victims of atomic bombing, the historical studies and the movement of the victims of atomic bombing. The investigations are explained in detail about each item. The relief and medical treatment of the sufferers in 1945 in Hiroshima and Nagasaki are described in detail. The actual medical treatment methods and the conditions of the patients are presented. The law on the medical services related to the atomic bombing is introduced with the modifications being conducted from 1954 until 1974. The administration for the victims of atomic bombing and the activities of citizens, including the countermeasures for the victims of atomic bombing and so on are explained.;

Major Descriptors: *A-BOMB SURVIVORS -- SOCIOLOGY; *A-BOMB SURVIVORS -- THERAPY; *HIROSHIMA -- NUCLEAR EXPLOSIONS; *NAGASAKI -- NUCLEAR EXPLOSIONS; *NUCLEAR EXPLOSIONS -- BIOLOGICAL EFFECTS

Descriptors: MAN; NUCLEAR WEAPONS; PATIENTS; POPULATIONS; PUBLIC OPINION; REGIONAL ANALYSIS; RESEARCH PROGRAMS; REVIEWS; VICTIMS COMPENSATION

Broader Terms: ANIMALS; ASIA; DOCUMENT TYPES; EXPLOSIONS; JAPAN; MAMMALS; PRIMATES; VERTEBRATES; WEAPONS

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

INIS Subject Categories: C52* -- Radiation Hazards & Safety Evaluations of Nuclear Installations

10/5/821 (Item 521 from file: 103)

00726442 ERA-06-011511; EDB-81-034696

Author(s): Wellings, J.H.

Title: Operation Redwing - commander task group 7.3. Final report Mar-Aug 56

Corporate Source: General Electric Co., Santa Barbara, CA (USA)

Publication Date: 1 Oct 1979 p 195

Report Number(s): AD-B-951765

Document Type: Report

Language: English

Journal Announcement: EDB8010

Availability: NTIS, PC A09/MF A01.

Subfile: ERA (Energy Research Abstracts); NTS (NTIS).

Country of Origin: United States

Country of Publication: United States

Abstract: Operation REDWING was conducted at the Pacific Proving Ground during the spring and summer of 1956. The main effort of the Navy task group (Task Group 7.3) was concentrated at Bikini Atoll in support of large yield shots. The broad mission of Task Group 7.3 was to provide the necessary naval support, including an evacuation capability, required by Joint Task Force Seven. Task Group 7.3 carried out the following assigned tasks: 1) conduct security and safety patrols (air and surface ship); 2) provide surface ship transportation between Eniwetok and Bikini and other atolls; 3) provide shipboard command, control and communications facilities for CJTF-7 and the task groups; 4) provide shipboard facilities to accommodate elements of the Joint Task Force while afloat, including pre-shot evacuations as directed by

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CJTF-7; and 5) provide support to scientific projects as requested.;
Major Descriptors: *REDWING PROJECT -- OPERATION; *REDWING PROJECT -- PLANNING
Descriptors: BIKINI; ENIWETOK; MILITARY FACILITIES; NUCLEAR EXPLOSIONS; SAFETY; TESTING
Broader Terms: EXPLOSIONS; ISLANDS; MARSHALL ISLANDS; MICRONESIA; OCEANIA
Subject Categories: 450200* -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives

10/5/822 (Item 522 from file: 103)
00726417 ERA-06-011490; EDB-81-034671
Author(s): Berning, W.W.; Arnold, N.W.
Title: Scientific director's report of atomic weapon tests at Eniwetok, 1951. Annex 6.3. Combat vehicle exposure
Corporate Source: Ballistic Research Labs., Aberdeen Proving Ground, MD (USA)
Publication Date: Aug 1952 p 287
Report Number(s): AD-374634
Document Type: Report
Language: English
Journal Announcement: EDB8012
Availability: NTIS, PC A $16.00.
Subfile: ERA (Energy Research Abstracts); NTS (NTIS).
Country of Origin: United States
Country of Publication: United States
Abstract: Two M-46 and eight M-26 medium tanks were exposed to E-shot in Operation Greenhouse. These vehicles were located at ranges of 500, 750, 1000, 1233, and 1400 yd from ground zero, with various orientations relative to the burst point. The effects on crew members are considerably more serious than those on the vehicle itself. Within those vehicles rendered unfit for combat by violent displacement, complete crew casualty is immediate. At greater ranges from ground zero, lethal radiation dosages are incurred by the crew when the medium tank suffers no impairment of combat effectiveness. The effects of blast pressures within the crew compartment are of little consequence. Briefly the results may be given as follows: (1) Combat effectiveness of vehicle alone: 0%, 0 to 500 yd; 0 to 100%, 500 to 1000 yd; 100% at distances greater than 1000 yd; (2) Immediate combat effectiveness of crew: 0%, 0 to 900 yd; 0 to 100%, 900 to 1100 yd; 100% at distances greater than 1100 yd; and (3) Delayed combat effectiveness of crew (periods greater than 24 hr): 0%, 0 to 1200 yd; 0 to 100%, 1200 to 1600 yd; 100% at distances greater than 1600 yd.;
Major Descriptors: *GREENHOUSE PROJECT; *MILITARY EQUIPMENT -- BLAST EFFECTS; *MILITARY PERSONNEL -- BLAST EFFECTS; *VEHICLES -- BLAST EFFECTS
Descriptors: DAMAGE; NUCLEAR EXPLOSIONS
Broader Terms: EQUIPMENT; EXPLOSIONS; NUCLEAR EXPLOSIONS; PERSONNEL
Subject Categories: 450200* -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives

10/5/823 (Item 523 from file: 103)
00726416 ERA-06-011489; EDB-81-034670
Author(s): Bascom, W.; Munk, W.; Van Dorn, W.
Title: Barometric and water-surface waves produced by Mike shot
Corporate Source: Scripps Institution of Oceanography, La Jolla, CA (USA)
Publication Date: Jun 1953 p 38
Report Number(s): AD-363623
Document Type: Report
Language: English
Journal Announcement: EDB8012
Availability: NTIS, PC A $6.00.
Subfile: ERA (Energy Research Abstracts); NTS (NTIS).
Country of Origin: United States
Country of Publication: United States
Abstract: Barometric and water-surface waves generated by Mike shot were studied by means of 25 instruments in 19 locations in the Pacific Basin

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ranging from 12 to 4600 nautical miles from Ground Zero. Several new kinds of instruments were constructed and used, and deep-sea instrument stations were installed on the tops of two mounts. The first water waves arriving at Eniwetok Island apparently traveled along paths outside the lagoon. At several of the stations there were two distinct arrivals of water waves, the first apparently being driven by the propagated rise in atmospheric pressure caused by the explosion and thus traveling at the speed of sound and the second moving along the water surface in the usual manner at a velocity of the square root of gh. At the distant island stations a long-continued persistence of wave activity substantially above background was observed, modulated by sporadic enhancements that suggest reflections from major land masses.;

Major Descriptors: *NUCLEAR EXPLOSIONS -- WATER WAVES; *WATER WAVES -- WAVE PROPAGATION
Descriptors: PACIFIC OCEAN; VELOCITY
Broader Terms: EXPLOSIONS; SEAS; SURFACE WATERS
Subject Categories: 450200* -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives

10/5/824 (Item 524 from file: 103)
00720498 EDB-81-028751
Title: Radioactivity in certain pelagic fish. IV. Separation and confirmation of radioiron in skipjack
Author(s): Amano, K.; Tozawa, H.; Takase, A.
Source: Nippon Suisan Gakkaishi (Japan) v 21. Coden: NSUGA
Publication Date: 1956 p 1261-1268
Document Type: Journal Article
Language: English
Journal Announcement: EDB8103
Subfile: TIC (Technical Information Center).
Country of Origin: Japan
Abstract: Incinerated liver (0.2g.) and stomach (0.15g.) of a skipjack caught near the Bikini Atoll on June 19, 1954, were dissolved in 0.2N HCl, filtered, and the filtrates made up to 100 cc.; the radioactivities were 130 and 86 counts/min./cc., respectively. The solutions were passed through column of Dowex 50. Elution with 0.5% oxalic acid gave powerful radioactivity with liver, but very weak with stomach. Elution with a solution of NH/sub 4/ citrate at pH 3.5 from both samples showed strong radioactivity, probably due to the presence of /sup 65/Zn. Distinct radioactivity was also detected in the NH/sub 4/ citrate eluate at pH 4.1 from the liver, but not from the stomach; this eluted element emitted no ..gamma..-rays and differed from /sup 65/Zn. The elution behavior of the radioactive element in the 0.5% oxalic acid elution showed that it was Fe; elution by 0.6M HCl after adsorption to Dowex 1 supported this result. /sup 95/Zr and /sup 95/Nb were indicated from these data to be absent. The pulse height distribution curve of ..gamma..-ray emitted by the element also indicated that it was Fe. However, the radiation decay curve differed considerably from that of /sup 59/Fe, suggesting the presence of radioactive element with longer half-life. Comparison of the absorption coefficient of Al, Ag, and Au for x rays from /sup 55/Fe, /sup 63/Ni and the isolated element indicated that the element was /sup 55/Fe.;
Major Descriptors: *FISHES -- RADIOACTIVITY; *LIVER -- RADIOCHEMICAL ANALYSIS; *STOMACH -- RADIOCHEMICAL ANALYSIS
Descriptors: ALUMINIUM; AMMONIUM COMPOUNDS; BIKINI; CITRATES; DECAY; FALLOUT; GAMMA RADIATION; GOLD; HYDROCHLORIC ACID; ION EXCHANGE; IRON 55; IRON 59; IRON ISOTOPES; NICKEL 63; NIOBIUM 95; NUCLEAR EXPLOSIONS; OXALIC ACID; RADIONUCLIDE KINETICS; SILVER; ZINC 65; ZIRCONIUM 95
Broader Terms: ANIMALS; AQUATIC ORGANISMS; BETA DECAY RADIOISOTOPES; BETA-MINUS DECAY RADIOISOTOPES; BETA-PLUS DECAY RADIOISOTOPES; BODY; CARBOXYLIC ACID SALTS; CARBOXYLIC ACIDS; CHEMICAL ANALYSIS; DAYS LIVING RADIOISOTOPES; DICARBOXYLIC ACIDS; DIGESTIVE SYSTEM; ELECTROMAGNETIC RADIATION; ELECTRON CAPTURE RADIOISOTOPES; ELEMENTS; EVEN-ODD NUCLEI; EXPLOSIONS; GASTROINTESTINAL TRACT; GLANDS; HYDROGEN COMPOUNDS; INORGANIC ACIDS; INTERMEDIATE MASS NUCLEI; IONIZING RADIATIONS; IRON

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ISOTOPES; ISLANDS; ISOMERIC TRANSITION ISOTOPES; ISOTOPES; MARSHALL ISLANDS; METALS; MICRONESIA; NICKEL ISOTOPES; NIOBIUM ISOTOPES; NUCLEI; OCEANIA; ODD-EVEN NUCLEI; ORGANIC ACIDS; ORGANIC COMPOUNDS; ORGANS; QUANTITATIVE CHEMICAL ANALYSIS; RADIATIONS; RADIOISOTOPES; TRANSITION ELEMENTS; VERTEBRATES; YEARS LIVING RADIOISOTOPES; ZINC ISOTOPES; ZIRCONIUM ISOTOPES
Subject Categories: 560172* -- Radiation Effects -- Nuclide Kinetics & Toxicology -- Animals -- (-1987)
520302 -- Environment, Aquatic -- Radioactive Materials Monitoring & Transport -- Aquatic Ecosystems & Food Chains -- (-1987)
450200 -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives

10/5/825 (Item 525 from file: 103)
00720355 EDB-81-028608
Title: Medical survey of Marshallese two years after exposure to fallout radiation
Author(s): Conard, R.A.; Huggins, C.E.; Cannon, B.; Lowrey, A.
Source: J. Am. Med. Assoc. (United States) v 164. Coden: JAMAA
Publication Date: 1957 p 1192-1197
Document Type: Journal Article
Language: English
Journal Announcement: EDB8103
Subfile: TIC (Technical Information Center).
Country of Origin: United States
Abstract: This report concerns the medical follow-up survey of 82 Marshallese people two years after exposure to fallout radiation. On Rongelap Island, 64 people and on Ailingnae, 18 people were exposed to the radiation on March 1, 1954, after an experimental detonation of a nuclear device some 100 miles away. Initial and follow up studies on these people six months and one year after exposure have been reported. ;
Major Descriptors: *FALLOUT -- RADIATION HAZARDS; *HUMAN POPULATIONS -- MEDICAL SURVEILLANCE
Descriptors: MARSHALL ISLANDS; NUCLEAR EXPLOSIONS
Broader Terms: EXPLOSIONS; HAZARDS; HEALTH HAZARDS; ISLANDS; MICRONESIA; OCEANIA; POPULATIONS; SURVEILLANCE
Subject Categories: 560151* -- Radiation Effects on Animals -- Man
560161 -- Radionuclide Effects, Kinetics, & Toxicology -- Man
450200 -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives

10/5/826 (Item 526 from file: 103)
00720297 AIX-12-581491; EDB-81-028550
Title: Dietary radioactivity intake from bioassay data: a model applied to /sup 137/Cs intake by Bikini Island residents
Author(s): Lessard, E.T.; Miltenberger, R.P.; Greenhouse, N.A. (Brookhaven National Lab., Upton, NY (USA))
Source: Health Phys. (United Kingdom) v 39:2. Coden: HLTPA
Publication Date: Aug 1980 p 177-183
Document Type: Journal Article
Language: English
Journal Announcement: EDB8102
Subfile: AIX (non-US Atomindex input).
Country of Origin: United States
Abstract: This paper presents an equation with which the constant daily activity ingestion rate may be calculated from sequentially obtained whole body counting and urine bioassay data. The model was developed to relate whole body counting results to urinary activity excretion data for /sup 137/Cs in the Marshallese population at Bikini Island for whom accurate dietary intake and residence interval information were not available. The technique is applicable to radioactive material whose biological and physical removal mechanisms are linear first order processes described by appropriate rate constants which give the instantaneous fraction of atoms transferred from compartments in the body to urine per unit time, and the instantaneous fraction of atoms

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decaying per unit time.;
Major Descriptors: *CESIUM 137 -- BODY BURDEN; *HUMAN POPULATIONS -- DIET
Descriptors: BIKINI; CHRONIC INTAKE; EXCRETION; INGESTION; MAN; MATHEMATICAL MODELS; URINE; WHOLE-BODY COUNTING
Broader Terms: ALKALI METAL ISOTOPES; ANIMALS; BETA DECAY RADIOISOTOPES; BETA-MINUS DECAY RADIOISOTOPES; BIOLOGICAL MATERIALS; BIOLOGICAL WASTES ; BODY FLUIDS; CESIUM ISOTOPES; CLEARANCE; COUNTING TECHNIQUES; INTAKE; ISLANDS; ISOTOPES; MAMMALS; MARSHALL ISLANDS; MATERIALS; MICRONESIA; NUCLEI; OCEANIA; ODD-EVEN NUCLEI; POPULATIONS; PRIMATES; RADIOISOTOPES; VERTEBRATES; WASTES; 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: C21* -- Tissue Distribution, Metabolism, Toxicology & Removal of Radionuclides

10/5/827 (Item 527 from file: 103)
00720257 EDB-81-028510
Author(s): Conard, R.A.; Robertson, J.S.; Meyer, L.M.
Title: Medical survey of Rongelap people, March 1958, four years after exposure to fallout
Corporate Source: Brookhaven National Lab., Upton, NY (USA)
Publication Date: May 1959 p 38
Report Number(s): BNL-534
Document Type: Report
Language: English
Journal Announcement: EDB8103
Availability: NTIS.
Subfile: TIC (Technical Information Center).
Country of Origin: United States
Country of Publication: United States
Abstract: Results are summarzied from a medical survey carried out in March 1958 on inhabitants of the Rongelap Islands exposed to accidental fall-out radiation during Operation Castle n the spring of 1954. The habitation of these people on Rongelap Island affords the opportunity for a most valuable ecological radiation study on human beings. The various radionuclides present on the island can be traced from the soil through the food and into the human being, where the tissue and organ distributions, biological half-times, and excretion rates can be studied. No apparent acute or subacute effects were found at this time related to the gamma dose of 175 r received, with the possible exception of hemopoietic findings indicating a persisting lag in complete recovery of platelet levels of the peripheral blood. In the males these mean levels were 11 to 16% and in the females 9% below the corresponding mean levels of the comparison population. History and physical examinations revealed no clinical evidence of any illness or findings during the past year or at the time of the survey which could be related to whole-body exposure. Estimates of body burdens of radionuclides were determined by gamma spectroscopy and by radiochemical analyses of urine samples. These measurements showed an increase in the body burden of cesium-137, strontium-90, and zinc-65. Surveys were also made on the incidence of intestinal parasites, and on blood groups and anthropological background of the Marshallese.;
Major Descriptors: *FALLOUT -- RADIATION HAZARDS; *HUMAN POPULATIONS -- MEDICAL SURVEILLANCE; *HUMAN POPULATIONS -- RADIATION HAZARDS
Descriptors: ANTHROPOLOGY; BIOLOGICAL HALF-LIFE; BIOLOGICAL RADIATION EFFECTS; BLOOD; BLOOD GROUPS; BLOOD PLATELETS; BODY BURDEN; CASTLE PROJECT; CESIUM 137; ENVIRONMENTAL EXPOSURE PATHWAY; EXCRETION; FOOD; FOOD CHAINS; GAMMA RADIATION; GAMMA SPECTRA; HEMATOPOIETIC SYSTEM; MARSHALL ISLANDS; NUCLEAR EXPLOSIONS; PARASITES; RADIATION DOSES; RADIOCHEMICAL ANALYSIS; SOILS; STRONTIUM 90; TISSUE DISTRIBUTION; URINE ; WHOLE-BODY IRRADIATION; ZINC 65
Broader Terms: ALKALI METAL ISOTOPES; ALKALINE EARTH ISOTOPES; BETA DECAY RADIOISOTOPES; BETA-MINUS DECAY RADIOISOTOPES; BETA-PLUS DECAY RADIOISOTOPES; BIOLOGICAL EFFECTS; BIOLOGICAL MATERIALS; BIOLOGICAL WASTES; BLOOD; BLOOD CELLS; BODY; BODY FLUIDS; CESIUM ISOTOPES;

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CHEMICAL ANALYSIS; CLEARANCE; DAYS LIVING RADIOISOTOPES; DISTRIBUTION; DOSES; ELECTROMAGNETIC RADIATION; ELECTRON CAPTURE RADIOISOTOPES; EVEN-EVEN NUCLEI; EVEN-ODD NUCLEI; EXPLOSIONS; EXTERNAL IRRADIATION; HAZARDS; HEALTH HAZARDS; INTERMEDIATE MASS NUCLEI; IONIZING RADIATIONS; IRRADIATION; ISLANDS; ISOTOPES; MATERIALS; MICRONESIA; NUCLEAR EXPLOSIONS; NUCLEI; OCEANIA; ODD-EVEN NUCLEI; POPULATIONS; QUANTITATIVE CHEMICAL ANALYSIS; RADIATION EFFECTS; RADIATIONS; RADIOISOTOPES; SPECTRA; STRONTIUM ISOTOPES; SURVEILLANCE; WASTES; YEARS LIVING RADIOISOTOPES; ZINC ISOTOPES
Subject Categories: 560151* -- Radiation Effects on Animals -- Man
560161 -- Radionuclide Effects, Kinetics, & Toxicology -- Man
560171 -- Radiation Effects -- Nuclide Kinetics & Toxicology -- Man -- (-1987)
450200 -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives

10/5/828 (Item 528 from file: 103)
00719809 EDB-81-028062
Title: Radioactivity of fish II.
Author(s): Obo, F.; Wakamatsu, C.; Hiwatashi, Y.; Tamari, T.; Yoshitake, N.; Tajima, D.
Source: Igaku To Seibutsugaku (Japan) v 34. Coden: IGSBA
Publication Date: 1955 p 255-258
Document Type: Journal Article
Language: English
Journal Announcement: EDB8103
Subfile: TIC (Technical Information Center).
Country of Origin: Japan
Abstract: Various tissues of fish captured east of Formosa after the Bikini H-Bomb experiment had radioactivities (detected on May 27, 1954) in counts/min/ash from 5 g. fresh tissues: blood 2414, eyeball 49, heart muscle 111, white muscle 11, red muscle (chiai) 123, bone 46, skin 28, pancreas 131, liver 522, stomach muscle 106, stomach contents 52, spermatozoa 47, and spleen 504. High radioactivities in blood and blood synthesizing organs (liver and spleen) were emphasized. The radioactivity in the blood had a half-life of 34 to 35 days and the maximum energy of ..beta..-ray of approximate 0.4 m.e.v.;
Major Descriptors: *FISHES -- RADIOACTIVITY; *FISSION PRODUCTS -- TISSUE DISTRIBUTION
Descriptors: BETA DECAY RADIOISOTOPES; BIKINI; BLOOD; EYES; FALLOUT; HEART; LIVER; MUSCLES; NUCLEAR EXPLOSIONS; PANCREAS; RADIONUCLIDE KINETICS; SKELETON; SKIN; SPERMATOZOA; SPLEEN; STOMACH; TISSUES
Broader Terms: ANIMALS; AQUATIC ORGANISMS; BIOLOGICAL MATERIALS; BODY; BODY AREAS; BODY FLUIDS; CARDIOVASCULAR SYSTEM; DIGESTIVE SYSTEM; DISTRIBUTION; ENDOCRINE GLANDS; EXPLOSIONS; FACE; GAMETES; GASTROINTESTINAL TRACT; GERM CELLS; GLANDS; HEAD; ISLANDS; ISOTOPES; MARSHALL ISLANDS; MATERIALS; MICRONESIA; OCEANIA; ORGANS; RADIOACTIVE MATERIALS; RADIOISOTOPES; SENSE ORGANS; 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

10/5/829 (Item 529 from file: 103)
00719803 AIX-12-577497; EDB-81-028056
Title: Concentrations of sup(113m)Cd in the marine environment
Author(s): Noshkin, V.E.; Wong, K.M.; Eagle, R.J.; Anglin, D.L. (California Univ., Livermore (USA). Lawrence Livermore Lab.)
Source: Nature (London) (United Kingdom) v 287:5779. Coden: NATUA
Publication Date: 18 Sep 1980 p 221-223
Document Type: Journal Article; Numerical data
Language: English
Journal Announcement: EDB8102

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Subfile: AIX (non-US Atomindex input).
Country of Origin: United States
Abstract: A preliminary report is presented of sup(113m)Cd concentrations measured in sediment and tissue samples of marine organisms collected around different atolls in the Marshall Islands which are considered to be representative of the levels expected at these latitudes from global fallout deposition.;
Major Descriptors: *CADMIUM 113 -- RADIOECOLOGICAL CONCENTRATION; *MARSHALL ISLANDS -- FISHES; *MARSHALL ISLANDS -- SEDIMENTS
Descriptors: AMERICIUM 241; BISMUTH 210; CESIUM 137; COBALT 60; COMPARATIVE EVALUATIONS; EUROPIUM 155; EXPERIMENTAL DATA; GLOBAL FALLOUT; IRON 55; KIDNEYS; LIVER; MUSCLES; PLUTONIUM 239; PLUTONIUM 240; RADIOACTIVITY; RADIONUCLIDE MIGRATION; STRONTIUM 90; 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; BISMUTH ISOTOPES; BODY; CADMIUM ISOTOPES; CESIUM ISOTOPES; COBALT ISOTOPES; DATA; DAYS LIVING RADIOISOTOPES; DIGESTIVE SYSTEM; ECOLOGICAL CONCENTRATION; ELECTRON CAPTURE RADIOISOTOPES; ENVIRONMENTAL TRANSPORT; EUROPIUM ISOTOPES; EVEN-EVEN NUCLEI; EVEN-ODD NUCLEI; FALLOUT; GLANDS; HEAVY NUCLEI; INFORMATION; INTERMEDIATE MASS NUCLEI; INTERNAL CONVERSION RADIOISOTOPES; IRON ISOTOPES; ISLANDS; ISOMERIC TRANSITION ISOTOPES; ISOTOPES; MASS TRANSFER; MICRONESIA; MINUTES LIVING RADIOISOTOPES; NUCLEI; NUMERICAL DATA; OCEANIA; ODD-EVEN NUCLEI; ODD-ODD NUCLEI; ORGANS; PLUTONIUM ISOTOPES; RADIOISOTOPES; RARE EARTH ISOTOPES; RARE EARTH NUCLEI; STABLE ISOTOPES; STRONTIUM ISOTOPES; VERTEBRATES; YEARS LIVING RADIOISOTOPES
Subject Categories: 520302* -- Environment, Aquatic -- Radioactive Materials Monitoring & Transport -- Aquatic Ecosystems & Food Chains -- (-1987)
INIS Subject Categories: B32* -- Water

10/5/830 (Item 530 from file: 103)
00719795 EDB-81-028048
Title: Nuclear long-range fallout in surface waters
Author(s): Bell, C.G.
Source: Transp. Eng. J. ASCE (United States) v 83. Coden: TPEJA
Publication Date: 1957 p 1400-1401, 1421
Document Type: Journal Article
Language: English
Journal Announcement: EDB8103
Subfile: TIC (Technical Information Center).
Country of Origin: United States
Abstract: Based in part on samples from the National Bureau of Standards, rather extensive calibration measurements indicated a fallout beta (disintegrations) / (count rate) ratio of 2.8 ..mu.. ..mu.. curies per count per minute for the water samples. The average of the most radioactive set of surface water samples collected in eastern Massachusetts following November, 1952, Eniwetok detonations registered 6.9 counts per minute per liter or 0.02 ..mu.. ..mu.. curies per milliliter. As the peak radioactivity concentration in rain and surface waters occurred about a month after these tests, the Atomic Energy Commission - Civil Defense Administration beta concentration level for 30 day water consumption appears pertinent. This indicates that for drinking water purposes, the Ivy test would have had to discharge (31,000 ..mu.. ..mu.. curies per milliliter) / (0.02 ..mu.. ..mu.. curies per milliliter) = 1,500,000 times as much fission radioactivity to reach the above mentioned level in eastern Massachusetts.;
Major Descriptors: *DRINKING WATER -- RADIOACTIVITY; *MASSACHUSETTS -- RADIATION MONITORING; *RAIN -- RADIOACTIVITY; *SURFACE WATERS -- RADIOACTIVITY
Descriptors: BETA DETECTION; ENIWETOK; FALLOUT; FISSION PRODUCTS; NUCLEAR EXPLOSIONS
Broader Terms: ATMOSPHERIC PRECIPITATIONS; CHARGED PARTICLE DETECTION; DETECTION; EXPLOSIONS; HYDROGEN COMPOUNDS; ISLANDS; ISOTOPES; MARSHALL ISLANDS; MATERIALS; MICRONESIA; MONITORING; NORTH AMERICA; NORTH

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ATLANTIC REGION; OCEANIA; OXYGEN COMPOUNDS; RADIATION DETECTION; RADIOACTIVE MATERIALS; USA; WATER
Subject Categories: 520301* -- Environment, Aquatic -- Radioactive Materials Monitoring & Transport -- Water -- (1987)
500300 -- Environment, Atmospheric -- Radioactive Materials Monitoring & Transport -- (-1989)
450200 -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives

10/5/831 (Item 531 from file: 103)
00719793 EDB-81-028046
Author(s): Dunning, G.M.
Title: Radioactive contamination of certain areas in the Pacific Ocean from nuclear test
Publisher: Government Printing Office,Washington, DC
Publication Date: 1957 p 60
Document Type: Book
Language: English
Journal Announcement: EDB8103
Availability: $0.40
Subfile: TIC (Technical Information Center).
Country of Origin: United States
Country of Publication: United States
Abstract: The results of the medical and radiological surveys of the Marshall Islands following the thermonuclear test at Eniwetok, March 1, 1954, are presented. In addition to an external gamma radiation survey, the gross activity of land plants, marine organisms and birds, soils, and water was measured. The results of radiochemical analyses of various biological materials are given, and studies of internal contamination of animals, residual activity in the Pacific Ocean, and medical status of the Rongelapese are described.;
Major Descriptors: *AQUATIC ORGANISMS -- RADIATION MONITORING; *BIRDS -- RADIATION MONITORING; *HUMAN POPULATIONS -- MEDICAL SURVEILLANCE; *MARSHALL ISLANDS -- RADIATION MONITORING; *PACIFIC OCEAN -- RADIATION MONITORING; *PLANTS -- RADIATION MONITORING; *SOILS -- RADIATION MONITORING; *WATER -- RADIATION MONITORING
Descriptors: BIOLOGICAL MATERIALS; ENIWETOK; FALLOUT; GAMMA DETECTION; INTERNAL IRRADIATION; NUCLEAR EXPLOSIONS; RADIOACTIVITY; RADIOCHEMICAL ANALYSIS
Broader Terms: ANIMALS; CHEMICAL ANALYSIS; DETECTION; EXPLOSIONS; HYDROGEN COMPOUNDS; IRRADIATION; ISLANDS; MARSHALL ISLANDS; MATERIALS; MICRONESIA; MONITORING; OCEANIA; OXYGEN COMPOUNDS; POPULATIONS; QUANTITATIVE CHEMICAL ANALYSIS; RADIATION DETECTION; SEAS; SURFACE WATERS; SURVEILLANCE; VERTEBRATES
Subject Categories: 520301* -- Environment, Aquatic -- Radioactive Materials Monitoring & Transport -- Water -- (1987)
520302 -- Environment, Aquatic -- Radioactive Materials Monitoring & Transport -- Aquatic Ecosystems & Food Chains -- (-1987)
510301 -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- Soil -- (-1987)
510302 -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- Terrestrial Ecosystems & Food Chains -- (-1987)
560161 -- Radionuclide Effects, Kinetics, & Toxicology -- Man
560162 -- Radionuclide Effects, Kinetics, & Toxicology -- Animals, Plants, Microorganisms, & Cells
450200 -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives

10/5/832 (Item 532 from file: 103)
00719678 EDB-81-027931
Title: Radiaton hazard from contaminated aircraft
Author(s): Kulp, J.L.; Dick, J.L.
Affiliation: Lamont Geological Observatory, Palisades, NY
Source: Health Phys. (United Kingdom) v 4. Coden: HLTPA
Publication Date: Dec 1960 p 133-156
Document Type: Journal Article

5003988

Language: English
Journal Announcement: EDB8103
Subfile: TIC (Technical Information Center).
Country of Origin: United States
Abstract: A study of the relative importance of the external, inhalation, and ingestion hazards associated with surface contamination of aircraft that have penetrated atomic clouds or the stratosphere is described. Experiments were conducted at Operations Redwing and Plumbbob. They included ..gamma..- and ..beta..-..gamma..-aircraft surveys, air sampling, swipe sampling, radiochemical and biological analyses, and personnel dosimetry. The latest maximum permissible total radiation dose limits and the NCRP total organ burdens are interpreted in terms of the aircraft maintenance problem. Curves are drawn to show the maximum permissible concentration of mixed fission products in air as a function of age of the debris assuming a 40-hr work week for both controlled and uncontrolled situations. Similar curves are given for the ingestion hazard. The radiological hazard from external radiation is compared with that presented by inhalation and ingestion. It is found for mixed fission debris on aircraft ranging in age from 1 hr to 1 year that the external radiation hazard is dominant by large factors under all normal working conditions. It is concluded that ..gamma..-surveying is generally adequate to define the radiation problem. Release to uncontrolled areas appears warranted if the average measured ..gamma..-field in potential working areas around the aircraft or its parts is less than 0.5 mr/hr regardless of age. Swipe sampling cannot be used to evaluate the local air concentration and thus the inhalation hazard. For mixed fission prodcts on aircraft surfaces swipe sampling is no more reliable than the close ..beta..-survey of the surface for estimating the potential ingestion hazard.;
Major Descriptors: *AIRCRAFT -- RADIATION HAZARDS
Descriptors: AERIAL MONITORING; AGE DEPENDENCE; AIR; BETA DETECTION; BODY BURDEN; EXTERNAL IRRADIATION; FISSION PRODUCTS; GAMMA DETECTION; INGESTION; INHALATION; MAXIMUM PERMISSIBLE DOSE; OCCUPATIONAL SAFETY; PERSONNEL; PERSONNEL DOSIMETRY; PLUMBBOB PROJECT; RADIATION MONITORING; RADIOACTIVE CLOUDS; RADIOCHEMICAL ANALYSIS; REDWING PROJECT; WORKING CONDITIONS
Broader Terms: CHARGED PARTICLE DETECTION; CHEMICAL ANALYSIS; CLOUDS; DETECTION; DOSIMETRY; EXPLOSIONS; FLUIDS; GASES; HAZARDS; HEALTH HAZARDS; INTAKE; IRRADIATION; ISOTOPES; MATERIALS; MONITORING; NUCLEAR EXPLOSIONS; QUANTITATIVE CHEMICAL ANALYSIS; RADIATION DETECTION; RADIOACTIVE MATERIALS; SAFETY; SAFETY STANDARDS; STANDARDS
Subject Categories: 500300* -- Environment, Atmospheric -- Radioactive Materials Monitoring & Transport -- (-1989)
560151 -- Radiation Effects on Animals -- Man
560161 -- Radionuclide Effects, Kinetics, & Toxicology -- Man
450200 -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives

10/5/833 (Item 533 from file: 103)
00719645 EDB-81-027898
Author(s): Telegadas, K.; Nagler, K.M.
Title: Fallout patterns from Operation Hardtack, Phase II
Corporate Source: Weather Bureau, Washington, DC (USA)
Publication Date: May 1960 p 124
Report Number(s): TID-6055
Document Type: Report
Language: English
Journal Announcement: EDB8103
Availability: NTIS.
Subfile: TIC (Technical Information Center).
Country of Origin: United States
Country of Publication: United States
Abstract: Fall-out patterns from Operation Hardtack, Phas II, are presented for 31 of the 37 bursts. Those not being reported are Bursts Nos. 5, 16, 20, 23, 32, and 35. Dose-rate contours were drawn for the gamma dose rate one hour after burst time, and pertinent meteorological data

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are given. Errors due to passing nuclear clouds are discussed.;
Major Descriptors: *FALLOUT -- SPATIAL DOSE DISTRIBUTIONS; *HARDTACK PROJECT -- SPATIAL DOSE DISTRIBUTIONS
Descriptors: DOSE RATES; GAMMA RADIATION; ISODOSE CURVES; METEOROLOGY; RADIATION MONITORING
Broader Terms: ELECTROMAGNETIC RADIATION; EXPLOSIONS; IONIZING RADIATIONS; MONITORING; NUCLEAR EXPLOSIONS; RADIATION DOSE DISTRIBUTIONS; RADIATIONS
Subject Categories: 500300* -- Environment, Atmospheric -- Radioactive Materials Monitoring & Transport -- (-1989)
450200 -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives

10/5/834 (Item 534 from file: 103)
00715550 EDB-81-023802
Title: Clinical course of the radiation sickness caused by Bikini ashes
Author(s): Koyama, Y.
Source: Iryo (Japan) v 9. Coden: IRYOA
Publication Date: 1955 p 5-45
Document Type: Journal Article
Language: Japanese
Journal Announcement: EDB8102
Subfile: TIC (Technical Information Center).
Country of Origin: Japan
Abstract: Clinical observations are summarized covering a 5 month period on 16 patients exposed to radioactive fallout from the thermonuclear explosions of Bikini on March 1, 1954. The patients were members of the crew of the 5th Lucky Dragon, a fishing boat, said to be located about 100 miles east of Bikini at the time of the explosion. Photomicrograms and photographs illustrate the text.;
Major Descriptors: *RADIATION SYNDROME -- PATHOLOGY
Descriptors: BIKINI; FALLOUT; NUCLEAR EXPLOSIONS; PATIENTS; SYMPTOMS
Broader Terms: EXPLOSIONS; ISLANDS; MARSHALL ISLANDS; MICRONESIA; OCEANIA
Subject Categories: 560151* -- Radiation Effects on Animals -- Man
550600 -- Medicine
450200 -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives

10/5/835 (Item 535 from file: 103)
00715258 ERA-06-008182; INS-81-002650; EDB-81-023510
Author(s): Noshkin, V.E.; Wong, K.M.; Eagle, R.J.; Anglin, D.L.
Title: Detection of cadmium radioactivity in the marine environment
Corporate Source: California Univ., Livermore (USA). Lawrence Livermore National Lab.
Conference Title: International symposium on the impacts of radionuclide releases into the marine environment
Conference Location: Vienna, Austria Conference Date: 6 Oct 1980
Publication Date: Dec 1980 p 12
Report Number(s): UCRL-85273; CONF-801063-5
Contract Number (DOE): W-7405-ENG-48
Document Type: Report; Conference literature; Numerical data
Language: English
Journal Announcement: EDB8102
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: Sediment and tissues from different marine organisms recently collected atolls of the Marshall Islands have been found to contain measurable amounts of /sup 113m/Cd previously deposited to the atolls during the testing of nuclear devices at the Pacific Proving Grounds. /sup 113m/Cd has been also detected in some internal organs of mullet collected from the east coast of the United States in an area contaminated only with global fallout debris. This is one of the few summaries to show that this long-lived radionuclide (T/sub 1/2/ = 14.6

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yr) exists and persists in the marine environment. It is the dominant 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 analyzed. Dose to man from /sup 113m/Cd ingestion is being assessed at the Marshall Islands and should be done at any other global site where contamination by this radionuclide is suspected in the aquatic environment.;
Major Descriptors: *CADMIUM 113 -- RADIOECOLOGICAL CONCENTRATION; *MARSHALL ISLANDS -- AQUATIC ORGANISMS; *MARSHALL ISLANDS -- SEDIMENTS
Descriptors: BIOLOGICAL ACCUMULATION; EXPERIMENTAL DATA; FALLOUT; FISSION PRODUCTS; FOOD CHAINS; INGESTION; MAN; RADIATION DOSES; TISSUES
Broader Terms: ANIMALS; BETA DECAY RADIOISOTOPES; BETA-MINUS DECAY RADIOISOTOPES; BODY; CADMIUM ISOTOPES; DATA; DOSES; ECOLOGICAL CONCENTRATION; EVEN-ODD NUCLEI; INFORMATION; INTAKE; INTERMEDIATE MASS NUCLEI; ISLANDS; ISOMERIC TRANSITION ISOTOPES; ISOTOPES; MAMMALS; MATERIALS; MICRONESIA; NUCLEI; NUMERICAL DATA; OCEANIA; PRIMATES; RADIOACTIVE MATERIALS; RADIOISOTOPES; STABLE ISOTOPES; VERTEBRATES; YEARS LIVING RADIOISOTOPES
Subject Categories: 520302* -- Environment, Aquatic -- Radioactive Materials Monitoring & Transport -- Aquatic Ecosystems & Food Chains -- (-1987)
INIS Subject Categories: C22* -- Radionuclide Ecology

10/5/836 (Item 536 from file: 103)
00709977 EDB-81-018228
Author(s): Cronkite, E.P.; Bond, V.P.; Dunham, C.L.
Title: Some effects of ionizing radiation on human beings. Study of accidental deposit of radioactive material on inhabited Pacific islands following detonation of thermonuclear device
Publisher: Government Printing Office,Washington, DC
Publication Date: (nd) p 106
Report Number(s): TID-5338
Document Type: Book
Language: English
Journal Announcement: EDB8102
Subfile: TIC (Technical Information Center).
Country of Origin: United States
Country of Publication: United States
Abstract: This report concerns the Marshallese and Americans accidentally exposed to radiation from fallout following the explosion of March 1, 1954, and includes a discussion of radiation injury in the human being. Radiation surveys of the areas revealed injurious radiation levels on inhabited atolls and evacuation was ordered immediately. The degree of radiation injury was assessed as quickly as possible, and appropriate care and study of the injured was instituted without delay. The initial data have been supplemented by field surveys 6 and 24 months after the original investigation. The results of this work are summarized.;
Major Descriptors: *HUMAN POPULATIONS -- RADIATION INJURIES; *NUCLEAR EXPLOSIONS -- RADIATION HAZARDS
Descriptors: ACCIDENTS; BIOLOGICAL RADIATION EFFECTS; IONIZING RADIATIONS; MARSHALL ISLANDS; POST-IRRADIATION THERAPY; RADIATION DOSES
Broader Terms: BIOLOGICAL EFFECTS; BIOLOGICAL RADIATION EFFECTS; DOSES; EXPLOSIONS; HAZARDS; HEALTH HAZARDS; INJURIES; ISLANDS; MICRONESIA; OCEANIA; POPULATIONS; RADIATION EFFECTS; RADIATIONS; THERAPY
Subject Categories: 560151* -- Radiation Effects on Animals -- Man
560161 -- Radionuclide Effects, Kinetics, & Toxicology -- Man
450200 -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives

10/5/837 (Item 537 from file: 103)
00709454 EDB-81-017705
Title: Radiochemical studies on Bikini ashes
Author(s): Shiokawa, T.
Source: Bunseki Kagaku (Japan) v 3. Coden: BNSKA
Publication Date: 1954 p 349-359
Document Type: Journal Article

5003989

Language: English
Journal Announcement: EDB8102
Subfile: TIC (Technical Information Center).
Country of Origin: Japan
Abstract: Decay characteristics of the ashes which were brought back by the crew of the Fukuryu Maru No. 5 were: untreated ash I = ct/sup -1/ /sup 81/, water soluble part t/sup -2/ /sup 71/, insoluble part t/sup -1/ /sup 68/. Radioactive species separated by chemical method with carrier or collector were: nuclide, activity of nuclide (counts/min)/activity of original sample (counts/min), and the date of separation, /sup 89/Sr 6000/80 X 10/sup 4/, April 24; /sup 95/Zr, 280/80 x 10/sup 4/, -; /sup 111/Ag, 200/200 x 10/sup 4/, April 14; /sup 103/Ru, 2.300/25 x 10/sup 4/, etc.;
Major Descriptors: *ASHES -- RADIOCHEMICAL ANALYSIS
Descriptors: BIKINI; DECAY; FALLOUT; NUCLEAR EXPLOSIONS; RADIOACTIVITY; RUTHENIUM 103; SILVER 111; STRONTIUM 89; ZIRCONIUM 95
Broader Terms: ALKALINE EARTH ISOTOPES; BETA DECAY RADIOISOTOPES; BETA-MINUS DECAY RADIOISOTOPES; CHEMICAL ANALYSIS; DAYS LIVING RADIOISOTOPES; EVEN-ODD NUCLEI; EXPLOSIONS; INTERMEDIATE MASS NUCLEI; ISLANDS; ISOMERIC TRANSITION ISOTOPES; ISOTOPES; MARSHALL ISLANDS; MICRONESIA; MINUTES LIVING RADIOISOTOPES; NUCLEI; OCEANIA; ODD-EVEN NUCLEI; QUANTITATIVE CHEMICAL ANALYSIS; RADIOISOTOPES; RESIDUES; RUTHENIUM ISOTOPES; SILVER ISOTOPES; STRONTIUM ISOTOPES; ZIRCONIUM ISOTOPES
Subject Categories: 500300* -- Environment, Atmospheric -- Radioactive Materials Monitoring & Transport -- (-1989)
450200 -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives

10/5/838 (Item 538 from file: 103)
00709418 EDB-81-017669
Author(s): Glasstone, S. (ed.)
Title: Effects of nuclear weapons
Publisher: Government Printing Office,Washington, DC
Publication Date: 1957 p 587
Document Type: Book
Language: English
Journal Announcement: EDB8102
Subfile: TIC (Technical Information Center).
Country of Origin: United States
Country of Publication: United States
Abstract: The most recent data concerning the effects associated with explosions of nuclear weapons are presented. The data have been obtained from observations made of effects of nuclear bombing in Japan and tests carried out at the Eniwetok Proving Grounds and Nevada Test Site, as well as from experiments with conventional explosives, and mathematical calculations. The volume is intended for use in planning against possible nuclear attack.;
Major Descriptors: *NUCLEAR EXPLOSIONS -- DATA
Descriptors: ENIWETOK; JAPAN; NEVADA TEST SITE; NUCLEAR WEAPONS; NUMERICAL ANALYSIS
Broader Terms: ASIA; EXPLOSIONS; INFORMATION; ISLANDS; MARSHALL ISLANDS; MATHEMATICS; MICRONESIA; OCEANIA; WEAPONS
Subject Categories: 450200* -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives
450202 -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

10/5/839 (Item 539 from file: 103)
00704843 EDB-81-013093
Title: Investigations on the radioactive contamination of crop plants as a result of hydrogen-bomb detonation. Part II. Root and foliage uptake of Bikini ash
Author(s): Mitsui, S.; Aso, S.; Tensho, K.; Kumazawa, K.
Source: Soil Plant Food (Tokyo) (Japan) v 1. Coden: SPFOA
Publication Date: 1955 p 17-18
Document Type: Journal Article

5003990

Language: English
Journal Announcement: EDB8101
Subfile: TIC (Technical Information Center).
Country of Origin: Japan
Abstract: Bikini ash (I) was prepared by igniting the heavily contaminated substances on board No. 5 Fukuryu Maru at 650/sup 0/. The I was extracted with H/sub 2/O, concentrated HCl, and 2% citric acid. The acid extracts were neutralized to pH 5.0 to 5.5 with NaOH. Squash-plant leaves were painted with these extracts, after 6 days the plant parts were assayed for radioactivity. Uptake and translocation of radioactive fission products to all plant parts was found, but with the major portion in above ground parts. Wheat seeds grown in natural and synthetic soil mixtures showed a much depressed uptake of fission materials. Most of the radioactivity was found in the roots. About 10% was translocated to aerial portions of plants.;
Major Descriptors: *FISSION PRODUCTS -- ROOT ABSORPTION; *FISSION PRODUCTS -- UPTAKE; *PLANTS -- RADIONUCLIDE KINETICS; *SEEDS -- RADIONUCLIDE KINETICS
Descriptors: ASHES; BIKINI; CITRIC ACID; FALLOUT; HYDROCHLORIC ACID; LEAVES ; NUCLEAR EXPLOSIONS; RADIOACTIVITY; SODIUM HYDROXIDES; TRANSLOCATION; WHEAT
Broader Terms: ABSORPTION; ALKALI METAL COMPOUNDS; CARBOXYLIC ACIDS; CEREALS; EXPLOSIONS; GRAMINEAE; GRASS; HYDROGEN COMPOUNDS; HYDROXIDES; HYDROXY ACIDS; INORGANIC ACIDS; ISLANDS; ISOTOPES; MARSHALL ISLANDS; MATERIALS; MICRONESIA; OCEANIA; ORGANIC ACIDS; ORGANIC COMPOUNDS; OXYGEN COMPOUNDS; PLANTS; RADIOACTIVE MATERIALS; RESIDUES; SODIUM COMPOUNDS; UPTAKE
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

10/5/840 (Item 540 from file: 103)
00704834 EDB-81-013084
Title: Separation of the radioactive elements in the muscle of skipjack by ion-exchange resin, and confirmation of the presence of radioactive zinc
Author(s): Takase, A.
Source: Koshu Eiseiin Kenkyu Hokoku (Japan) v 4:3. Coden: KEKHA
Publication Date: 1955 p 22-26
Document Type: Journal Article
Language: English
Journal Announcement: EDB8101
Subfile: TIC (Technical Information Center).
Country of Origin: Japan
Abstract: An ashed sample of shipjack muscle caught in June, 1954, near Bikini Atoll was analyzed for elements separated by an anion-exchange method (Dowex 50) with the use of 0.2N HCl, 0.5% oxalic acid, and 2% NH/sub 4/ citrate as eluents at each pH value of 3.53, 2.18, 4.60, 5.02, 5.64, and 6.42.;
Major Descriptors: *MUSCLES -- RADIOCHEMICAL ANALYSIS; *ZINC ISOTOPES -- ION EXCHANGE
Descriptors: AMMONIUM COMPOUNDS; BIKINI; CITRATES; FALLOUT; FISHES; HYDROCHLORIC ACID; NUCLEAR EXPLOSIONS; OXALIC ACID; PH VALUE; RESINS
Broader Terms: ANIMALS; AQUATIC ORGANISMS; CARBOXYLIC ACID SALTS; CARBOXYLIC ACIDS; CHEMICAL ANALYSIS; DICARBOXYLIC ACIDS; EXPLOSIONS; HYDROGEN COMPOUNDS; INORGANIC ACIDS; ISLANDS; ISOTOPES; MARSHALL ISLANDS; MICRONESIA; OCEANIA; ORGANIC ACIDS; ORGANIC COMPOUNDS; ORGANIC POLYMERS; PETROCHEMICALS; PETROLEUM PRODUCTS; POLYMERS; QUANTITATIVE CHEMICAL ANALYSIS; VERTEBRATES
Subject Categories: 560172* -- Radiation Effects -- Nuclide Kinetics & Toxicology -- Animals -- (-1987)
520302 -- Environment, Aquatic -- Radioactive Materials Monitoring & Transport -- Aquatic Ecosystems & Food Chains -- (-1987)

5003991

10/5/841 (Item 541 from file: 103)
00703833 EDB-81-012083
Title: Artificial radioactivity in the sea near Japan
Author(s): Miyake, Y.; Sugiura, Y.; Kameda, K.
Source: Pap. Meteorol. Geophys. (Tokyo) (Japan) v 6. Coden: PMGTA
Publication Date: 1955 p 90-92
Document Type: Journal Article
Language: English
Journal Announcement: EDB8101
Subfile: TIC (Technical Information Center).
Country of Origin: Japan
Abstract: Sea water collected around the Bikini Atoll from July to September 1954, was analyzed for total radioactivity by adding 2 g solid NH/sub 4/Cl, 1 ml of an aqueous solution of Ferric alum (86.3 g/l), and 1 ml of BaCl/sub 2/ solution (17.8 g/l) to 1 l of H/sub 2/O heated to 60 to 70 while being stirred. NH/sub 4/OH was added until the solution was faintly pink to phenolphthalein. After 2-min boiling the precipitate settled on standing for several hours at room temperature before being filtered on a filter disk lain above a glass filter. Counting rates of 2.1 +- 1.6 to 140.8 +- 6.8 counts/min/l were obtained.;
Major Descriptors: *SEAWATER -- RADIOACTIVITY
Descriptors: AMMONIUM CHLORIDES; AMMONIUM HYDROXIDES; BARIUM CHLORIDES; BIKINI; FILTRATION; JAPAN; SAMPLING; SEAS; SEPARATION PROCESSES
Broader Terms: ALKALINE EARTH METAL COMPOUNDS; AMMONIUM COMPOUNDS; AMMONIUM HALIDES; ASIA; BARIUM COMPOUNDS; CHLORIDES; CHLORINE COMPOUNDS; HALIDES ; HALOGEN COMPOUNDS; HYDROGEN COMPOUNDS; HYDROXIDES; ISLANDS; MARSHALL ISLANDS; MICRONESIA; OCEANIA; OXYGEN COMPOUNDS; SEPARATION PROCESSES; SURFACE WATERS; WATER
Subject Categories: 520301* -- Environment, Aquatic -- Radioactive Materials Monitoring & Transport -- Water -- (1987)
450200 -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives

10/5/842 (Item 542 from file: 103)
00703806 EDB-81-012056
Title: Radioactive contamination of plants in Japan covered with rainout from H-bomb detonations in March-May 1954 at Bikini Atoll, Marshall Island. Part II. Radioactive elements of contaminated plants
Author(s): Yatazawa, M.
Source: Soil Plant Food (Tokyo) (Japan) v 1. Coden: SPFOA
Publication Date: 1955 p 23-24
Document Type: Journal Article
Language: English
Journal Announcement: EDB8101
Subfile: TIC (Technical Information Center).
Country of Origin: Japan
Abstract: Following a fallout estimated at 0.2 microcurie/l, Trifolium repens, Astragalus sinicus, and Rumex japonicus were harvested and analyzed for radioactivity. Most of the radioactivity (2300 to 4700 counts/min/50 g plant ash) was associated with oxalate precipitate. A small amount of activity in the Zn group is attributed to /sup 65/Zn produced by reaction /sup 64/Zn (n,..gamma..) from Zn employed in the mechanical parts of the bomb. Sr-Ba radioactivity was 0.1 that of the rare earth group. Distribution of the radioactive elements was nearly the same as that found on the No. 5 Fukuryu-Maru.;
Major Descriptors: *BARIUM -- UPTAKE; *NUCLEAR EXPLOSIONS -- FALLOUT; *PLANTS -- RADIOACTIVITY; *RARE EARTHS -- UPTAKE; *STRONTIUM -- UPTAKE; *ZINC 65 -- UPTAKE
Descriptors: BIKINI; CONTAMINATION; JAPAN; ZINC 64
Broader Terms: ALKALINE EARTH METALS; ASIA; BETA DECAY RADIOISOTOPES; BETA-PLUS DECAY RADIOISOTOPES; DAYS LIVING RADIOISOTOPES; ELECTRON CAPTURE RADIOISOTOPES; ELEMENTS; EVEN-EVEN NUCLEI; EVEN-ODD NUCLEI; EXPLOSIONS; INTERMEDIATE MASS NUCLEI; ISLANDS; ISOTOPES; MARSHALL ISLANDS; METALS; MICRONESIA; NUCLEI; OCEANIA; RADIOISOTOPES; STABLE

5003692

ISOTOPES; ZINC ISOTOPES
Subject Categories: 510302* -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- Terrestrial Ecosystems & Food Chains -- (-1987)
450200 -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives

10/5/843 (Item 543 from file: 103)
00703773 EDB-81-012023
Title: Damping of radioactivity of the Bikini ashes
Author(s): Horie, K.
Source: Kagaku (Tokyo) (Japan) v 25. Coden: KAGTA
Publication Date: 1955 p 636-637
Document Type: Journal Article
Language: English
Journal Announcement: EDB8101
Subfile: TIC (Technical Information Center).
Country of Origin: Japan
Abstract: The radioactivity (..beta..- and ..gamma..-radiation) of the H-bomb ashes was measured over a period of 600 days by means of an electroscope and a Geiger-Mueller counter. Absorption by Al foils shows that the half-life is shorter for radiation of lower energy.;
Major Descriptors: *ASHES -- RADIOACTIVITY; *RADIOACTIVITY -- DAMPING
Descriptors: ABSORPTION; ALUMINIUM; BETA DETECTION; BIKINI; ELECTROSCOPES; FOILS; GAMMA DETECTION; GEIGER-MUELLER COUNTERS; HALF-LIFE; NUCLEAR EXPLOSIONS
Broader Terms: CHARGED PARTICLE DETECTION; DETECTION; ELECTRIC MEASURING INSTRUMENTS; ELECTRICAL EQUIPMENT; ELEMENTS; EQUIPMENT; EXPLOSIONS; ISLANDS; MARSHALL ISLANDS; MEASURING INSTRUMENTS; METALS; MICRONESIA; OCEANIA; RADIATION DETECTION; RADIATION DETECTORS; RESIDUES
Subject Categories: 510301* -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- Soil -- (-1987)
450200 -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives

10/5/844 (Item 544 from file: 103)
00703744 EDB-81-011994
Title: Ionization of the atmosphere in the New York area before and after the Bikini atom-bomb test
Author(s): Hess, V.F.; Luger, P.
Source: Phys. Rev. (United States) v 70. Coden: PHRVA
Publication Date: 1946 p 564-565
Document Type: Journal Article
Language: English
Journal Announcement: EDB8101
Subfile: TIC (Technical Information Center).
Country of Origin: United States
Abstract: In the interval June 29 through July 10, 1946, no atmospheric ionization due to the atomic bomb was observed.;
Major Descriptors: *EARTH ATMOSPHERE -- IONIZATION
Descriptors: BIKINI; NEW YORK CITY; NUCLEAR EXPLOSIONS
Broader Terms: EXPLOSIONS; ISLANDS; MARSHALL ISLANDS; MICRONESIA; MID-ATLANTIC REGION; NEW YORK; NORTH AMERICA; OCEANIA; USA
Subject Categories: 500300* -- Environment, Atmospheric -- Radioactive Materials Monitoring & Transport -- (-1989)
450200 -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives

10/5/845 (Item 545 from file: 103)
00703742 EDB-81-011992
Title: On the radioactivity of the atmosphere
Author(s): Garrigue, H.
(In French)
Source: C. R. Hebd. Seances Acad. Sci. (France) v 228. Coden: COREA
Publication Date: 1949 p 1583-1584
Document Type: Journal Article

5003993

Language: English
Journal Announcement: EDB8101
Subfile: TIC (Technical Information Center).
Country of Origin: France
Abstract: An unknown radioactive substance, of a 25- hr half life period, was recorded in July-August, 1946, by an ionization chamber at 6000 m altitude (from an airplane), the content measured being about 2 x 10/sup -18/ curie. In July to August, 1948, at altitudes 7300 to 8700 m, the content found was much lower (0.005 to 0.02 curie). It is surmised that the phenomenon might be traced to the atomic bomb explosion at Bikini on July 1, 1946. Other hypotheses are meteoric origin or a nuclear reaction due to cosmic rays.;
Major Descriptors: *EARTH ATMOSPHERE -- RADIOACTIVITY
Descriptors: AERIAL MONITORING; AIRCRAFT; BIKINI; COSMIC RADIATION; HALF-LIFE; IONIZATION CHAMBERS; METEOROIDS; NUCLEAR EXPLOSIONS; NUCLEAR REACTIONS
Broader Terms: EXPLOSIONS; IONIZING RADIATIONS; ISLANDS; MARSHALL ISLANDS; MEASURING INSTRUMENTS; MICRONESIA; MONITORING; OCEANIA; RADIATION DETECTORS; RADIATIONS
Subject Categories: 500300* -- Environment, Atmospheric -- Radioactive Materials Monitoring & Transport -- (-1989)
450200 -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives

10/5/846 (Item 546 from file: 103)
00703731 EDB-81-011981
Title: Evolution of atmospheric radioactivity in Paris region
Author(s): Abribat, M.; Pouradier, J.; Venet, A.M.
(In French)
Source: C. R. Hebd. Seances Acad. Sci. (France) v 240. Coden: COREA
Publication Date: 1953 p 2310-2312
Document Type: Journal Article
Language: French
Journal Announcement: EDB8101
Subfile: TIC (Technical Information Center).
Country of Origin: France
Abstract: Daily measurements of radioactivity have shown the passage of many atomic clouds, and particularly the series of explosions in the US and Russia, while those in the Pacific and Australia have been identified in Milan. For the Australian explosion in October 1953, there was no radioactive increase in the air in the Paris region, while for the Pacific explosion there were measurable fluctuations but very feeble. For the Russian explosions in August 1954, the fluctuations were much greater than for the Pacific ones.;
Major Descriptors: *EARTH ATMOSPHERE -- RADIOACTIVITY; *FRANCE -- RADIATION MONITORING
Descriptors: AUSTRALIA; FALLOUT; MARSHALL ISLANDS; NEVADA TEST SITE; NUCLEAR EXPLOSIONS; RADIOACTIVE CLOUDS; USSR
Broader Terms: ASIA; AUSTRALASIA; CLOUDS; EASTERN EUROPE; EUROPE; EXPLOSIONS; ISLANDS; MICRONESIA; MONITORING; OCEANIA; WESTERN EUROPE
Subject Categories: 500300* -- Environment, Atmospheric -- Radioactive Materials Monitoring & Transport -- (-1989)
450200 -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives

10/5/847 (Item 547 from file: 103)
00703727 EDB-81-011977
Title: Radioactive ashes on the fifth Fukuryu-Maru, the fishing boat that suffered from the hydrogen bomb test on March 1, 1954
Author(s): Kimura, K.
Source: Kagaku (Tokyo) (Japan) v 24. Coden: KAGTA
Publication Date: 1954 p 300-302
Document Type: Journal Article
Language: English
Journal Announcement: EDB8101
Subfile: TIC (Technical Information Center).

5003994

Country of Origin: Japan
Abstract: By ordinary procedures with carriers and by separation with cation-exchange resins, the ashes were analyzed and the following radioactive nuclides were detected, /sup 95/Zr (65 days), /sup 95/Nb (35 days), /sup 132/I (2.4 h), /sup 132/Te (77.7 h), /sup 95m/Nb (90 h), /sup 131/I (8.141 days), /sup 140/Ba (12.8 days), /sup 140/La (40.0 h), /sup 89/Sr (53 days), /sup 127/Sb (93 h), /sup 103/Ru (39.8 days), and /sup 106/Ru (1.0 yr), etc.;
Major Descriptors: *FALLOUT -- RADIOCHEMICAL ANALYSIS
Descriptors: ANTIMONY 127; ASHES; BARIUM 140; BIKINI; IODINE 131; ION EXCHANGE; ISOMERIC NUCLEI; LANTHANUM 140; NIOBIUM 95; NUCLEAR EXPLOSIONS; RADIOACTIVITY; RESINS; RUTHENIUM 103; RUTHENIUM 106; STRONTIUM 89; TELLURIUM 132; ZIRCONIUM 95
Broader Terms: ALKALINE EARTH ISOTOPES; ANTIMONY ISOTOPES; BARIUM ISOTOPES; BETA DECAY RADIOISOTOPES; BETA-MINUS DECAY RADIOISOTOPES; CHEMICAL ANALYSIS; DAYS LIVING RADIOISOTOPES; EVEN-EVEN NUCLEI; EVEN-ODD NUCLEI; EXPLOSIONS; INTERMEDIATE MASS NUCLEI; INTERNAL CONVERSION RADIOISOTOPES ; IODINE ISOTOPES; ISLANDS; ISOMERIC TRANSITION ISOTOPES; ISOTOPES; LANTHANUM ISOTOPES; MARSHALL ISLANDS; MICRONESIA; NIOBIUM ISOTOPES; NUCLEI; OCEANIA; ODD-EVEN NUCLEI; ODD-ODD NUCLEI; ORGANIC COMPOUNDS; ORGANIC POLYMERS; PETROCHEMICALS; PETROLEUM PRODUCTS; POLYMERS; QUANTITATIVE CHEMICAL ANALYSIS; RADIOISOTOPES; RARE EARTH ISOTOPES; RARE EARTH NUCLEI; RESIDUES; RUTHENIUM ISOTOPES; STRONTIUM ISOTOPES; TELLURIUM ISOTOPES; YEARS LIVING RADIOISOTOPES; ZIRCONIUM ISOTOPES
Subject Categories: 500300* -- Environment, Atmospheric -- Radioactive Materials Monitoring & Transport -- (-1989)
450200 -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives

10/5/848 (Item 548 from file: 103)
00703725 EDB-81-011975
Title: Radioactive dust from No. 5 Fukuryu Maru
Author(s): Yamatera, H.
Source: Bunseki Kagaku (Japan) v 3. Coden: BNSKA
Publication Date: 1954 p 356-361
Document Type: Journal Article
Language: English
Journal Announcement: EDB8101
Subfile: TIC (Technical Information Center).
Country of Origin: Japan
Abstract: Analysis of radioactive dust collected on board No. 5 Fukuryu Maru were done by chemical separation and measurement of ..gamma..-ray energy and half-life of each species. Results are summarized as follows, radioactive nuclide and approximate percentage of radioactivity given: /sup 103/Ru, 4.3 to 57; /sup 106/Ru, 1.4; /sup 129/Te, 1.3; /sup 131/I, 4.5; /sup 132/I, 1.0; /sup 132/Te, 1.0; etc.;
Major Descriptors: *FALLOUT -- RADIOCHEMICAL ANALYSIS
Descriptors: BIKINI; DUSTS; GAMMA DETECTION; HALF-LIFE; IODINE 131; IODINE 132; NUCLEAR EXPLOSIONS; RADIOACTIVITY; RUTHENIUM 103; RUTHENIUM 106; SHIPS; TELLURIUM 129; TELLURIUM 132
Broader Terms: BETA DECAY RADIOISOTOPES; BETA-MINUS DECAY RADIOISOTOPES; CHEMICAL ANALYSIS; DAYS LIVING RADIOISOTOPES; DETECTION; EVEN-EVEN NUCLEI; EVEN-ODD NUCLEI; EXPLOSIONS; HOURS LIVING RADIOISOTOPES; INTERMEDIATE MASS NUCLEI; INTERNAL CONVERSION RADIOISOTOPES; IODINE ISOTOPES; ISLANDS; ISOMERIC TRANSITION ISOTOPES; ISOTOPES; MARSHALL ISLANDS; MICRONESIA; NUCLEI; OCEANIA; ODD-EVEN NUCLEI; ODD-ODD NUCLEI; QUANTITATIVE CHEMICAL ANALYSIS; RADIATION DETECTION; RADIOISOTOPES; RUTHENIUM ISOTOPES; TELLURIUM ISOTOPES; YEARS LIVING RADIOISOTOPES
Subject Categories: 500300* -- Environment, Atmospheric -- Radioactive Materials Monitoring & Transport -- (-1989)
450200 -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives

50039 95

10/5/849 (Item 549 from file: 103)
00703723 EDB-81-011973
Title: Radiochemical analysis of Bikini ashes fallen on board the No. 5

Fukuryu Maru on March 1, 1954
Author(s): Kimura, K.
Source: Bunseki Kagaku (Japan) v 3. Coden: BNSKA
Publication Date: 1954 p 335-348
Document Type: Journal Article
Language: English
Journal Announcement: EDB8101
Subfile: TIC (Technical Information Center).
Country of Origin: Japan
Abstract: Comprehensive analysis was done in order to find the proper method of medical treatment for the victim fishermen on board. Analysis was started on March 18, and ash was found to consist mostly of Ca(OH)/sub 2/, activity of which was 0.37 mc/g on April 23. Cations of the 3rd group (especially rare-earth metals) and 5th group were found to have strong activity by chemical separation. Fractions of each group, anions, Zr and Nb fraction, and U fraction were separated by an ion-exchange method.;
Major Descriptors: *FALLOUT -- QUALITATIVE CHEMICAL ANALYSIS
Descriptors: ANIONS; ASHES; BIKINI; CALCIUM HYDROXIDES; CATIONS; ION EXCHANGE; NIOBIUM; NUCLEAR EXPLOSIONS; RARE EARTHS; URANIUM; ZIRCONIUM
Broader Terms: ACTINIDES; ALKALINE EARTH METAL COMPOUNDS; CALCIUM COMPOUNDS ; CHARGED PARTICLES; CHEMICAL ANALYSIS; ELEMENTS; EXPLOSIONS; HYDROGEN COMPOUNDS; HYDROXIDES; IONS; ISLANDS; MARSHALL ISLANDS; METALS; MICRONESIA; OCEANIA; OXYGEN COMPOUNDS; REFRACTORY METALS; RESIDUES; TRANSITION ELEMENTS
Subject Categories: 500300* -- Environment, Atmospheric -- Radioactive Materials Monitoring & Transport -- (-1989)
450200 -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives

10/5/850 (Item 550 from file: 103)
00703713 EDB-81-011963
Title: Radiochemical analysis of radioactive dusts
Author(s): Kimura, K.
Title: International conference on the peaceful uses of atomic energy, Geneva, Vol. 7
Publisher: United Nations,New York, NY
Publication Date: 1955 p 196-209
Document Type: Analytic of a Book; Conference literature
Language: English
Journal Announcement: EDB8101
Subfile: TIC (Technical Information Center).
Country of Origin: United States
Country of Publication: United States
Abstract: The specific activity of the ashes which fell on the Fukuryu Maru at 7:00 a.m., March 1, 1954, is estimated as 1.4 ..mu..c/g. A detailed and extensive account of the radiochemical analysis of the ash, including procedures and results, is given.;
Major Descriptors: *FALLOUT -- RADIOCHEMICAL ANALYSIS
Descriptors: ASHES; BIKINI; DUSTS; NUCLEAR EXPLOSIONS; RADIOACTIVITY
Broader Terms: CHEMICAL ANALYSIS; EXPLOSIONS; ISLANDS; MARSHALL ISLANDS; MICRONESIA; OCEANIA; QUANTITATIVE CHEMICAL ANALYSIS; RESIDUES
Subject Categories: 500300* -- Environment, Atmospheric -- Radioactive Materials Monitoring & Transport -- (-1989)
450200 -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives

10/5/851 (Item 551 from file: 103)
00703706 EDB-81-011956
Title: Radioactive strontium fallout
Author(s): Libby, W.F.
Source: Proc. Natl. Acad. Sci. U.S.A. (United States) v 42. Coden: PNASA
Publication Date: 1956 p 365-390
Document Type: Journal Article
Language: English
Journal Announcement: EDB8101

5003996

Subfile: TIC (Technical Information Center).
Country of Origin: United States
Abstract: Hazards from /sup 90/Sr deposited in fallout following nuclear explosions are reviewed. Strontium/sup 90/ is of particular interest among the fission products because of chemical similarity to Ca, an average life of about 40 years, and a low rate of skeletal elimination. The maximum permissible average concentration of /sup 90/Sr in the adult skeleton is calculated to be 1..mu..c/1000 gm of Ca.;
Major Descriptors: *FALLOUT -- GLOBAL ASPECTS; *NUCLEAR EXPLOSIONS -- FALLOUT; *STRONTIUM 90 -- ENVIRONMENTAL EXPOSURE PATHWAY; *THERMONUCLEAR EXPLOSIONS -- FALLOUT
Descriptors: ANIMALS; CALCIUM; CASTLE PROJECT; FISSION PRODUCTS; FOOD CHAINS; FORECASTING; GLOBAL FALLOUT; MAN; MILK; PLANTS; RADIATION DOSES ; RADIATION HAZARDS; RAIN; REGIONAL ANALYSIS; SKELETON; SOILS; STRONTIUM
Broader Terms: ALKALINE EARTH ISOTOPES; ALKALINE EARTH METALS; ANIMALS; ATMOSPHERIC PRECIPITATIONS; BETA DECAY RADIOISOTOPES; BETA-MINUS DECAY RADIOISOTOPES; BIOLOGICAL MATERIALS; BODY; BODY FLUIDS; DOSES; ELEMENTS ; EVEN-EVEN NUCLEI; EXPLOSIONS; FALLOUT; FOOD; HAZARDS; HEALTH HAZARDS; INTERMEDIATE MASS NUCLEI; ISOTOPES; MAMMALS; MATERIALS; METALS; NUCLEAR EXPLOSIONS; NUCLEI; ORGANS; PRIMATES; RADIOACTIVE MATERIALS; RADIOISOTOPES; STRONTIUM ISOTOPES; VERTEBRATES; YEARS LIVING RADIOISOTOPES
Subject Categories: 500300* -- Environment, Atmospheric -- Radioactive Materials Monitoring & Transport -- (-1989)
510302 -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- Terrestrial Ecosystems & Food Chains -- (-1987)

10/5/852 (Item 552 from file: 103)
00703062 EDB-81-011312
Title: Results of atmospheric analyses done at Tulsa, Oklahoma, during the period neighboring the time of the second Bikini atomic bomb test
Author(s): Fearson, R.E.; Engle, W.; Thayer, J.; Swift, G.; Johnson, I.
Source: Phys. Rev. (United States) v 70. Coden: PHRVA
Publication Date: 1946 p 564
Document Type: Journal Article
Language: English
Journal Announcement: EDB8101
Subfile: TIC (Technical Information Center).
Country of Origin: United States
Abstract: Radioactive concentrates were prepared from the atmosphere. Data of July 26 and August 30, 1946, represent the active deposits of Rn and Tn. The data of July 28, based on two samples with initial intensities of 5 x 10/sup -10/ curie, are explained by assuming that the concentrate is the active deposit of a new rare radioactive gas of at. no. 86, with a half-life of 82 min.; it corresponds with at least two members of an unreported radioactive series.;
Major Descriptors: *EARTH ATMOSPHERE -- RADIOACTIVITY; *FALLOUT -- RADIOCHEMISTRY; *OKLAHOMA -- RADIATION MONITORING
Descriptors: BIKINI; HALF-LIFE; NUCLEAR EXPLOSIONS; RADON
Broader Terms: CHEMISTRY; ELEMENTS; EXPLOSIONS; FLUIDS; GASES; ISLANDS; MARSHALL ISLANDS; MICRONESIA; MONITORING; NONMETALS; NORTH AMERICA; OCEANIA; RARE GASES; SOUTHWEST REGION; USA
Subject Categories: 400702* -- Radiochemistry & Nuclear Chemistry -- Properties of Radioactive Materials
500300 -- Environment, Atmospheric -- Radioactive Materials Monitoring & Transport -- (-1989)
450200 -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives

5003997

10/5/853 (Item 553 from file: 103)
00702535 EDB-81-010785
Title: Radiochemical analysis of the Bikini ashes
Author(s): Ishibashi, M.; Shigematsu, T.; Ishida, T.
Source: Bull. Inst. Chem. Res., Kyoto Univ. (Japan) Coden: BICRA
Publication Date: 1954 p 35-39

Document Type: Journal Article
Language: English
Journal Announcement: EDB8101
Subfile: TIC (Technical Information Center).
Country of Origin: Japan
Abstract: The following nuclides were detected in the Bikini ashes by radiochemical procedures: /sup 45/Ca, /sup 89/Sr, /sup 91/Y, /sup 95/Zr, /sup 103/Ru, /sup 144/Pr, and /sup 237/U. The ion-exchange method was used for analysis of contaminated rain water which fell on the Kyoto area on May 16, 1954 from which the presence of /sup 89/Sr, /sup 95/Zr, and /sup 140/Ba, was detected. Rare earths seemed also to be present.;
Major Descriptors: *ASHES -- RADIOCHEMICAL ANALYSIS; *NUCLEAR EXPLOSIONS -- RADIOISOTOPES
Descriptors: BARIUM 140; BIKINI; CALCIUM 45; CERIUM 144; FALLOUT; IODINE 131; ION EXCHANGE; ISOMERIC NUCLEI; JAPAN; LANTHANUM 140; NIOBIUM 95; PRASEODYMIUM 144; RAIN; RARE EARTHS; RHODIUM 103; RUTHENIUM 103; RUTHENIUM 106; STRONTIUM 89; TELLURIUM 129; URANIUM 237; YTTRIUM 91; ZIRCONIUM 95
Broader Terms: ACTINIDE ISOTOPES; ACTINIDE NUCLEI; ALKALINE EARTH ISOTOPES; ASIA; ATMOSPHERIC PRECIPITATIONS; BARIUM ISOTOPES; BETA DECAY RADIOISOTOPES; BETA-MINUS DECAY RADIOISOTOPES; CALCIUM ISOTOPES; CERIUM ISOTOPES; CHEMICAL ANALYSIS; DAYS LIVING RADIOISOTOPES; ELEMENTS; EVEN-EVEN NUCLEI; EVEN-ODD NUCLEI; EXPLOSIONS; HEAVY NUCLEI; HOURS LIVING RADIOISOTOPES; INTERMEDIATE MASS NUCLEI; INTERNAL CONVERSION RADIOISOTOPES; IODINE ISOTOPES; ISLANDS; ISOMERIC TRANSITION ISOTOPES; ISOTOPES; LANTHANUM ISOTOPES; MARSHALL ISLANDS; METALS; MICRONESIA; MINUTES LIVING RADIOISOTOPES; NIOBIUM ISOTOPES; NUCLEI; OCEANIA; ODD-EVEN NUCLEI; ODD-ODD NUCLEI; PRASEODYMIUM ISOTOPES; QUANTITATIVE CHEMICAL ANALYSIS; RADIOISOTOPES; RARE EARTH ISOTOPES; RARE EARTH NUCLEI; RESIDUES; RHODIUM ISOTOPES; RUTHENIUM ISOTOPES; STABLE ISOTOPES ; STRONTIUM ISOTOPES; TELLURIUM ISOTOPES; URANIUM ISOTOPES; YEARS LIVING RADIOISOTOPES; YTTRIUM ISOTOPES; ZIRCONIUM ISOTOPES
Subject Categories: 400102* -- Chemical & Spectral Procedures
500300 -- Environment, Atmospheric -- Radioactive Materials Monitoring & Transport -- (-1989)
450200 -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives

10/5/854 (Item 554 from file: 103)
00697933 ERA-06-005318; EDB-81-006182
Title: Concentrations of /sup 113m/Cd in the marine environment
Author(s): Noshkin, V.E.; Wong, K.M.; Eagle, R.J.; Anglin, D.L.
Affiliation: Univ. of California, Livermore
Source: Nature (London) (United Kingdom) v 287. Coden: NATUA
Publication Date: 18 Sep 1980 p 221-223
Contract Number (DOE): W-7405-ENG-48
Document Type: Journal Article; Numerical data
Language: English
Journal Announcement: EDB8101
Subfile: ERA (Energy Research Abstracts); TIC (Technical Information Center).
Country of Origin: United States
Abstract: Reports on the detection of /sup 113m/Cd in any type of environmental sample have been rare. The 113 mass chain yield is small relative to other longer-lived fission products, such as /sup 90/Sr and /sup 137/Cs, produced from uranium, plutonium and thorium fissions. Also, only a small fraction of the 113 chain yield decays to /sup 113m/Cd. Salter estimated that the /sup 113m/Cd//sup 90/Sr activity quotient in thermonuclear fission should be 0.003. He stated that this ratio is in good agreement with data from a few samples measured in the northern hemisphere prior to 1962 which have no /sup 109/Cd. This, to our knowledge, was the first report of the detection of fission-produced /sup 113m/Cd in the environment. Salter also calculated that 0.062 MCi of /sup 113m/Cd and 0.25 MCi of /sup 109/Cd were produced by activation during the atmospheric detonation of the

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1.4-megaton Starfish device on 9 July 1962 over Johnston Atoll. As both /sup 109/Cd and /sup 113m/Cd are produced during neutron activation of stable cadmium, and /sup 109/Cd is not a fission product, the last part of Salter's statement is significant. The absence of /sup 109/Cd in samples collected before 1962 indicates that all nuclear testing before this time, which included all tests conducted at Enewetak and Bikini Atolls in the Marshall Islands, could have generated /sup 113m/Cd only as a fission product. It is therefore important to recognize that /sup 113m/Cd could be present in other environments contaminated with fission product wastes discharged to the aquatic environment from other nuclear facilities. /sup 113m/Cd has a half life of 14.6 +- 0.1 y and decays predominantly by beta-particle emission. We present here a preliminary report of /sup 113m/Cd concentrations measured in sediment and tissue samples of marine organisms collected around different atolls in the Marshall Islands.;

Major Descriptors: *CADMIUM 113 -- ENVIRONMENTAL TRANSPORT; *FISHES -- CONTAMINATION; *MOLLUSCS -- CONTAMINATION

Descriptors: AQUATIC ORGANISMS; EXPERIMENTAL DATA; FISSION PRODUCTS; INTESTINES; ISOMERIC NUCLEI; KIDNEYS; LIVER; MARSHALL ISLANDS; MUSCLES; QUANTITATIVE CHEMICAL ANALYSIS; QUANTITY RATIO; RADIONUCLIDE KINETICS; SEDIMENTS; TISSUES

Broader Terms: ANIMALS; AQUATIC ORGANISMS; BETA DECAY RADIOISOTOPES; BETA-MINUS DECAY RADIOISOTOPES; BODY; CADMIUM ISOTOPES; CHEMICAL ANALYSIS; DATA; DIGESTIVE SYSTEM; EVEN-ODD NUCLEI; GASTROINTESTINAL TRACT; GLANDS; INFORMATION; INTERMEDIATE MASS NUCLEI; INVERTEBRATES; ISLANDS; ISOMERIC TRANSITION ISOTOPES; ISOTOPES; MASS TRANSFER; MATERIALS; MICRONESIA; NUCLEI; NUMERICAL DATA; OCEANIA; ORGANS; RADIOACTIVE MATERIALS; RADIOISOTOPES; STABLE ISOTOPES; 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)

10/5/855 (Item 555 from file: 103)
00697865 ERA-06-004136; INS-81-000329; EDB-81-006114
Author(s): Lessard, E.T.; Greenhouse, N.A.; Miltenberger, R.P.
Title: Reconstruction of chronic dose equivalents for Rongelap and Utirik residents: 1954 to 1980
Corporate Source: Brookhaven National Lab., Upton, NY (USA)
Publication Date: Oct 1980 p 60
Report Number(s): BNL-51257
Contract Number (DOE): AC02-76CH00016
Document Type: Report
Language: English
Journal Announcement: EDB8012
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: From June 1946 to August 1958, the US Department of Defense and Atomic Energy Commission conducted nuclear weapons tests in the Northern Marshall Islands. BRAVO, an aboveground test in the Castle series, resulted in radioactive fallout contaminating Rongelap and Utirik Atolls. On March 3, 1954, the inhabitants of these atolls were relocated until radiation exposure rates declined to acceptable levels. Environmental and personnel radiological monitoring programs were begun in the mid 1950's by Brookhaven National Laboratory to ensure that dose equivalents received or committed remained within US Federal Radiation Council Guidelines for members of the general public. Body burden and dose equivalent histories along with activity ingestion patterns post return are presented. Dosimetric methods, results, and internal dose equivalent distributions for subgroups of the population are also described.;

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Major Descriptors: *HUMAN POPULATIONS -- BODY BURDEN; *HUMAN POPULATIONS -- RADIATION DOSES; *MARSHALL ISLANDS -- FALLOUT
Descriptors: CASTLE PROJECT; DOSE COMMITMENTS; DOSE EQUIVALENTS; DOSIMETRY; EXPERIMENTAL DATA; MEDICAL SURVEILLANCE; NUCLEAR EXPLOSIONS; NUCLEAR WEAPONS; RADIATION MONITORING
Broader Terms: DATA; DOSES; EXPLOSIONS; INFORMATION; ISLANDS; MICRONESIA; MONITORING; NUCLEAR EXPLOSIONS; NUMERICAL DATA; OCEANIA; POPULATIONS; SURVEILLANCE; WEAPONS
Subject Categories: 510302* -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- Terrestrial Ecosystems & Food Chains -- (-1987)
560151 -- Radiation Effects on Animals -- Man
INIS Subject Categories: C22* -- Radionuclide Ecology
C15 -- Effects of External Radiation on Man

10/5/856 (Item 556 from file: 103)
00694235 AIX-11-558635; EDB-81-002483
Title: Dosimetric results for the Bikini population
Author(s): Greenhouse, N.A.; Miltenberger, R.P.; Lessard, E.T. (Safety and Environmental Protection Division, Upton, NY (USA))
Source: Health Phys. (United Kingdom) v 38:5. Coden: HLTPA
Publication Date: May 1980 p 846-851
Document Type: Journal Article
Language: English
Journal Announcement: EDB8012
Subfile: AIX (non-US Atomindex input).
Country of Origin: United States
Abstract: The restoration of Bikini Atoll after contamination with fallout from weapons tests began in 1969. By the time of their departure in 1978 the number of Bikini residents had reached about 140. External radiation monitoring, bioassay and whole-body counting programmes for the Bikini Island population are described. The dose equivalents during the residency period and dose equivalent commitments to bone and marrow from ingested /sup 90/Sr - /sup 90/Y and to total-body from ingested /sup 137/Cs - /sup 137/sup(M)Ba are presented. A whole-body dose equivalent and commitment of 3 rem for a maximally exposed person and a population average dose equivalent and commitment of 1.2 rem were calculated for residential periods between 1969 and 1978.;
Major Descriptors: *BARIUM 137 -- BODY BURDEN; *BIKINI -- FALLOUT; *CESIUM 137 -- BODY BURDEN; *HUMAN POPULATIONS -- RADIATION DOSES; *STRONTIUM 90 -- BODY BURDEN
Descriptors: BIOASSAY; CONTAMINATION; DOSE COMMITMENTS; ENVIRONMENT; EXCRETION; EXTERNAL IRRADIATION; RADIATION MONITORING; URINE; WHOLE-BODY COUNTING; YTTRIUM 90
Broader Terms: ALKALI METAL ISOTOPES; ALKALINE EARTH ISOTOPES; BARIUM ISOTOPES; BETA DECAY RADIOISOTOPES; BETA-MINUS DECAY RADIOISOTOPES; BIOLOGICAL MATERIALS; BIOLOGICAL WASTES; BODY FLUIDS; CESIUM ISOTOPES; CLEARANCE; COUNTING TECHNIQUES; DAYS LIVING RADIOISOTOPES; DOSES; EVEN-EVEN NUCLEI; EVEN-ODD NUCLEI; HOURS LIVING RADIOISOTOPES; INTERMEDIATE MASS NUCLEI; IRRADIATION; ISLANDS; ISOMERIC TRANSITION ISOTOPES; ISOTOPES; MARSHALL ISLANDS; MATERIALS; MICRONESIA; MINUTES LIVING RADIOISOTOPES; MONITORING; NUCLEI; OCEANIA; ODD-EVEN NUCLEI; ODD-ODD NUCLEI; POPULATIONS; RADIOISOTOPES; STABLE ISOTOPES; STRONTIUM ISOTOPES; WASTES; YEARS LIVING RADIOISOTOPES; YTTRIUM ISOTOPES
Subject Categories: 560171* -- Radiation Effects -- Nuclide Kinetics & Toxicology -- Man -- (-1987)
510500 -- Environment, Terrestrial -- Site Resource & Use Studies -- (-1989)
INIS Subject Categories: C21* -- Tissue Distribution, Metabolism, Toxicology & Removal of Radionuclides

10/5/857 (Item 557 from file: 103)
00690208 GAP-80-018658; EDB-80-129738
Title: Plutonium in the marine environment of the Marshall Islands
Title: Energy and technology review
Publication Date: Oct 1980 p 8-13

5004000

Report Number(s): UCRL-52000-80-10
Document Type: Analytic of a Report
Language: English
Journal Announcement: EDB8012
Availability: NTIS, PC A03/MF A01.
Subfile: GAP (General and Practical); TIC (Technical Information Center).

Country of Origin: United States
Country of Publication: United States
Abstract: Between 1946 and 1958, the United States conducted 66 nuclear tests in the Pacific atolls of Eniwetok and Bikini in the Marshall Islands. Since 1972, LLNL has conducted a variety of studies related to the cycling and transport of longer lived residual radionuclides in the marine environments of these atolls. The primary concern is to collect sufficient data to develop recommendations to minimize the transfer of man-made radionuclides to people returning to the atolls. However, an attempt has also been made to relate analytical findings to much wider fields of scientific endeavor and to develop models that are useful, first locally, and secondly in another aquatic environments receiving inputs from different source terms. One such program deals with the behavior of plutonium radionuclides in the marine environment of Eniwetok and Bikini, the findings of which are reported. A summary of the concentration of /sup 239/Pu plus /sup 240/Pu in the Eniwetok and Bikini lagoons and in the North Equatorial Pacific Ocean is presented.;

Major Descriptors: *BIKINI -- RADIATION MONITORING; *ENIWETOK -- RADIATION MONITORING; *PACIFIC OCEAN -- RADIATION MONITORING; *PLUTONIUM 239 -- RADIOACTIVITY; *PLUTONIUM 240 -- RADIOACTIVITY
Descriptors: MARINE SURVEYS; MARSHALL ISLANDS; PLUTONIUM; RADIOACTIVE WASTES; RADIONUCLIDE MIGRATION; SEAWATER; SEDIMENTS; WATER POLLUTION
Broader Terms: ACTINIDE ISOTOPES; ACTINIDE NUCLEI; ACTINIDES; ALPHA DECAY RADIOISOTOPES; ELEMENTS; ENVIRONMENTAL TRANSPORT; EVEN-EVEN NUCLEI; EVEN-ODD NUCLEI; HEAVY NUCLEI; HYDROGEN COMPOUNDS; ISLANDS; ISOTOPES; MARSHALL ISLANDS; MASS TRANSFER; MATERIALS; METALS; MICRONESIA; MONITORING; NUCLEI; OCEANIA; OXYGEN COMPOUNDS; PLUTONIUM ISOTOPES; POLLUTION; RADIOACTIVE MATERIALS; RADIOISOTOPES; SEAS; SURFACE WATERS; SURVEYS; TRANSURANIUM ELEMENTS; WASTES; WATER; YEARS LIVING RADIOISOTOPES
Subject Categories: 520301* -- Environment, Aquatic -- Radioactive Materials Monitoring & Transport -- Water -- (1987)

10/5/858 (Item 558 from file: 103)
00690104 GAP-80-018652; EDB-80-129634
Title: Marshall Islands project
Title: Energy and technology review
Publication Date: Oct 1980 p 2-7
Report Number(s): UCRL-52000-80-10
Document Type: Analytic of a Report
Language: English
Journal Announcement: EDB8012
Availability: NTIS, PC A03/MF A01.
Subfile: GAP (General and Practical); TIC (Technical Information Center).

Country of Origin: United States
Country of Publication: United States
Abstract: At the end of World War II, the US entered into a Trust Territory Agreement with the six districts of Micronesia, thereby accepting responsibility for the welfare and education of their people. In 1947, the people of the Enewetak and Bikini Atolls (in the Marshall Islands) were relocated to other islands so that the US could conduct nuclear tests there. In response to requests from the people for permission to return to their atolls and in anticipation of the termination of the Trust Territory Agreement in 1981, a series of field surveys and assessment studies have been conducted under the technical direction of LLNL. These studies are designed to estimate potential radiation doses and to allow the US government to make reasonable recommendations on

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resettlement and land use. Integration of the field studies and the assessment effort has made the program more efficient.;
Major Descriptors: *HUMAN POPULATIONS -- RADIATION DOSES; *MARSHALL ISLANDS -- POPULATION RELOCATION; *MARSHALL ISLANDS -- RADIATION MONITORING
Descriptors: FOOD; HABITAT; LAND USE; RISK ASSESSMENT
Broader Terms: DOSES; ISLANDS; MICRONESIA; MONITORING; OCEANIA; POPULATIONS
Subject Categories: 510302* -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- Terrestrial Ecosystems & Food Chains -- (-1987)
510301 -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- Soil -- (-1987)
520302 -- Environment, Aquatic -- Radioactive Materials Monitoring & Transport -- Aquatic Ecosystems & Food Chains -- (-1987)
520301 -- Environment, Aquatic -- Radioactive Materials Monitoring & Transport -- Water -- (1987)
560171 -- Radiation Effects -- Nuclide Kinetics & Toxicology -- Man -- (-1987)

10/5/859 (Item 559 from file: 103)
00685031 ERA-06-001324; EDB-80-124560
Author(s): Hawthorne, H.A.
Title: Compilation of local fallout data from test detonations 1945-1962 extracted from DASA 1251. Volume II. Oceanic U.S. tests
Corporate Source: General Electric Co., Santa Barbara, CA (USA)
Publication Date: 1 May 1979 p 351
Report Number(s): AD-A-079310
Contract Number (DOE): DNA001-79-C-0081
Document Type: Report
Language: English
Journal Announcement: EDB8006
Availability: NTIS, PC A16/MF A01.
Subfile: ERA (Energy Research Abstracts); NTS (NTIS).
Country of Origin: United States
Country of Publication: United States
Abstract: Fallout patterns from U.S. oceanic nuclear weapons tests are given. Also given are time and place of test and ambient winds.;
Major Descriptors: *BIKINI -- FALLOUT DEPOSITS; *ENIWETOK -- FALLOUT DEPOSITS; *LOCAL FALLOUT -- DATA COMPILATION; *NUCLEAR EXPLOSIONS -- LOCAL FALLOUT; *PACIFIC OCEAN -- NUCLEAR EXPLOSIONS
Descriptors: CONTAMINATION; TEST FACILITIES; WIND
Broader Terms: DATA; EXPLOSIONS; FALLOUT; INFORMATION; ISLANDS; MARSHALL ISLANDS; MICRONESIA; NUMERICAL DATA; OCEANIA; SEAS; SURFACE WATERS
Subject Categories: 500300* -- Environment, Atmospheric -- Radioactive Materials Monitoring & Transport -- (-1989)
450200 -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives

10/5/860 (Item 560 from file: 103)
00679523 ERA-05-037226; INS-80-017094; EDB-80-119051
Author(s): Noshkin, V.E.; Eagle, R.J.; Wong, K.M.; Jokela, T.A.
Title: Transuranic concentrations in reef and pelagic fish from the Marshall Islands (/sup 239/Pu, /sup 240/Pu)
Corporate Source: California Univ., Livermore (USA). Lawrence Livermore Lab.
Conference Title: International symposium on the impacts of radionuclide releases into the marine environment
Conference Location: Vienna, Austria Conference Date: 6 Oct 1980
Publication Date: Sep 1980 p 24
Report Number(s): UCRL-84213; CONF-801063-1
Contract Number (DOE): W-7405-ENG-48
Document Type: Report; Conference literature
Language: English
Journal Announcement: EDB8010
Availability: NTIS, PC A02/MF A01.
Subfile: INS (US Atomindex input); ERA (Energy Research Abstracts); TIC (Technical Information Center).

5004002

Country of Origin: United States
Country of Publication: United States
Abstract: Concentrations of /sup 239 + 240/Pu are reported in tissues of several species of reef and pelagic fish caught at 14 different atolls in the northern Marshall Islands. Several regularities that are species 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 analyzed. 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: *AQUATIC ECOSYSTEMS -- RADIONUCLIDE MIGRATION; *FISHES -- RADIONUCLIDE KINETICS; *FOOD CHAINS -- RADIONUCLIDE MIGRATION; *PLUTONIUM 239 -- RADIOECOLOGICAL CONCENTRATION; *PLUTONIUM 239 -- TISSUE DISTRIBUTION; *PLUTONIUM 240 -- RADIOECOLOGICAL CONCENTRATION; *PLUTONIUM 240 -- TISSUE DISTRIBUTION
Descriptors: CONTAMINATION; LIVER; MARSHALL ISLANDS; MUSCLES; PACIFIC OCEAN ; SEAWATER; SKELETON
Broader Terms: ACTINIDE ISOTOPES; ACTINIDE NUCLEI; ALPHA DECAY RADIOISOTOPES; ANIMALS; AQUATIC ORGANISMS; BODY; DIGESTIVE SYSTEM; DISTRIBUTION; ECOLOGICAL CONCENTRATION; ECOSYSTEMS; ENVIRONMENTAL TRANSPORT; EVEN-EVEN NUCLEI; EVEN-ODD NUCLEI; GLANDS; HEAVY NUCLEI; HYDROGEN COMPOUNDS; ISLANDS; ISOTOPES; MASS TRANSFER; MICRONESIA; NUCLEI; OCEANIA; ORGANS; OXYGEN COMPOUNDS; PLUTONIUM ISOTOPES; RADIOISOTOPES; SEAS; SURFACE WATERS; VERTEBRATES; WATER; YEARS LIVING RADIOISOTOPES
Subject Categories: 560172* -- Radiation Effects -- Nuclide Kinetics & Toxicology -- Animals -- (-1987)
520302 -- Environment, Aquatic -- Radioactive Materials Monitoring & Transport -- Aquatic Ecosystems & Food Chains -- (-1987)
INIS Subject Categories: C21* -- Tissue Distribution, Metabolism, Toxicology & Removal of Radionuclides
C22 -- Radionuclide Ecology

10/5/861 (Item 561 from file: 103)
00673289 ERA-05-037175; EDB-80-112816
Title: Microhabitat resource use, activity patterns, and episodic catastrophe: Conus on tropical intertidal reef rock benches
Author(s): Leviten, P.J.; Kohn, A.J.
Affiliation: Univ. of Washington, Seattle
Source: Ecol. Monogr. (United States) v 50:1. Coden: ECMOA
Publication Date: Mar 1980 p 55-75
Contract Number (DOE): AT-(29-2)-266; AT-(26-1)-628
Document Type: Journal Article
Language: English
Journal Announcement: EDB8010
Subfile: ERA (Energy Research Abstracts); TIC (Technical Information Center).
Country of Origin: United States
Abstract: Low species richness (five to nine species) and high population density (means of 0.2-8.6 individuals per square metre) characterize Conus assemblages on intertidal benches throughout the tropical Indo-West Pacific region. Data from 16 such habitats in Hawaii, Marshall Islands, Australia, Maldives, and Seychelles indicate that similarity of microhabitats between species is equal to or greater than random expectation. Significant between-species differences in zonation

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pattern occur across benches at a given time and place. The peak of C. ebraeus abundance typically occurs closest to shore; C. chaldaeus and C. sponsalis are usually most distant from shore. However, we found about as many significant within-species differences between censuses made at different times on the same bench as between-species differences within censuses. Co-occurring species thus tend not to use microhabitat resources differentially. Physical environmental variables including tide level, strength of water flow and time of day determine refuging and foraging activity patterns, and all species apear to respond similarly to these factors. The data thus do not support the hypothesis of temporal resource partitioning. We found evidence neither for homing, as mark-recapture results suggested that individuals occupy any convenient refuge after foraging, nor for interference competition for protected sites among Conus. Conus species diversity is significantly correlated with (1) substrate topographic diversity measured either independently or as the diversity of microhabitats utilized by all species together, and (2) the proportion of individuals occupying protected sites.;
Major Descriptors: *MOLLUSCS -- POPULATION DYNAMICS
Descriptors: ALGAE; AQUATIC ECOSYSTEMS; BIOLOGICAL FUNCTIONS; BIOLOGICAL STRESS; BIOLOGICAL VARIABILITY; HABITAT; HOME RANGE; PARTITION FUNCTIONS; POPULATION DENSITY; REGIONAL ANALYSIS; SEAWATER; SPECIES DIVERSITY; TIDE; TIME DEPENDENCE; TOLERANCE; WATER CURRENTS
Broader Terms: ANIMALS; AQUATIC ORGANISMS; CURRENTS; ECOSYSTEMS; FUNCTIONS; HYDROGEN COMPOUNDS; INVERTEBRATES; OXYGEN COMPOUNDS; PLANTS; WATER
Subject Categories: 520100* -- Environment, Aquatic -- Basic Studies -- (-1989)
550100 -- Behavioral Biology

10/5/862 (Item 562 from file: 103)
00673283 AIX-11-551901; EDB-80-112810
Title: Effect of plowing on /sup 241/Am contamination in sandy soil
Author(s): Crites, T.R.; Denham, D.H. (California Univ., Livermore (USA). Lawrence Livermore Lab.); Barnes, M.G. (Desert Research Inst., Las Vegas, NV (USA))
Source: Health Phys. (United Kingdom) v 38:4. Coden: HLTPA
Publication Date: Apr 1980 p 699-703
Document Type: Journal Article
Language: English
Journal Announcement: EDB8010
Subfile: AIX (non-US Atomindex input).
Country of Origin: United States
Abstract: This paper reports an experiment to test plowing as an alternative to soil excision to reduce surface contamination on Enjebi, the Enewetak Atoll island most suitable for resettlement.;
Major Descriptors: *SOILS -- DECONTAMINATION
Descriptors: AMERICIUM 241; CULTIVATION TECHNIQUES; DEPTH; ENIWETOK; MIXING ; SAND; SPATIAL DISTRIBUTION; SURFACE CONTAMINATION
Broader Terms: ACTINIDE ISOTOPES; ACTINIDE NUCLEI; ALPHA DECAY RADIOISOTOPES; AMERICIUM ISOTOPES; CLEANING; CONTAMINATION; DIMENSIONS; DISTRIBUTION; HEAVY NUCLEI; ISLANDS; ISOTOPES; MARSHALL ISLANDS; MICRONESIA; NUCLEI; OCEANIA; ODD-EVEN NUCLEI; RADIOISOTOPES; YEARS LIVING RADIOISOTOPES
Subject Categories: 510500* -- Environment, Terrestrial -- Site Resource & Use Studies -- (-1989)
INIS Subject Categories: B31* -- Land

10/5/863 (Item 563 from file: 103)
00673278 EDB-80-112805
Title: Radioactive contamination of plants in Japan covered with fallout from H-bomb detonations in March-May 1954 at Bikini Atoll, Marshall Islands. I. Distribution of deposited radioactivity
Author(s): Yatazawa, M.; Ishihara, T.
Source: Soil Plant Food (Japan) v 1. Coden: SPFOA
Publication Date: 1955 p 21-22
Document Type: Journal Article

400405

Language: English
Journal Announcement: EDB8011
Subfile: TIC (Technical Information Center).
Country of Origin: Japan
Abstract: In May 1954 rains contained radioactivity up to 0.2 muc./liter. The provisional permissible level of unknown radioisotopes in H/sub 2/O is given as 10/sup -7/ muc./ml for ..beta..- or ..gamma..-emitters. The safety factor for these values is at least 100. From these values the permissible level for foods was calculated as 0.22 muc./day. Food plants tested ranged 0 to 1.25 muc./10g dry matter. It is concluded that serious radioactive contamination of plants was probable.;
Major Descriptors: *JAPAN -- RADIATION MONITORING; *PLANTS -- RADIOACTIVITY ; *RAIN -- RADIOACTIVITY
Descriptors: BETA DECAY RADIOISOTOPES; BIKINI; CONTAMINATION; FALLOUT; GAMMA RADIATION; MAXIMUM PERMISSIBLE LEVEL; RADIATION HAZARDS; THERMONUCLEAR EXPLOSIONS
Broader Terms: ASIA; ATMOSPHERIC PRECIPITATIONS; ELECTROMAGNETIC RADIATION; EXPLOSIONS; HAZARDS; HEALTH HAZARDS; IONIZING RADIATIONS; ISLANDS; ISOTOPES; MARSHALL ISLANDS; MICRONESIA; MONITORING; NUCLEAR EXPLOSIONS; OCEANIA; RADIATIONS; RADIOISOTOPES; SAFETY STANDARDS; STANDARDS
Subject Categories: 510302* -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- Terrestrial Ecosystems & Food Chains -- (-1987)
500300 -- Environment, Atmospheric -- Radioactive Materials Monitoring & Transport -- (-1989)
450200 -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives

10/5/864 (Item 564 from file: 103)
00673277 EDB-80-112804
Title: Investigations on the contamination of field crops by artificial radioactivities as a result of the H-bomb tests at Bikini Atoll
Author(s): Egawa, T.; Iimura, K.; Shirai, T.; Yoshida, T.; Kawarazaki, H.; Michiyoshi; Tsukahara, S.
Source: Soil Plant Food (Japan) v 1. Coden: SPFOA
Publication Date: 1955 p 19-20
Document Type: Journal Article
Language: English
Journal Announcement: EDB8011
Subfile: TIC (Technical Information Center).
Country of Origin: Japan
Abstract: Crop samples taken between June and October 1954 were analyzed for radioactivity. Rare earth elements contributed the greater part of the activity. Polished rice showed no activity.;
Major Descriptors: *CROPS -- CONTAMINATION; *CROPS -- RADIOACTIVITY; *RICE -- RADIOACTIVITY
Descriptors: BIKINI; ENVIRONMENTAL EXPOSURE PATHWAY; NUCLEAR EXPLOSIONS; RARE EARTHS
Broader Terms: CEREALS; ELEMENTS; EXPLOSIONS; GRAMINEAE; GRASS; ISLANDS; MARSHALL ISLANDS; METALS; MICRONESIA; OCEANIA; PLANTS
Subject Categories: 510302* -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- Terrestrial Ecosystems & Food Chains -- (-1987)
450200 -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives

10/5/865 (Item 565 from file: 103)
00673163 EDB-80-112690
Author(s): Minkkinen, C.; Schlacks, H.P.; Goeke, R.H.; Weaver, C.L.
Title: Operation HARDTACK, Phase I. Task group 7.5. Radiological safety support
Corporate Source: USAEC Nevada Test Organization, Mercury. Off-Site Radiological Safety Activities
Publication Date: Apr 1959 p 46
Report Number(s): AD-A078823/2
Document Type: Report

500405

Language: English
Journal Announcement: EDB8005
Availability: NTIS, PC A03/MF A01.
Subfile: NTS (NTIS).
Country of Origin: United States
Country of Publication: United States
Abstract: The Rad-Safe organizational arrangement for this Operation, the Rad-Safe personnel of TG 7.5 functioning as an independent Rad-Safe organization for TG 7.5, proved satisfactory and demonstrated that the AEC Contractor could adequately supply radiological safety service for TG 7.5.;
Major Descriptors: *NUCLEAR EXPLOSIONS -- CONTAMINATION; *NUCLEAR EXPLOSIVES -- TESTING; *RADIOLOGICAL PERSONNEL -- RADIATION PROTECTION
Descriptors: BIKINI; ENIWETOK; MANAGEMENT; RADIATION DETECTORS; RADIOLOGY; SAFETY; SHIELDING
Broader Terms: EXPLOSIONS; EXPLOSIVES; ISLANDS; MARSHALL ISLANDS; MEASURING INSTRUMENTS; MEDICINE; MICRONESIA; NUCLEAR MEDICINE; OCEANIA; PERSONNEL
Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)
560151 -- Radiation Effects on Animals -- Man

10/5/866 (Item 566 from file: 103)
00668323 EDB-80-107849
Title: Operation Greenhouse
Corporate Source: Joint Task Force Three, Washington, DC (USA)
Publication Date: 1951 p 20
Report Number(s): AD-A-078576/6
Document Type: Report
Language: English
Journal Announcement: EDB8005
Availability: NTIS, PC AA02/MF A01.
Subfile: NTS (NTIS).
Country of Origin: United States
Country of Publication: United States
Abstract: The following topics are discussed: Development of Operation GREENHOUSE; general information; information on the Marshall Islands; and hazards resulting from atomic bomb explosions.;
Major Descriptors: *NUCLEAR EXPLOSIONS -- HAZARDS; *NUCLEAR WEAPONS -- TESTING
Descriptors: MARSHALL ISLANDS; SAFETY
Broader Terms: EXPLOSIONS; ISLANDS; MICRONESIA; OCEANIA; WEAPONS
Subject Categories: 450200* -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives

10/5/867 (Item 567 from file: 103)
00668322 EDB-80-107848
Title: Operation Sandstone, nuclear explosions, atomic weapons tests. Operation Sandstone, 1948. Annex I. Part I. Volume I. Report to Joint Chiefs of Staff. Sandstone report no. 2
Corporate Source: Joint Task Force Seven, Washington, DC (USA)
Publication Date: 1948 p 79
Report Number(s): AD-A-078571/7
Document Type: Report
Language: English
Journal Announcement: EDB8005
Availability: NTIS, PC AA05/MF A01.
Subfile: NTS (NTIS).
Country of Origin: United States
Country of Publication: United States
Abstract: This annex contains the operational reports of agencies of Joint Task Force Seven. In general these reports are complete as submitted to the Commander of the Task Force. However, there have been some deletions in order to keep the classification 'secret' or lower, to obviate an excess of duplication between different reports and to eliminate unnecessary detail. The unabridged reports will be found in the records of Joint Task Force Seven, in custody of the Armed Forces

500400b

Special Weapons Project.;
Major Descriptors: *NUCLEAR EXPLOSIONS; *NUCLEAR WEAPONS -- TESTING
Descriptors: ENIWETOK; MANAGEMENT; OPERATION; PLANNING; SECURITY
Broader Terms: EXPLOSIONS; ISLANDS; MARSHALL ISLANDS; MICRONESIA; OCEANIA; WEAPONS
Subject Categories: 450200* -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives

10/5/868 (Item 568 from file: 103)
00668321 EDB-80-107847
Title: Operation Sandstone. Nuclear explosions. 1948. TG 7.6 operations. Operation report. Phases A, B, C, D and E. Sandstone report no. 43
Corporate Source: Joint Task Force Seven, Washington, DC (USA)
Publication Date: 20 Mar 1948 p 301
Report Number(s): AD-A-078570/9
Document Type: Report
Language: English
Journal Announcement: EDB8005
Availability: NTIS, PC AA14/MF A01.
Subfile: NTS (NTIS).
Country of Origin: United States
Country of Publication: United States
Abstract: This document outlines the radiological safety procedures developed for and followed during the Operation SANDSTONE Nuclear Explosions.;
Major Descriptors: *NUCLEAR EXPLOSIONS -- SAFETY; *NUCLEAR WEAPONS -- TESTING
Descriptors: CONSTRUCTION; CONTAMINATION; DAMAGE; ENIWETOK; PERSONNEL; RADIOLOGY
Broader Terms: EXPLOSIONS; ISLANDS; MARSHALL ISLANDS; MEDICINE; MICRONESIA; NUCLEAR MEDICINE; OCEANIA; WEAPONS
Subject Categories: 450200* -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives

10/5/869 (Item 569 from file: 103)
00668320 EDB-80-107846
Title: Atomic weapons tests, Operation Sandstone. 1948. Volume I. Report to Joint Chiefs of Staff. Sandstone report no. 1
Corporate Source: Joint Task Force Seven, Washington, DC (USA)
Publication Date: 16 Jun 1948 p 51
Report Number(s): AD-A-078563/4
Document Type: Report
Language: English
Journal Announcement: EDB8005
Availability: NTIS, PC AA04/MF A01.
Subfile: NTS (NTIS).
Country of Origin: United States
Country of Publication: United States
Abstract: This report covers the operations of Joint Task Force Seven necessary to the accomplishment of its assigned mission: the construction of an atomic weapons proving ground and the conduct of tests of atomic weapons early in 1948 at the Eniwetok proving ground. The tests consisted of statically detonating by remote control three atomic bombs of new design, located on the top of 200-foot steel towers. The scientific and technical aspects of the tests, which involved measurement of the explosions and their effect by instrumentation, are not covered in detail in this report. In mounting this operation the following fundamental considerations were of primary influence in the formulation of plans and organization: (a) The tests would provide the Armed Forces with an invaluable opportunity to participate in atomic weapon development; would therefore prove an excellent training vehicle; and would, from the overall viewpoint, be of inestimable value in the gain to national preparedness and security. (b) Although the Commander, Joint Task Force Seven, was charged with responsibility for the conduct of the entire operation, Standstone was primarily a scientific test with the Armed Forces in a supporting role.

(c) The security requirements imposed by the Atomic Energy Act of 1946 would be a controlling factor in the conduct of the operation. (d) The major expenditure of effort by the Armed Forces in support of this operation would be logistical in nature. (e) The international political situation would be an influencing consideration in conducting the operation.;
Major Descriptors: *NUCLEAR EXPLOSIONS; *NUCLEAR WEAPONS -- TESTING; *TEST FACILITIES -- CONSTRUCTION
Descriptors: ENIWETOK; PLANNING; SECURITY
Broader Terms: EXPLOSIONS; ISLANDS; MARSHALL ISLANDS; MICRONESIA; OCEANIA; WEAPONS
Subject Categories: 450200* -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives

10/5/870 (Item 570 from file: 103)
00668316 EDB-80-107842
Title: Operation Sandstone. Nuclear explosions. Scientific director's report of atomic weapon tests. Annex 17. Parts II and III. Sandia Laboratory group and forward area administration. Sandstone report no. 41
Corporate Source: Joint Task Force Seven, Washington, DC (USA)
Publication Date: 1948 p 126
Report Number(s): AD-A-078550/1
Document Type: Report
Language: English
Journal Announcement: EDB8005
Availability: NTIS, PC AA07/MF A01.
Subfile: NTS (NTIS).
Country of Origin: United States
Country of Publication: United States
Abstract: The facts and events presented here will serve as a brief summary of various activities in chronological order which are presented for the purpose of acquainting those who are interested with the necessary preparations on the part of Sandia Base personnel who were involved in Operation Sandstone. This report is not meant to be a complete historical document and will, therefore, include only those phases in which Sandia Base (Z-Division) participated. However, in order to prepare this work intelligently, it is felt that a brief outline and overlap of the entire organization is essential material and worthy of review for background. The Los Alamos Scientific Laboratory had realized since late in 1946 that only through field tests and actual detonation with proper instrumentation could the experimental designs of atomic weapons be proven and thereby obtain verification of theoretical calculations. To this extent then, on April 3, 1947, the General Advisory Committee recommended that serious consideration be given a proposed test program.;
Major Descriptors: *NUCLEAR EXPLOSIONS; *NUCLEAR WEAPONS -- TESTING
Descriptors: CONSTRUCTION; ENIWETOK; MANAGEMENT; PLANNING; REVIEWS; TEST FACILITIES
Broader Terms: DOCUMENT TYPES; EXPLOSIONS; ISLANDS; MARSHALL ISLANDS; MICRONESIA; OCEANIA; WEAPONS
Subject Categories: 450200* -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives

10/5/871 (Item 571 from file: 103)
00668315 EDB-80-107841
Title: Operation Sandstone Nuclear explosions. Atomic weapons tests. Operation Sandstone. Annex I. part II. Volume I. Report to joint chiefs of staff. Sandstone report no. 3
Corporate Source: Joint Task Force Seven, Washington, DC (USA)
Publication Date: 1948 p 517
Report Number(s): AD-A-078545/1
Document Type: Report
Language: English
Journal Announcement: EDB8005
Availability: NTIS, PC AA22/MF A01.

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Subfile: NTS (NTIS).
Country of Origin: United States
Country of Publication: United States
Abstract: The following topics are discussed: Task Group 7.2 (Army): activities up to embarkation, embarkation through 'P' Day, 'P' Day thru 'Z' Day plus 2, rollup, conclusions; Task Group 7.3 (Navy); Air Force; Task Group 7.6 (Rad-Safe); and Task Group 7.7 (Iscom Kwajalein).;
Major Descriptors: *NUCLEAR EXPLOSIONS; *NUCLEAR WEAPONS -- TESTING
Descriptors: CONSTRUCTION; ENIWETOK; MANAGEMENT; PLANNING; REVIEWS
Broader Terms: DOCUMENT TYPES; EXPLOSIONS; ISLANDS; MARSHALL ISLANDS; MICRONESIA; OCEANIA; WEAPONS
Subject Categories: 450200* -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives

10/5/872 (Item 572 from file: 103)
00668314 ERA-05-035378; EDB-80-107840
Title: Operation Sandstone nuclear explosions. atomic weapons tests. Operation Sandstone. Annex I part III. Volume I. Report to joint chiefs of staff. Sandstone report no. 4
Corporate Source: Joint Task Force Seven, Washington, DC (USA)
Publication Date: 1948 p 443
Report Number(s): AD-A-078542/8
Document Type: Report
Language: English
Journal Announcement: EDB8005
Availability: NTIS, PC AA19/MF A01.
Subfile: ERA (Energy Research Abstracts); NTS (NTIS).
Country of Origin: United States
Country of Publication: United States
Abstract: The following topica are discussed: communications and electronics; meteorology; adjutant general, Hq JTF-7; medical; fiscal; engineer; transportation; and photography.;
Major Descriptors: *NUCLEAR EXPLOSIONS; *NUCLEAR WEAPONS -- TESTING
Descriptors: COMMUNICATIONS; ENGINEERING; ENIWETOK; MANAGEMENT; METEOROLOGY ; PHOTOGRAPHY; PLANNING
Broader Terms: EXPLOSIONS; ISLANDS; MARSHALL ISLANDS; MICRONESIA; OCEANIA; WEAPONS
Subject Categories: 450200* -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives

10/5/873 (Item 573 from file: 103)
00652400 EDB-80-091925
Title: Metabolism of the radioisotopes contained in the radioactive ashes obtained from the No. 5 Fukuryu Maru
Author(s): Kikuchi, T.; Wakisaka, G.; Kono, T.; Goto, H.; Akagi, H.; Yamamasu, T.; Sugawa, I.
Source: Bull. Inst. Chem. Res., Kyoto Univ. (Japan) Coden: BICRA
Publication Date: 1954 p 84-90
Document Type: Journal Article
Language: English
Journal Announcement: EDB8008
Subfile: TIC (Technical Information Center).
Country of Origin: Japan
Abstract: Among the radioisotopes 141, 144 Ce obtained by separation from ashes on the ship, i.e., /sup 91/Y, /sup 141,144/Ce, Pr/sup 144/, /sup 45/Ca, sup/ 89, 90/Sr, /sup 103, 106/RU, /sup 106/Rh, /sup 95/Zr, /sup 95/Nb, /sup 131/I, Sr, Ca, and Y were accumulated chiefly in the bones of adult mice, and the elimination of radio-Sr from there was very slow. When administered by mouth, radio-Sr and radio-Ca were readily absorbed from the digestive tract, while the absorption of radio-Y from the tract was poor.;
Major Descriptors: *CALCIUM 45 -- UPTAKE; *SKELETON -- RADIONUCLIDE KINETICS; *STRONTIUM 89 -- UPTAKE; *STRONTIUM 90 -- UPTAKE; *YTTRIUM 91 -- UPTAKE
Descriptors: ASHES; BIKINI; CERIUM 141; CERIUM 144; FALLOUT; INTESTINAL ABSORPTION; IODINE 131; METABOLISM; MICE; NIOBIUM 95; NUCLEAR

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EXPLOSIONS; ORAL ADMINISTRATION; PRASEODYMIUM 144; RADIOISOTOPES; RHODIUM 106; RUTHENIUM 103; RUTHENIUM 106; ZIRCONIUM 95
Broader Terms: ALKALINE EARTH ISOTOPES; ANIMALS; BETA DECAY RADIOISOTOPES; BETA-MINUS DECAY RADIOISOTOPES; BODY; CALCIUM ISOTOPES; CERIUM ISOTOPES ; DAYS LIVING RADIOISOTOPES; EVEN-EVEN NUCLEI; EVEN-ODD NUCLEI; EXPLOSIONS; HOURS LIVING RADIOISOTOPES; INTERMEDIATE MASS NUCLEI; IODINE ISOTOPES; ISLANDS; ISOMERIC TRANSITION ISOTOPES; ISOTOPES; MAMMALS; MARSHALL ISLANDS; MICRONESIA; MINUTES LIVING RADIOISOTOPES; NIOBIUM ISOTOPES; NUCLEI; OCEANIA; ODD-EVEN NUCLEI; ODD-ODD NUCLEI; ORGANS; PRASEODYMIUM ISOTOPES; RADIOISOTOPES; RARE EARTH ISOTOPES; RARE EARTH NUCLEI; RESIDUES; RHODIUM ISOTOPES; RODENTS; RUTHENIUM ISOTOPES; SECONDS LIVING RADIOISOTOPES; STRONTIUM ISOTOPES; UPTAKE; VERTEBRATES; YEARS LIVING RADIOISOTOPES; YTTRIUM ISOTOPES; ZIRCONIUM ISOTOPES
Subject Categories: 560172* -- Radiation Effects -- Nuclide Kinetics & Toxicology -- Animals -- (-1987)
450200 -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives

10/5/874 (Item 574 from file: 103)
00652399 EDB-80-091924
Title: Metabolism of fission products. I. The metabolism of the radioactive ashes obtained from the No. 5 Fukuryu Maru
Author(s): Kikuchi, T.; Wakisaky, G.; Kono, T.; Hiroshi, G.; Akagi, H.; Yamamasu, T.; Sugawa, I.
Source: Bull. Inst. Chem. Res., Kyoto Univ. (Japan) Coden: BICRA
Publication Date: 1954 p 75-83
Document Type: Journal Article
Language: English
Journal Announcement: EDB8008
Subfile: TIC (Technical Information Center).
Country of Origin: Japan
Abstract: When the radioactive ashes were administered by mouth, the radioisotopes which were chiefly absorbed were alkaline earths, and were deposited mainly in the bones. When, after the removal of the alkaline earths, the radioisotopes contained in the radioactive ashes were administered by mouth in the form of chloride or citrate, the radioisotopes chiefly absorbed were heavy metals such as Ru and Rh.;
Major Descriptors: *ALKALINE EARTH ISOTOPES -- UPTAKE; *FISSION PRODUCTS -- METABOLISM; *RHODIUM ISOTOPES -- UPTAKE; *RUTHENIUM ISOTOPES -- UPTAKE; *SKELETON -- RADIONUCLIDE KINETICS
Descriptors: ASHES; BIKINI; FALLOUT; NUCLEAR EXPLOSIONS; ORAL ADMINISTRATION
Broader Terms: BODY; EXPLOSIONS; ISLANDS; ISOTOPES; MARSHALL ISLANDS; MICRONESIA; OCEANIA; ORGANS; RADIOACTIVE MATERIALS; RESIDUES
Subject Categories: 560172* -- Radiation Effects -- Nuclide Kinetics & Toxicology -- Animals -- (-1987)
450200 -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives

10/5/875 (Item 575 from file: 103)
00652357 EDB-80-091882
Title: Nature and extent of internal radioactive contamination of human beings exposed to fallout material in Operation Castle
Author(s): Cohn, S.H.; Rinehart, R.W.; Gong, J.K.; Robertson, J.S.; Chapman, W.; Milne, W.L.
Source: Radiat. Res. (United States) v 3:2. Coden: RAREA
Publication Date: Oct 1955 p vp
Document Type: Journal Article
Language: English
Journal Announcement: EDB8008
Subfile: TIC (Technical Information Center).
Country of Origin: United States
Abstract: The first instance of exposure of human beings to significant internal contamination with fission products occurred as a result of the ingestion and inhalation of fallout material from a nuclear detonation in the spring of 1954. An evaluation of the nature and

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extent of these internal radioelements excreted by the exposed human beings was compared with data obtained from radiochemical analysis of the tissues and excreta of animals contaminated in the same event.;
Major Descriptors: *FECES -- RADIOCHEMICAL ANALYSIS; *FISSION PRODUCTS -- RADIATION HAZARDS; *HUMAN POPULATIONS -- CONTAMINATION; *TISSUES -- RADIOCHEMICAL ANALYSIS; *URINE -- RADIOCHEMICAL ANALYSIS
Descriptors: CASTLE PROJECT; FALLOUT; INGESTION; INHALATION; INTERNAL IRRADIATION; NUCLEAR EXPLOSIONS; RADIATION DOSES; RADIOISOTOPES; RADIONUCLIDE KINETICS; TISSUE DISTRIBUTION
Broader Terms: BIOLOGICAL MATERIALS; BIOLOGICAL WASTES; BODY; BODY FLUIDS; CHEMICAL ANALYSIS; DISTRIBUTION; DOSES; EXPLOSIONS; HAZARDS; HEALTH HAZARDS; INTAKE; IRRADIATION; ISOTOPES; MATERIALS; NUCLEAR EXPLOSIONS; POPULATIONS; RADIOACTIVE MATERIALS; WASTES
Subject Categories: 560161* -- Radionuclide Effects, Kinetics, & Toxicology -- Man
450200 -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives

10/5/876 (Item 576 from file: 103)
00652356 EDB-80-091881
Title: Radiochemical analysis of the body of the late Mr. Kuboyama
Author(s): Kimura, K.; Ikedo, N.; Kimura, K.; Kawanishi, H.; Kimura, M.
Source: Radioisotopes (Tokyo) (Japan) v 4. Coden: RAISA
Publication Date: 1956 p 22-27
Document Type: Journal Article
Language: English
Journal Announcement: EDB8008
Subfile: TIC (Technical Information Center).
Country of Origin: Japan
Abstract: Analyses were carried out of various organs of Mr. Kuboyama 200 days after he had exposed himself to radiation of the atomic bomb explosion on Bikini Atoll, March, 1954. By ion-exchange chromatography, the presence of the following nuclides was indicated: /sup 144/Ce, and /sup 144/Pr in the bone (I) (20 x 10/sup -12/ counts/g. fresh wt.). Liver (II), and Kidneys (III); /sup 95/Zr and /sup 95/Nb in II and III; /sup 106/Rh, /sup 129m/Te, and /sup 129/Te in I, III, and muscles; and /sup 89/Sr, /sup 90/Sr, and /sup 90/Y in I, II, and III. Activities found in these organs were decidedly higher than those found in the control samples obtained from individuals who died of other than the so-called radiation sickness. Radiation dose received by the bones of Mr. Kuboyama was calculated to be approximately 8 r.e.p.;
Major Descriptors: *NUCLEAR EXPLOSIONS -- RADIATION HAZARDS; *RADIOISOTOPES -- TISSUE DISTRIBUTION
Descriptors: ACCIDENTS; AUTOPSY; BIKINI; BIOLOGICAL RADIATION EFFECTS; CERIUM 144; ION EXCHANGE CHROMATOGRAPHY; KIDNEYS; LIVER; MASS; MUSCLES; NIOBIUM 95; PRASEODYMIUM 144; RADIATION SYNDROME; RADIOCHEMISTRY; RHODIUM 106; SKELETON; STRONTIUM 89; STRONTIUM 90; TELLURIUM 129; YTTRIUM 90; ZIRCONIUM 95
Broader Terms: ALKALINE EARTH ISOTOPES; BETA DECAY RADIOISOTOPES; BETA-MINUS DECAY RADIOISOTOPES; BIOLOGICAL EFFECTS; BODY; CERIUM ISOTOPES; CHEMISTRY; CHROMATOGRAPHY; DAYS LIVING RADIOISOTOPES; DIAGNOSTIC TECHNIQUES; DIGESTIVE SYSTEM; DISTRIBUTION; EVEN-EVEN NUCLEI ; EVEN-ODD NUCLEI; EXPLOSIONS; GLANDS; HAZARDS; HEALTH HAZARDS; HOURS LIVING RADIOISOTOPES; INTERMEDIATE MASS NUCLEI; ISLANDS; ISOMERIC TRANSITION ISOTOPES; ISOTOPES; MARSHALL ISLANDS; MICRONESIA; MINUTES LIVING RADIOISOTOPES; NIOBIUM ISOTOPES; NUCLEI; OCEANIA; ODD-EVEN NUCLEI; ODD-ODD NUCLEI; ORGANS; PRASEODYMIUM ISOTOPES; RADIATION EFFECTS; RADIOISOTOPES; RARE EARTH ISOTOPES; RARE EARTH NUCLEI; RHODIUM ISOTOPES; SECONDS LIVING RADIOISOTOPES; SEPARATION PROCESSES; STRONTIUM ISOTOPES; TELLURIUM ISOTOPES; YEARS LIVING RADIOISOTOPES; YTTRIUM ISOTOPES; ZIRCONIUM ISOTOPES
Subject Categories: 560161* -- Radionuclide Effects, Kinetics, & Toxicology -- Man
560171 -- Radiation Effects -- Nuclide Kinetics & Toxicology -- Man -- (-1987)
400702 -- Radiochemistry & Nuclear Chemistry -- Properties of

Radioactive Materials
450200 -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives

10/5/877 (Item 577 from file: 103)
00652300 EDB-80-091825
Title: Estimate of radiation doses received by the individuals aboard a contaminated fishing boat
Author(s): Yamazaki, F.; Kakehi, K.
Source: Radioisotopes (Tokyo) (Japan) v 3:1. Coden: RAISA
Publication Date: 1954 p 4-6
Document Type: Journal Article
Language: English
Journal Announcement: EDB8008
Subfile: TIC (Technical Information Center).
Country of Origin: Japan
Abstract: A dose was estimated to be 120 r. in 24 hours or 270 r. in 13 days when calculated according to t/sup -1/ /sup 2/; pr 240 r. in 24 hours or 440 r. in 13 days when calculated according to t/sup -1/ /sup 4/, observed value of decay, and supposing exposure to the radiation began 6 hours after the explosion had occurred on Bikini.;
Major Descriptors: *FALLOUT -- RADIATION HAZARDS; *MAN -- RADIATION DOSES; *NUCLEAR EXPLOSIONS -- FALLOUT
Descriptors: BIKINI; SHIPS; TIME DEPENDENCE
Broader Terms: ANIMALS; DOSES; EXPLOSIONS; HAZARDS; HEALTH HAZARDS; ISLANDS ; MAMMALS; MARSHALL ISLANDS; MICRONESIA; OCEANIA; PRIMATES; VERTEBRATES
Subject Categories: 560151* -- Radiation Effects on Animals -- Man
560171 -- Radiation Effects -- Nuclide Kinetics & Toxicology -- Man -- (-1987)
450200 -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives

10/5/878 (Item 578 from file: 103)
00652298 EDB-80-091823
Title: Response of human beings accidentally exposed to significant fallout radiation
Author(s): Cronkite, E.P.; Bond, V.P.; Conrad, R.A.; Shulman, N.R.; Farr, R.S.; Cohn, S.H.; Dunham, C.L.; Browning, E.
Source: J. Am. Med. Assoc. (United States) v 159. Coden: JAMAA
Publication Date: 1955 p 430-434
Document Type: Journal Article
Language: English
Journal Announcement: EDB8008
Subfile: TIC (Technical Information Center).
Country of Origin: United States
Abstract: After detonation of a thermonuclear device in the Marshall Islands in the spring of 1954, radioactive fall-out occurred over an area of thousands of square miles beyond the range of thermal and blast injury. Marshallese and Americans were accidently exposed on Islands in the area, receiving whole-body radiation, beta radiation injury to skin, and minimal internal contamination.;
Major Descriptors: *FALLOUT -- RADIATION HAZARDS; *HUMAN POPULATIONS -- RADIATION INJURIES; *HUMAN POPULATIONS -- WHOLE-BODY IRRADIATION; *SKIN -- RADIATION INJURIES
Descriptors: ACCIDENTS; BETA DECAY RADIOISOTOPES; INTERNAL IRRADIATION; MARSHALL ISLANDS; NUCLEAR EXPLOSIONS
Broader Terms: BIOLOGICAL EFFECTS; BIOLOGICAL RADIATION EFFECTS; BODY; EXPLOSIONS; EXTERNAL IRRADIATION; HAZARDS; HEALTH HAZARDS; INJURIES; IRRADIATION; ISLANDS; ISOTOPES; MICRONESIA; OCEANIA; ORGANS; POPULATIONS; RADIATION EFFECTS; RADIOISOTOPES
Subject Categories: 560151* -- Radiation Effects on Animals -- Man
560161 -- Radionuclide Effects, Kinetics, & Toxicology -- Man
450200 -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives

10/5/879 (Item 579 from file: 103)

5004012

00652296 EDB-80-091821
Title: Skin lesions, epilation and nail pigmentation in Marshallese and Americans accidentally contaminated with radioactive fallout
Author(s): Conrad, R.A.; Shulman, N.R.; Wood, D.A.; Dunham, C.L.; Alpen, E.L.; Eugene, L.E.
Source: Science (United States) v 122. Coden: SCIEA
Publication Date: 1955 p 1178-1179
Document Type: Journal Article
Language: English
Journal Announcement: EDB8008
Subfile: TIC (Technical Information Center).
Country of Origin: United States
Abstract: The majority of individuals exposed to fallout material complained of burning and itching of the skin during the first 24 to 48 hours after exposure. Epilation and skin lesions were observed, beginning approximately 2 to 3 weeks after exposure on skin areas contaminated with fallout. Bluish-brown pigmentation of the fingernails was a common finding. Individuals in the highest exposure group developed more extensive and severe lesions and epilation (90% of 64 people).;
Major Descriptors: *EPILATION -- RADIOINDUCTION; *HUMAN POPULATIONS -- RADIATION INJURIES; *NAILS -- BIOLOGICAL RADIATION EFFECTS; *PIGMENTS -- BIOLOGICAL RADIATION EFFECTS; *SKIN -- BIOLOGICAL RADIATION EFFECTS; *ULCERS -- RADIOINDUCTION
Descriptors: ACCIDENTS; CONTAMINATION; FALLOUT; FISSION PRODUCTS; MARSHALL ISLANDS; NUCLEAR EXPLOSIONS; SYMPTOMS
Broader Terms: BIOLOGICAL EFFECTS; BIOLOGICAL RADIATION EFFECTS; BODY; DISEASES; EXPLOSIONS; INJURIES; ISLANDS; ISOTOPES; MICRONESIA; OCEANIA; ORGANS; PATHOLOGICAL CHANGES; POPULATIONS; RADIATION EFFECTS; RADIOACTIVE MATERIALS; SKIN
Subject Categories: 560151* -- Radiation Effects on Animals -- Man
450200 -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives

10/5/880 (Item 580 from file: 103)
00651824 EDB-80-091349
Title: Studies on the radioactivity in certain pelagic fish. III. Separation and confirmation of /sup 65/Zn in the muscle tissue of a skipjack
Author(s): Yamada, K.; Tozawa, H.; Amano, K.; Takase, A.
Source: Nippon Suisan Gakkaishi (Japan) v 20:10. Coden: NSUGA
Publication Date: 1955 p 921-926
Document Type: Journal Article
Language: English
Journal Announcement: EDB8008
Subfile: TIC (Technical Information Center).
Country of Origin: Japan
Abstract: Ashed sample of the muscle tissue of skipjack, which were caught by Shunkotsu-Maru on June 19th near Bikini Atoll was used for the present study. Ion exchanger method, using Dowex 50, was applied to separate radioactive elements with 0.2 HCl, 0.5% oxalic acid and 5% annonium citrate (pH 3.53, 4.18, 4.60, 5.02, 5.63 and 6.42) as the eluents. Elution curve of the ashed muscle is shown in Figure 1. Appreciable amounts of cationic radioactive elements were separated by 0.5% oxalic and by 5% annonium citrate at the pH of 4.18 and also anionic radioactive elements were obtained by 0.2N HCl. As the fraction, which can be withdrawn by annonium citrate as pH 4.18, was proved the most active; further analysis was undertaken according to the scheme cited in Figures 2 and 5. In addition to these chemical separation, absorption curve of this specimen with tin foil was examined simultaneously (Figure 3) and thus the radioactive /sup 65/Zn was confirmed to be present in the fish muscle. Although it was difficult to detect radioactivity in rare-earth and alkaline-earth groups in the muscle tissue, attempts are being made for more precise examination.;
Major Descriptors: *FISHES -- RADIOACTIVITY; *MUSCLES -- QUALITATIVE

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CHEMICAL ANALYSIS; *ZINC 65 -- ABSORPTION SPECTROSCOPY; *ZINC 65 -- ION EXCHANGE CHROMATOGRAPHY
Descriptors: BIKINI; FALLOUT; NUCLEAR EXPLOSIONS; SEPARATION PROCESSES
Broader Terms: ANIMALS; AQUATIC ORGANISMS; BETA DECAY RADIOISOTOPES; BETA-PLUS DECAY RADIOISOTOPES; CHEMICAL ANALYSIS; CHROMATOGRAPHY; DAYS LIVING RADIOISOTOPES; ELECTRON CAPTURE RADIOISOTOPES; EVEN-ODD NUCLEI; EXPLOSIONS; INTERMEDIATE MASS NUCLEI; ISLANDS; ISOTOPES; MARSHALL ISLANDS; MICRONESIA; NUCLEI; OCEANIA; RADIOISOTOPES; SEPARATION PROCESSES; SPECTROSCOPY; VERTEBRATES; ZINC ISOTOPES
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

10/5/881 (Item 581 from file: 103)
00651823 EDB-80-091348
Title: Radioactive material in the radiologically contaminated fishes caught in the Pacific Ocean in 1954
Author(s): Saiki, M.; Okano, S.; Mori, T.
Source: Nippon Suisan Gakkaishi (Japan) v 20. Coden: NSUGA
Publication Date: 1955 p 902-906
Document Type: Journal Article
Language: English
Journal Announcement: EDB8008
Subfile: TIC (Technical Information Center).
Country of Origin: Japan
Abstract: The radioactivity of several samples of Coryphaena Hippyrus caught in the southern Pacific in May, 1954, after the atomic explosion at Bikini, was found, in decreasing order, in spleen, kidney, liver, pyloric ceca, heart, gill, intestine, gastric wall, ovary, testis, gastric content, red muscle, skin, vertebrae, and muscle. The red muscle of Neothunnus Macropterus showed 54.8 counts/min./0.20 g. activity on dry basis, the activity was decreased to 27.6 by soaking 25 g. muscle in 25 cc. water, and to 14.1 by soaking in 0.5% Na ethylenediaminetetraacetate solution. The radioactive substances in these fish tissues were found, upon analysis, to belong to the III group, particularly to III-B group. Examination of synchroscope patterns by scintillation counter indicated the presence of /sup 65/Zn among the radioactive substances. /sup 90/Sr was suggested to be present in very small amount.;
Major Descriptors: *FISHES -- CONTAMINATION; *FISSION PRODUCTS -- TISSUE DISTRIBUTION
Descriptors: BIKINI; GILLS; HEART; INTESTINES; KIDNEYS; LIVER; MUSCLES; NUCLEAR EXPLOSIONS; OVARIES; PACIFIC OCEAN; RADIOACTIVITY; RADIONUCLIDE KINETICS; SKIN; SPLEEN; STOMACH; STRONTIUM 90; TESTES; VERTEBRAE; ZINC 65
Broader Terms: ALKALINE EARTH ISOTOPES; ANIMALS; AQUATIC ORGANISMS; BETA DECAY RADIOISOTOPES; BETA-MINUS DECAY RADIOISOTOPES; BETA-PLUS DECAY RADIOISOTOPES; BODY; CARDIOVASCULAR SYSTEM; DAYS LIVING RADIOISOTOPES; DIGESTIVE SYSTEM; DISTRIBUTION; ELECTRON CAPTURE RADIOISOTOPES; EVEN-EVEN NUCLEI; EVEN-ODD NUCLEI; EXPLOSIONS; FEMALE GENITALS; GASTROINTESTINAL TRACT; GLANDS; GONADS; INTERMEDIATE MASS NUCLEI; ISLANDS; ISOTOPES; MALE GENITALS; MARSHALL ISLANDS; MICRONESIA; NUCLEI; OCEANIA; ORGANS; RADIOACTIVE MATERIALS; RADIOISOTOPES; RESPIRATORY SYSTEM; SEAS; SKELETON; STRONTIUM ISOTOPES; SURFACE WATERS; VERTEBRATES ; YEARS LIVING RADIOISOTOPES; ZINC ISOTOPES
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

410405

10/5/882 (Item 582 from file: 103)
00651822 EDB-80-091347
Title: Radioactivity in the pelagic fish. III. Separation and identification of zinc-65 in the muscle of skipjack
Source: Nippon Suisan Gakkaishi (Japan) v 20. Coden: NSUGA
Publication Date: 1955 p 921-926
Document Type: Journal Article
Language: English
Journal Announcement: EDB8008
Subfile: TIC (Technical Information Center).
Country of Origin: Japan
Abstract: Muscles of Skipjack caught in the vicinity of the Bikini Atolls after the explosion were aashed, treated with Dowex 50, and eluted with various solvents. A fraction obtained with 0.5% oxalic acid and ammonium citrate (pH 4.18) contained /sup 65/Zn.;
Major Descriptors: *FISHES -- RADIONUCLIDE KINETICS; *MUSCLES -- RADIOCHEMICAL ANALYSIS; *ZINC 65 -- RADIOCHEMICAL ANALYSIS
Descriptors: BIKINI; NUCLEAR EXPLOSIONS; SEPARATION PROCESSES
Broader Terms: ANIMALS; AQUATIC ORGANISMS; BETA DECAY RADIOISOTOPES; BETA-PLUS DECAY RADIOISOTOPES; CHEMICAL ANALYSIS; DAYS LIVING RADIOISOTOPES; ELECTRON CAPTURE RADIOISOTOPES; EVEN-ODD NUCLEI; EXPLOSIONS; INTERMEDIATE MASS NUCLEI; ISLANDS; ISOTOPES; MARSHALL ISLANDS; MICRONESIA; NUCLEI; OCEANIA; RADIOISOTOPES; VERTEBRATES; ZINC ISOTOPES
Subject Categories: 520302* -- Environment, Aquatic -- Radioactive Materials Monitoring & Transport -- Aquatic Ecosystems & Food Chains -- (-1987)
450200 -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives

10/5/883 (Item 583 from file: 103)
00651820 EDB-80-091345
Title: Radiologic contamination of fish. II. Actual state of radiologic contamination in fish and its possible routes on the basis of the findings of the Bikini Expedition
Author(s): Kawabata, T.
Source: Jpn. J. Med. Sci. Biol. (Japan) v 8. Coden: JJMCA
Publication Date: 1955 p 347-358
Document Type: Journal Article
Language: English
Journal Announcement: EDB8008
Subfile: TIC (Technical Information Center).
Country of Origin: Japan
Abstract: The contamination of large fish is chiefly from their food.;
Major Descriptors: *FISHES -- CONTAMINATION
Descriptors: BIKINI; ENVIRONMENTAL EXPOSURE PATHWAY; FOOD; RADIOACTIVITY
Broader Terms: ANIMALS; AQUATIC ORGANISMS; ISLANDS; MARSHALL ISLANDS; MICRONESIA; OCEANIA; VERTEBRATES
Subject Categories: 520302* -- Environment, Aquatic -- Radioactive Materials Monitoring & Transport -- Aquatic Ecosystems & Food Chains -- (-1987)

10/5/884 (Item 584 from file: 103)
00651819 EDB-80-091344
Title: Biological concentration by killer clams of cobalt-60 from radioactive fallout
Author(s): Weiss, H.V.; Shipman, W.H.
Source: Science (United States) v 125. Coden: SCIEA
Publication Date: 1957 p 695
Document Type: Journal Article
Language: English
Journal Announcement: EDB8008
Subfile: TIC (Technical Information Center).
Country of Origin: United States
Abstract: In 2 specimens of Tridacna Gigas recovered from the shores of

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Rongelap Island 2 years after the March, 1954, nuclear detonation, readily detectable amounts of both ..beta..- and ..gamma..-radiation were present. The activity was attributable to /sup 60/Co (I) to the extent of 63 and 85% of the gross ..gamma..-activity. As it is not a component of fission products, it is assumed that it was induced from an environmental precursor possibly /sup 59/Co, by the neutron flux accompanying the detonation. It was not detected in samples collected one year after the detonation; this points to an enormous concentrating capacity of Tridacna gigas.;

Major Descriptors: *COBALT 60 -- UPTAKE; *MOLLUSCS -- RADIOECOLOGICAL CONCENTRATION; *NUCLEAR EXPLOSIONS -- FALLOUT

Descriptors: BETA PARTICLES; BIOLOGICAL ACCUMULATION; COBALT 59; GAMMA RADIATION; MARSHALL ISLANDS

Broader Terms: ANIMALS; AQUATIC ORGANISMS; BETA DECAY RADIOISOTOPES; BETA-MINUS DECAY RADIOISOTOPES; CHARGED PARTICLES; COBALT ISOTOPES; ECOLOGICAL CONCENTRATION; ELECTROMAGNETIC RADIATION; EXPLOSIONS; INTERMEDIATE MASS NUCLEI; INTERNAL CONVERSION RADIOISOTOPES; INVERTEBRATES; IONIZING RADIATIONS; ISLANDS; ISOMERIC TRANSITION ISOTOPES; ISOTOPES; MICRONESIA; MINUTES LIVING RADIOISOTOPES; NUCLEI; OCEANIA; ODD-EVEN NUCLEI; ODD-ODD NUCLEI; RADIATIONS; RADIOISOTOPES; STABLE ISOTOPES; YEARS LIVING RADIOISOTOPES

Subject Categories: 520302* -- Environment, Aquatic -- Radioactive Materials Monitoring & Transport -- Aquatic Ecosystems & Food Chains -- (-1987)
450200 -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives

10/5/885 (Item 585 from file: 103)
00651816 EDB-80-091341

Title: Radiochemical analysis of radio-nuclides in sea water collected near Bikini Atoll

Author(s): Miyake, Y.; Sugiura, Y.

Source: Pap. Meteorol. Geophys. (Tokyo) (Japan) v 6. Coden: PMGTA

Publication Date: 1955 p 33-37

Document Type: Journal Article

Language: English

Journal Announcement: EDB8008

Subfile: TIC (Technical Information Center).

Country of Origin: Japan

Abstract: A radiochemical analysis of sea water containing fission materials collected near Bikini Atoll in June, 1954, was performed. The sea water was boiled with hydrochloric acid, iron and lanthanum salts each 5 mg as Fe and La were added to it. They were precipitated as hydroxide, which was dissolved in hydrochloric acid and ferric chloride was extracted with ethyl ether. The remaining solution was evaporated to dryness and the residue was dissolved in hydrochloric acid. Using the latter solution the group separation was done with cation exchanger resins.;

Major Descriptors: *FISSION PRODUCTS -- RADIOCHEMICAL ANALYSIS; *SEAWATER -- RADIOCHEMICAL ANALYSIS

Descriptors: BIKINI; CATIONS; FALLOUT; ION EXCHANGE; RADIOISOTOPES; RESINS; SAMPLING; SEPARATION PROCESSES

Broader Terms: CHARGED PARTICLES; CHEMICAL ANALYSIS; HYDROGEN COMPOUNDS; IONS; ISLANDS; ISOTOPES; MARSHALL ISLANDS; MICRONESIA; OCEANIA; ORGANIC COMPOUNDS; ORGANIC POLYMERS; OXYGEN COMPOUNDS; PETROCHEMICALS; PETROLEUM PRODUCTS; POLYMERS; RADIOACTIVE MATERIALS; WATER

Subject Categories: 520301* -- Environment, Aquatic -- Radioactive Materials Monitoring & Transport -- Water -- (1987)
450200 -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives

500410

10/5/886 (Item 586 from file: 103)
00651737 EDB-80-091262

Title: Analysis of radioactive fallout of the atomic bomb explosion on Bikini

Author(s): Kimura, K.

Source: Radioisotopes (Tokyo) (Japan) v 3. Coden: RAISA
Publication Date: 1954 p 1-4
Document Type: Journal Article
Language: English
Journal Announcement: EDB8008
Subfile: TIC (Technical Information Center).
Country of Origin: Japan
Abstract: The radioactive fallout was found to contain 55.2, 7.0, 11.8, and 26.0% of CaO, MgO, CO/sub 2/, and H/sub 2/O, respectively, the chief constituent being Ca(OH)/sub 2/. The electric-spark method of analysis showed the presence of Al, Fe, and Si in addition to Ca and Mg. Its decay curve followed I = ct/sup -1/ /sup 37/, where I represents radioactivity, t, time since the explosion took place, March 1, 1954, and c, const. Its specific activity measured on April 23, 1954, was 0.37 mc./g. Radioactive nuclei identified by March 26 were /sup 89/Sr, /sup 90/Sr, /sup 91/Y, /sup 95/Sr, /sup 95m/Nb, /sup 95/Nb, /sup 103/Ru, /sup 106/Rh, /sup 129m/Te, /sup 129/Te, /sup 132/Te, /sup 131/I, /sup 132/I, /sup 140/Ba, /sup 141/Ce, /sup 144/Ce, /sup 143/Pr, /sup 144/Pr, /sup 147/Nd, /sup 147/Pm, /sup 35/S, /sup 45/Ca, /sup 237/U, and /sup 239/Pu.;
Major Descriptors: *FALLOUT -- CHEMICAL ANALYSIS; *NUCLEAR EXPLOSIONS -- FALLOUT
Descriptors: ALUMINIUM; BARIUM 140; BIKINI; CALCIUM 45; CALCIUM HYDROXIDES; CALCIUM OXIDES; CARBON DIOXIDE; CERIUM 141; CERIUM 144; DECAY; IODINE 131; IODINE 132; IRON; MAGNESIUM OXIDES; NEODYMIUM 147; NIOBIUM 95; PLUTONIUM 239; PRASEODYMIUM 143; PRASEODYMIUM 144; PROMETHIUM 147; QUALITATIVE CHEMICAL ANALYSIS; QUANTITATIVE CHEMICAL ANALYSIS; RHODIUM 106; RUTHENIUM 103; SILICON; STRONTIUM 89; STRONTIUM 90; STRONTIUM 95; SULFUR 35; TELLURIUM 129; TELLURIUM 132; URANIUM 237; WATER; YTTRIUM 91
Broader Terms: ACTINIDE ISOTOPES; ACTINIDE NUCLEI; ALKALINE EARTH ISOTOPES; ALKALINE EARTH METAL COMPOUNDS; ALPHA DECAY RADIOISOTOPES; BARIUM ISOTOPES; BETA DECAY RADIOISOTOPES; BETA-MINUS DECAY RADIOISOTOPES; CALCIUM COMPOUNDS; CALCIUM ISOTOPES; CARBON COMPOUNDS; CARBON OXIDES; CERIUM ISOTOPES; CHALCOGENIDES; CHEMICAL ANALYSIS; DAYS LIVING RADIOISOTOPES; ELEMENTS; EVEN-EVEN NUCLEI; EVEN-ODD NUCLEI; EXPLOSIONS; HEAVY NUCLEI; HOURS LIVING RADIOISOTOPES; HYDROGEN COMPOUNDS; HYDROXIDES; INTERMEDIATE MASS NUCLEI; INTERNAL CONVERSION RADIOISOTOPES ; IODINE ISOTOPES; ISLANDS; ISOMERIC TRANSITION ISOTOPES; ISOTOPES; LIGHT NUCLEI; MAGNESIUM COMPOUNDS; MARSHALL ISLANDS; METALS; MICRONESIA ; MINUTES LIVING RADIOISOTOPES; NEODYMIUM ISOTOPES; NIOBIUM ISOTOPES; NUCLEI; OCEANIA; ODD-EVEN NUCLEI; ODD-ODD NUCLEI; OXIDES; OXYGEN COMPOUNDS; PLUTONIUM ISOTOPES; PRASEODYMIUM ISOTOPES; PROMETHIUM ISOTOPES; RADIOISOTOPES; RARE EARTH ISOTOPES; RARE EARTH NUCLEI; RHODIUM ISOTOPES; RUTHENIUM ISOTOPES; SECONDS LIVING RADIOISOTOPES; SEMIMETALS; STRONTIUM ISOTOPES; SULFUR ISOTOPES; TELLURIUM ISOTOPES; TRANSITION ELEMENTS; URANIUM ISOTOPES; YEARS LIVING RADIOISOTOPES; YTTRIUM ISOTOPES
Subject Categories: 500300* -- Environment, Atmospheric -- Radioactive Materials Monitoring & Transport -- (-1989)
450200 -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives

10/5/887 (Item 587 from file: 103)
00651736 EDB-80-091261
Title: Colloid morphological and crystalline studies in Bikini dust from the No. 5 Fukuryu Maru by electron microscopy and diffraction methods
Author(s): Suito, E.; Takiyama, K.; Uyeda, N.
Source: Bull. Inst. Chem. Res., Kyoto Univ. (Japan) Coden: BICRA
Publication Date: 1954 p 18-28
Document Type: Journal Article
Language: English
Journal Announcement: EDB8008
Subfile: TIC (Technical Information Center).
Country of Origin: Japan
Abstract: Dust was collected from the deck, fishes, and other parts of the ship. The dust was white granules, approximately 0.3 mm. in size and

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sp. gr. 2.42. These granules were composed of unit particles which were cubic or spindle of 0.1 to 3. ..mu.. in size. The Bikini dust was calcite as determined by electron microdiffraction and x-ray diffraction studies. The coral reef is aragonite. It is suggested that coral reef was evapd. by the H-bomb explosion.;
Major Descriptors: *FALLOUT -- CRYSTAL STRUCTURE; *FALLOUT -- STRUCTURAL CHEMICAL ANALYSIS
Descriptors: ARAGONITE; BIKINI; CALCITE; COLLOIDS; CORALS; DUSTS; ELECTRON MICROSCOPY; NUCLEAR EXPLOSIONS; PARTICLE SIZE; X-RAY DIFFRACTION
Broader Terms: ALKALINE EARTH METAL COMPOUNDS; CALCIUM CARBONATES; CALCIUM COMPOUNDS; CARBON COMPOUNDS; CARBONATES; CNIDARIA; COHERENT SCATTERING; DIFFRACTION; DISPERSIONS; EXPLOSIONS; ISLANDS; MARSHALL ISLANDS; MICRONESIA; MICROSCOPY; MINERALS; OCEANIA; OXYGEN COMPOUNDS; SCATTERING ; SIZE
Subject Categories: 500300* -- Environment, Atmospheric -- Radioactive Materials Monitoring & Transport -- (-1989)
450200 -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives

10/5/888 (Item 588 from file: 103)
00651734 EDB-80-091259
Title: Radioautographic studies of the radioactive ashes obtained from the No. 5 Fukuryu Maru
Author(s): Kikuchi, T.; Akagi, H.; Goto, H.; Wakisaka, G.
Source: Bull. Inst. Chem. Res., Kyoto Univ. (Japan) Coden: BICRA
Publication Date: 1954 p 12-17
Document Type: Journal Article
Language: English
Journal Announcement: EDB8008
Subfile: TIC (Technical Information Center).
Country of Origin: Japan
Abstract: Radioautographic studies have been made of the radioactive ashes obtained from the ship by use of x-ray film, radioautographic stripping plates, and plates of ..cap alpha..-emitters. The radioactivity was found not proportional to the size of the particle, and the distribution of radioactivity in each particle was not uniform.;
Major Descriptors: *FALLOUT -- AUTORADIOGRAPHY
Descriptors: ALPHA DECAY RADIOISOTOPES; ASHES; BIKINI; NUCLEAR EXPLOSIONS; PARTICLE SIZE; PHOTOGRAPHIC FILMS; RADIOACTIVITY; SPATIAL DISTRIBUTION
Broader Terms: DISTRIBUTION; EXPLOSIONS; ISLANDS; ISOTOPES; MARSHALL ISLANDS; MICRONESIA; OCEANIA; RADIOISOTOPES; RESIDUES; SIZE
Subject Categories: 500300* -- Environment, Atmospheric -- Radioactive Materials Monitoring & Transport -- (-1989)
450200 -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives

10/5/889 (Item 589 from file: 103)
00651733 EDB-80-091258
Title: Radioautographic studies of the materials obtained from the No. 5 Fukuryu Maru contaminated by radioactive ashes
Author(s): Kikuchi, T.; Akagi, H.; Goto, H.; Wakisaka, G.
Source: Bull. Inst. Chem. Res., Kyoto Univ. (Japan) Coden: BICRA
Publication Date: 1954 p 29-34
Document Type: Journal Article
Language: English
Journal Announcement: EDB8008
Subfile: TIC (Technical Information Center).
Country of Origin: Japan
Abstract: The contamination was associated with the presence of small radioactive particles. Although these particles were easily scattered, it was difficult to remove them completely. The particles did not penetrate into the interior of clothes of fine meshes. Decontamination by washing with sea water was not perfect.;
Major Descriptors: *CLOTHING -- DECONTAMINATION; *FALLOUT -- AUTORADIOGRAPHY
Descriptors: ASHES; BIKINI; CONTAMINATION; NUCLEAR EXPLOSIONS; PARTICLES;

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SEAWATER; WASHING
Broader Terms: CLEANING; EXPLOSIONS; HYDROGEN COMPOUNDS; ISLANDS; MARSHALL ISLANDS; MICRONESIA; OCEANIA; OXYGEN COMPOUNDS; RESIDUES; WATER
Subject Categories: 500300* -- Environment, Atmospheric -- Radioactive Materials Monitoring & Transport -- (-1989)
450200 -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives

10/5/890 (Item 590 from file: 103)
00651732 EDB-80-091257
Title: Properties and size of the radioactive ashes obtained from the No. 5 Fukuryu Maru
Author(s): Kikuchi, T.; Wakisaka, G.; Akagi, H.; Goto, H.
Source: Bull. Inst. Chem. Res., Kyoto Univ. (Japan) Coden: BICRA
Publication Date: 1954 p 4-11
Document Type: Journal Article
Language: English
Journal Announcement: EDB8008
Subfile: TIC (Technical Information Center).
Country of Origin: Japan
Abstract: Size and radioactivity of the ashes collected from the ship have been measured. The ashes consisted of particles which appeared dark when observed through an occular microscope. When observed by side illumination the particles appeared white and several black spots were seen on the surfaces.;
Major Descriptors: *FALLOUT -- OPTICAL MICROSCOPY; *FALLOUT -- PARTICLE SIZE
Descriptors: ASHES; BIKINI; COLOR; NUCLEAR EXPLOSIONS; RADIOACTIVITY
Broader Terms: EXPLOSIONS; ISLANDS; MARSHALL ISLANDS; MICRONESIA; MICROSCOPY; OCEANIA; OPTICAL PROPERTIES; ORGANOLEPTIC PROPERTIES; PHYSICAL PROPERTIES; RESIDUES; SIZE
Subject Categories: 500300* -- Environment, Atmospheric -- Radioactive Materials Monitoring & Transport -- (-1989)
450200 -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives

10/5/891 (Item 591 from file: 103)
00651731 EDB-80-091256
Title: Presence of radioactive dusts over Calcutta
Author(s): Chatterjee, S.
Source: Sci. Cult. (India) v 19. Coden: SCINA
Publication Date: 1954 p 570-571
Document Type: Journal Article
Language: English
Journal Announcement: EDB8008
Subfile: TIC (Technical Information Center).
Country of Origin: India
Abstract: Particles collected from the grease of airplanes since April 8, 1954, and from the rain water of April 29, 1954, possess detectable ..beta..-activity but no ..cap alpha..- or ..gamma..-activity. From one grease sample a max. ..beta..-energy of 0.5 MeV was found. The activity is attributed to recent H-bomb detonations in the Pacific Ocean.;
Major Descriptors: *DUSTS -- RADIOACTIVITY; *GREASES -- RADIOACTIVITY; *INDIA -- RADIATION MONITORING; *RAIN -- RADIOACTIVITY
Descriptors: AIRCRAFT; BETA DETECTION; FALLOUT; MARSHALL ISLANDS; NUCLEAR EXPLOSIONS; PARTICLES
Broader Terms: ASIA; ATMOSPHERIC PRECIPITATIONS; CHARGED PARTICLE DETECTION ; DETECTION; DEVELOPING COUNTRIES; EXPLOSIONS; ISLANDS; LUBRICANTS; MICRONESIA; MONITORING; OCEANIA; RADIATION DETECTION
Subject Categories: 500300* -- Environment, Atmospheric -- Radioactive Materials Monitoring & Transport -- (-1989)
450200 -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives

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10/5/892 (Item 592 from file: 103)
00651729 EDB-80-091254

Title: Introduction to special collection of papers. Analysis of the Bikini ash
Author(s): Kimura, K.
Source: Jpn. Anal. (Japan) v 3. Coden: BNSKA
Publication Date: 1955 p 333-334
Document Type: Journal Article
Language: English
Journal Announcement: EDB8008
Subfile: TIC (Technical Information Center).
Country of Origin: Japan
Abstract: The incident of the Bikini ashes and the fishing boat is reported. Experiences on the boat are recorded, and fallout analyses are compared with those of Nagasaki and Hiroshima.;
Major Descriptors: *FALLOUT -- CHEMICAL ANALYSIS; *NUCLEAR EXPLOSIONS -- ASHES
Descriptors: BIKINI; HIROSHIMA; NAGASAKI
Broader Terms: ASIA; EXPLOSIONS; ISLANDS; JAPAN; MARSHALL ISLANDS; MICRONESIA; OCEANIA; RESIDUES
Subject Categories: 500300* -- Environment, Atmospheric -- Radioactive Materials Monitoring & Transport -- (-1989)
450200 -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives

10/5/893 (Item 593 from file: 103)
00651016 EDB-80-090541
Title: Studies of the analytical chemistry on filter paper. XVI. Paper chromatography of radioactive substance. Radiochemical studies on ''Bikini ashes''
Author(s): Nakano, S.
Source: Bull. Chem. Soc. Jpn. (Japan) v 29. Coden: BCSJA
Publication Date: 1956 p 219-224
Document Type: Journal Article
Language: English
Journal Announcement: EDB8008
Subfile: TIC (Technical Information Center).
Country of Origin: Japan
Abstract: Radioactivity from ''Bikini ashes'' and /sup 235/U fission is divided into 3 major groups by ion-exchange methods and then subdivided by paper chromatography. In the first group, TeO/sub 4/--, SO/sub 4/--, PO/sub 4//sup 3/-, and I-, as well as two /sup 106/Ru spots, are resolved in filter paper by iso-AmOH. /sup 137/Cs and /sup 144/Ce from the second and /sup 90/Y and /sup 90/Sr from the third group are separated also. It is shown that the presence of carrier or foreign elements alters the chromatographic behavior of the tracers.;
Major Descriptors: *ASHES -- QUALITATIVE CHEMICAL ANALYSIS; *NUCLEAR EXPLOSIONS -- ASHES
Descriptors: BIKINI; CERIUM 144; CESIUM 137; CHROMATOGRAPHY; IODINE; ION EXCHANGE; PHOSPHATES; RADIOCHEMISTRY; RUTHENIUM 106; STRONTIUM 90; SULFATES; TELLURIUM OXIDES; URANIUM 235; YTTRIUM 90
Broader Terms: ACTINIDE ISOTOPES; ACTINIDE NUCLEI; ALKALI METAL ISOTOPES; ALKALINE EARTH ISOTOPES; ALPHA DECAY RADIOISOTOPES; BETA DECAY RADIOISOTOPES; BETA-MINUS DECAY RADIOISOTOPES; CERIUM ISOTOPES; CESIUM ISOTOPES; CHALCOGENIDES; CHEMICAL ANALYSIS; CHEMISTRY; DAYS LIVING RADIOISOTOPES; ELEMENTS; EVEN-EVEN NUCLEI; EVEN-ODD NUCLEI; EXPLOSIONS; HALOGENS; HEAVY NUCLEI; HOURS LIVING RADIOISOTOPES; INTERMEDIATE MASS NUCLEI; ISLANDS; ISOMERIC TRANSITION ISOTOPES; ISOTOPES; MARSHALL ISLANDS; MICRONESIA; MINUTES LIVING RADIOISOTOPES; NONMETALS; NUCLEI; OCEANIA; ODD-EVEN NUCLEI; ODD-ODD NUCLEI; OXIDES; OXYGEN COMPOUNDS; PHOSPHORUS COMPOUNDS; RADIOISOTOPES; RARE EARTH ISOTOPES; RARE EARTH NUCLEI; RESIDUES; RUTHENIUM ISOTOPES; SEPARATION PROCESSES; STRONTIUM ISOTOPES; SULFUR COMPOUNDS; TELLURIUM COMPOUNDS; URANIUM ISOTOPES; YEARS LIVING RADIOISOTOPES; YTTRIUM ISOTOPES
Subject Categories: 400105* -- Separation Procedures
450200 -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives

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10/5/894 (Item 594 from file: 103)
00651015 EDB-80-090540
Title: Detection of rhodium-103m in the Bikini Ashes
Author(s): Kimura, K.; Ikeda, N.; Yoshihara, K.
Source: Bull. Chem. Soc. Jpn. (Japan) v 29. Coden: BCSJA
Publication Date: 1956 p 395-398
Document Type: Journal Article
Language: English
Journal Announcement: EDB8008
Subfile: TIC (Technical Information Center).
Country of Origin: Japan
Abstract: The radiochemical analysis of the so-called Bikini ashes which fell on a Japanese fishing boat, the No. 5 Fukuryu Maru on March 1, 1954, are described as of some 25 days after detonation of the bomb. The collected sample 10/sup 7/ counts/min.) was ignited and dissolved in 6N HCl, insolubles were filtered off, and the activity of small aliquots of the filtrate was measured. Total activity was estimated about 10/sup 6/ counts/min. Ru (10mg.) was added to the filtrate as a carrier, the acidity of solution was adjusted to 2N, H/sub 2/S was passed through to precipitate Ru as sulfide, and the precipitate was dissolved with HNO/sub 3/, H/sub 2/O, KMnO/sub 4/, and concentrated H/sub 2/O/sub 2/. The appropriate aliquot portion of the distillate was taken up in a counting dish and evaporated to dryness, the activity was measured and found to be 1.5 x 10/sup 5/ counts/min.;
Major Descriptors: *FALLOUT -- RADIOCHEMICAL ANALYSIS; *NUCLEAR EXPLOSIONS -- FALLOUT; *RHODIUM 103 -- RADIOCHEMICAL ANALYSIS
Descriptors: ASHES; BIKINI; FILTRATION; HYDROCHLORIC ACID; HYDROGEN PEROXIDE; HYDROGEN SULFIDES; ISOMERIC NUCLEI; NITRIC ACID; PH VALUE; POTASSIUM PERMANGANATES; RUTHENIUM; SHIPS
Broader Terms: ALKALI METAL COMPOUNDS; CHALCOGENIDES; CHEMICAL ANALYSIS; ELEMENTS; EXPLOSIONS; HYDROGEN COMPOUNDS; INORGANIC ACIDS; INTERMEDIATE MASS NUCLEI; INTERNAL CONVERSION RADIOISOTOPES; ISLANDS; ISOMERIC TRANSITION ISOTOPES; ISOTOPES; MANGANESE COMPOUNDS; MARSHALL ISLANDS; METALS; MICRONESIA; MINUTES LIVING RADIOISOTOPES; NUCLEI; OCEANIA; ODD-EVEN NUCLEI; OXYGEN COMPOUNDS; PERMANGANATES; PEROXIDES; PLATINUM METALS; POTASSIUM COMPOUNDS; RADIOISOTOPES; REFRACTORY METALS; RESIDUES ; RHODIUM ISOTOPES; SEPARATION PROCESSES; STABLE ISOTOPES; SULFIDES; SULFUR COMPOUNDS; TRANSITION ELEMENT COMPOUNDS; TRANSITION ELEMENTS
Subject Categories: 400105* -- Separation Procedures
450200 -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives
500300 -- Environment, Atmospheric -- Radioactive Materials Monitoring & Transport -- (-1989)

10/5/895 (Item 595 from file: 103)
00647457 INS-80-010750; ERA-05-028002; EDB-80-086982
Title: Ecological Research Division, Marine Research Program
Corporate Source: Department of Energy, Washington, DC (USA). Office of Health and Environmental Research
Publication Date: May 1980 p 90
Report Number(s): DOE/EV-0082
Document Type: Report
Language: English
Journal Announcement: EDB8007
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 report presents program summaries of the various projects sponsored during 1979 by the Marine Research Program of the Ecological Research Division. Program areas include the effects of petroleum hydrocarbons on the marine environment; a study of the baseline ecology of a proposed OTEC site near Puerto Rico; the environmental impact of offshore geothermal energy development; the movement of radionuclides through the marine environment; the environmental aspects of power

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plant cooling systems; and studies of the physical and biological oceangraphy of the continental shelves bordering the United States.;
Major Descriptors: *OCEANOGRAPHY -- RESEARCH PROGRAMS; *US DOE -- RESEARCH PROGRAMS
Descriptors: AQUATIC ECOSYSTEMS; BASELINE ECOLOGY; CONTINENTAL SHELF; COOLING SYSTEMS; ENERGY SOURCE DEVELOPMENT; ENVIRONMENTAL EFFECTS; GEOTHERMAL POWER PLANTS; HYDROCARBONS; MARSHALL ISLANDS; OCEAN THERMAL POWER PLANTS; OFFSHORE SITES; OIL SPILLS; PUERTO RICO; RADIOISOTOPES; RADIONUCLIDE MIGRATION; SEAS; WATER POLLUTION
Broader Terms: CONTINENTAL MARGIN; ECOLOGY; ECOSYSTEMS; ENVIRONMENTAL TRANSPORT; GREATER ANTILLES; ISLANDS; ISOTOPES; MASS TRANSFER; MICRONESIA; NATIONAL ORGANIZATIONS; OCEANIA; ORGANIC COMPOUNDS; POLLUTION; POWER PLANTS; SOLAR POWER PLANTS; SURFACE WATERS; THERMAL POWER PLANTS; US ORGANIZATIONS
Subject Categories: 580500* -- Oceanography -- (1980-1989)
520200 -- Environment, Aquatic -- Chemicals Monitoring & Transport -- (-1989)
520300 -- Environment, Aquatic -- Radioactive Materials Monitoring & Transport -- (1989)
200200 -- Fossil-Fueled Power Plants -- Waste Management
020900 -- Petroleum -- Environmental Aspects
150600 -- Geothermal Energy -- Environmental Aspects
140400 -- Solar Energy -- Environmental Aspects
INIS Subject Categories: C52* -- Radiation Hazards & Safety Evaluations of Nuclear Installations
B32 -- Water

10/5/896 (Item 596 from file: 103)
00646196 EDB-80-085721
Title: Mid-Pacific Marine Laboratory annual report FY1975, 1 July 1974-30 June 1975
Corporate Source: Hawaii Univ., Honolulu (USA)
Publication Date: 1975 p 108
Report Number(s): NVO-0628-T11
Contract Number (DOE): EY-76-S-08-0628
Document Type: Report
Language: English
Journal Announcement: EDB8008
Availability: NTIS, PC A06/MF A01.
Subfile: TIC (Technical Information Center).
Country of Origin: United States
Country of Publication: United States
Abstract: The report presents summaries of research programs conducted during 1975 in the following subject areas: biogeochemistry, lagoon oceanography, physiology, population ecology, behavioral ecology, and terrestrial ecology. (ACR);
Major Descriptors: *ENIWETOK -- RESEARCH PROGRAMS
Descriptors: AQUATIC ORGANISMS; BEHAVIOR; BENTHOS; BIOGEOCHEMISTRY; BIRDS; CORALS; ECOLOGY; OCEANOGRAPHY; PHYSIOLOGY; PLANTS; POPULATION DYNAMICS; RADIOISOTOPES; RATS
Broader Terms: ANIMALS; AQUATIC ORGANISMS; CHEMISTRY; CNIDARIA; GEOCHEMISTRY; ISLANDS; ISOTOPES; MAMMALS; MARSHALL ISLANDS; MICRONESIA; OCEANIA; RODENTS; VERTEBRATES
Subject Categories: 520100* -- Environment, Aquatic -- Basic Studies -- (-1989)
550100 -- Behavioral Biology
580500 -- Oceanography -- (1980-1989)
520302 -- Environment, Aquatic -- Radioactive Materials Monitoring & Transport -- Aquatic Ecosystems & Food Chains -- (-1987)

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10/5/897 (Item 597 from file: 103)
00639763 AIX-11-510704; EDB-80-079288
Title: Plutonium concentrations in fish and seawater from Kwajalein Atoll
Author(s): Noshkin, V.E.; Wong, K.M.; Eagle, R.J. (California Univ., Livermore (USA). Lawrence Livermore Lab.)
Source: Health Phys. (United Kingdom) v 37:4. Coden: HLTPA

Publication Date: Oct 1979 p 549-556
Document Type: Journal Article
Language: English
Journal Announcement: EDB8005
Subfile: AIX (non-US Atomindex input).
Country of Origin: United States

Abstract: A follow-up study has been made to assess the concentrations of /sup 239/ /sup 240/Pu and /sup 137/Cs in the marine environment of Kwajalein Atoll. Fish collected from the atoll in 1972 had body burdens of plutonium that were substantially higher than concentrations in similar species from locations contaminated only with global fallout. Recent results, however, indicated that Kwajalein lagoon seawater contained levels of plutonium more similar to global fallout levels found in north equatorial Pacific surface waters. No satisfactory explanation for the reported plutonium levels in fish from Kwajalein collected in 1972 could be deduced from the available data. The highest plutonium concentrations reported for the 1972 reef species of fish could expose man, through ingestion of marine foods, to a dose rate as high as 25% of the proposed EPA guideline for annual total transuranic dose rate to bone (3 mrad/yr over 70 yr). The present results show the dose rate from the marine food pathway is nearer to 0.005% of the recommended EPA value and is consistent with the view that Kwajalein Atoll contains plutonium concentrations that are expected from global fallout. The magnitude of the plutonium levels reported in fish collected from Kwajalein lagoon during 1972 was excessively high, and these results appear to be inconsistent with other environmental data from the lagoon. These results also show that concentration factors for plutonium in fish muscle and bone tissues appear to be independent of species, trophic level and location, which leads to the belief that there is a great deal of validity in the concept of a concentration factor for estimating concentrations of plutonium in fish.;

Major Descriptors: *CESIUM 137; *FISHES -- PLUTONIUM; *PLUTONIUM -- RADIOECOLOGICAL CONCENTRATION
Descriptors: BODY BURDEN; BONE TISSUES; DOSE RATES; ENVIRONMENTAL EXPOSURE PATHWAY; GLOBAL FALLOUT; HUMAN POPULATIONS; MARSHALL ISLANDS; MUSCLES; PLUTONIUM 239; PLUTONIUM 240; RADIONUCLIDE MIGRATION; SEAFOOD; SEAWATER
Broader Terms: ACTINIDE ISOTOPES; ACTINIDE NUCLEI; ACTINIDES; ALKALI METAL ISOTOPES; ALPHA DECAY RADIOISOTOPES; ANIMALS; AQUATIC ORGANISMS; BETA DECAY RADIOISOTOPES; BETA-MINUS DECAY RADIOISOTOPES; BODY; CESIUM ISOTOPES; CONNECTIVE TISSUE; ECOLOGICAL CONCENTRATION; ELEMENTS; ENVIRONMENTAL TRANSPORT; EVEN-EVEN NUCLEI; EVEN-ODD NUCLEI; FALLOUT; FISH PRODUCTS; FOOD; HEAVY NUCLEI; HYDROGEN COMPOUNDS; ISLANDS; ISOTOPES; MASS TRANSFER; METALS; MICRONESIA; NUCLEI; OCEANIA; ODD-EVEN NUCLEI; OXYGEN COMPOUNDS; PLUTONIUM ISOTOPES; POPULATIONS; RADIOISOTOPES; TISSUES; TRANSURANIUM ELEMENTS; VERTEBRATES; WATER; YEARS LIVING RADIOISOTOPES
Subject Categories: 520302* -- Environment, Aquatic -- Radioactive Materials Monitoring & Transport -- Aquatic Ecosystems & Food Chains -- (-1987)
053000 -- Nuclear Fuels -- Environmental Aspects
560172 -- Radiation Effects -- Nuclide Kinetics & Toxicology -- Animals -- (-1987)
INIS Subject Categories: C21* -- Tissue Distribution, Metabolism, Toxicology & Removal of Radionuclides

10/5/898 (Item 598 from file: 103)
00639758 ERA-05-026340; EDB-80-079283
Title: Bikini scientific resurvey. Volume II. Report of the technical director. Technical report
Corporate Source: Defense Atomic Support Agency, Washington, DC (USA)
Publication Date: Dec 1947 p 124
Report Number(s): AD-A-077490/1
Document Type: Report
Language: English
Journal Announcement: EDB8005

5004023

Availability: NTIS, PC A06/MF A01.
Subfile: ERA (Energy Research Abstracts); NTS (NTIS).
Country of Origin: United States
Country of Publication: United States
Abstract: Contents: Island and Reef Geology; Submarine Geology; Drilling Operations; Radiobiology Studies; Reef and Lagoon Fishes; Pelagic Fishes; Taxonomy and Teratology of Fishes; Invertebrate Embryology; Vertebrate Embryology; Reef and Lagoon Algae; Chemical Effects of Organisms Upon Sea Water; The Insect Population; Marine Invertebrates; Land Animals; Plankton Studies; Counter-Room Activities; Radiochemical Analyses; Soils Chemistry; Low-Level Radiation Studies; Army Engineering Studies; Aerological Data; Bacteriological Investigations; Radiological Safety; Radiological Health; Technical Director's Summary. ;
Major Descriptors: *BIKINI -- RADIOECOLOGY; *NUCLEAR EXPLOSIONS -- ENVIRONMENTAL EFFECTS
Descriptors: AQUATIC ECOSYSTEMS; CONTAMINATION; DAMAGE; ECOLOGY; ENVIRONMENT; GEOLOGY; OCEANOGRAPHY; PLANTS; RADIOBIOLOGY; SOILS; TESTING
Broader Terms: BIOLOGY; ECOLOGY; ECOSYSTEMS; EXPLOSIONS; ISLANDS; MARSHALL ISLANDS; MICRONESIA; OCEANIA
Subject Categories: 520301* -- Environment, Aquatic -- Radioactive Materials Monitoring & Transport -- Water -- (1987)
520302 -- Environment, Aquatic -- Radioactive Materials Monitoring & Transport -- Aquatic Ecosystems & Food Chains -- (-1987)

10/5/899 (Item 599 from file: 103)
00639757 ERA-05-026339; EDB-80-079282
Title: Bikini scientific resurvey. Volume I. Operations. Technical report
Corporate Source: Defense Atomic Support Agency, Washington, DC (USA)
Publication Date: Dec 1947 p 134
Report Number(s): AD-A-077489/3
Document Type: Report
Language: English
Journal Announcement: EDB8005
Availability: NTIS, PC A07/MF A01.
Subfile: ERA (Energy Research Abstracts); NTS (NTIS).
Country of Origin: United States
Country of Publication: United States
Abstract: Contents: Origin of the BIKINI SCIENTIFIC RESURVEY; Authorization of the BIKINI SCIENTIFIC RESURVEY; Mission of the BIKINI SCIENTIFIC RESURVEY; Task Force Organization; Staff Organization; Procurement of Personnel; Scientific Group Organization; Procurement of Equipment; and Early Planning.;
Major Descriptors: *BIKINI -- RADIOECOLOGY; *NUCLEAR EXPLOSIONS -- ENVIRONMENTAL EFFECTS
Descriptors: AQUATIC ECOSYSTEMS; CONTAMINATION; DAMAGE; ECOLOGY; ENVIRONMENT; GEOLOGY; OCEANOGRAPHY; PLANTS; RADIOBIOLOGY; SOILS; TESTING
Broader Terms: BIOLOGY; ECOLOGY; ECOSYSTEMS; EXPLOSIONS; ISLANDS; MARSHALL ISLANDS; MICRONESIA; OCEANIA
Subject Categories: 520301* -- Environment, Aquatic -- Radioactive Materials Monitoring & Transport -- Water -- (1987)
520302 -- Environment, Aquatic -- Radioactive Materials Monitoring & Transport -- Aquatic Ecosystems & Food Chains -- (-1987)

10/5/900 (Item 600 from file: 103)
00639713 ERA-05-026320; EDB-80-079238
Title: Bikini scientific resurvey. Volume II. Report of the technical director. Annex IV. Supplement. Technical report
Corporate Source: Defense Atomic Support Agency, Washington, DC (USA)
Publication Date: Dec 1947 p 50
Report Number(s): AD-A-077495/0
Document Type: Report
Language: English
Journal Announcement: EDB8005

5004024

Availability: NTIS, PC A03/MF A01.
Subfile: ERA (Energy Research Abstracts); NTS (NTIS).
Country of Origin: United States
Country of Publication: United States
Abstract: Contents: Radiochemical Analysis of Plutonium and Fission Products; and Soil Chemistry at Bikini.;
Major Descriptors: *BIKINI -- SOIL CHEMISTRY; *NUCLEAR EXPLOSIONS -- ENVIRONMENTAL EFFECTS
Descriptors: CONTAMINATION; DAMAGE; ECOLOGY; ENVIRONMENT; FISSION PRODUCTS; GEOLOGY; PLUTONIUM; RADIOCHEMISTRY; RADIOECOLOGICAL CONCENTRATION; SOILS; TESTING
Broader Terms: ACTINIDES; CHEMISTRY; ECOLOGICAL CONCENTRATION; ELEMENTS; EXPLOSIONS; ISLANDS; ISOTOPES; MARSHALL ISLANDS; METALS; MICRONESIA; OCEANIA; RADIOACTIVE MATERIALS; TRANSURANIUM ELEMENTS
Subject Categories: 510301* -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- Soil -- (-1987)
450200 -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives

10/5/901 (Item 601 from file: 103)
00639649 ERA-05-026287; EDB-80-079174
Title: Bikini scientific resurvey. Volume III. Report of the director of ship material. Annex II. USS Pilotfish (S.S.-386). Technical report
Corporate Source: Defense Atomic Support Agency, Washington, DC (USA)
Publication Date: Dec 1947 p 126
Report Number(s): AD-A-077493/5
Document Type: Report
Language: English
Journal Announcement: EDB8005
Availability: NTIS, PC A07/MF A01.
Subfile: ERA (Energy Research Abstracts); NTS (NTIS).
Country of Origin: United States
Country of Publication: United States
Abstract: The USS PILOTFISH was built of heavy hull construction at Portsmouth Naval Shipyard and was commissioned 16 December 1943. Ship characteristics are listed. A general and detailed description of damage is included for the USS PILOTFISH which was found sunk in about 29 fathoms of water, with the hulk buried in the bottom to about 12 ft. to 15 ft.;
Major Descriptors: *NUCLEAR EXPLOSIONS; *SHIPS -- DAMAGE; *SHIPS -- INSPECTION
Descriptors: BIKINI; CAMERAS; CONTAMINATION; PHOTOGRAPHY; TELEVISION CAMERAS; TESTING
Broader Terms: CAMERAS; EXPLOSIONS; ISLANDS; MARSHALL ISLANDS; MICRONESIA; OCEANIA
Subject Categories: 450200* -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives

10/5/902 (Item 602 from file: 103)
00639648 ERA-05-026286; EDB-80-079173
Title: Bikini scientific resurvey. Volume III. Report of the director of ship material. Annex I. USS Saratoga (CV-3). Technical report
Corporate Source: Defense Atomic Support Agency, Washington, DC (USA)
Publication Date: Dec 1947 p 212
Report Number(s): AD-A-077492/7
Document Type: Report
Language: English
Journal Announcement: EDB8005
Availability: NTIS, PC A10/MF A01.
Subfile: ERA (Energy Research Abstracts); NTS (NTIS).
Country of Origin: United States
Country of Publication: United States
Abstract: Ship characteristics of the USS SARATOGA (CV-3), are listed. A general and detailed description of damage is included for the SARATOGA which was found sunk in from 27 to 34 fathoms of water.;
Major Descriptors: *NUCLEAR EXPLOSIONS; *SHIPS -- DAMAGE; *SHIPS --

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INSPECTION
Descriptors: BIKINI; CAMERAS; CONTAMINATION; PHOTOGRAPHY; TELEVISION CAMERAS; TESTING
Broader Terms: CAMERAS; EXPLOSIONS; ISLANDS; MARSHALL ISLANDS; MICRONESIA; OCEANIA
Subject Categories: 450200* -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives

10/5/903 (Item 603 from file: 103)
00639647 ERA-05-026285; EDB-80-079172
Title: Bikini scientific resurvey. Volume III. Report of the director of ship material
Corporate Source: Defense Atomic Support Agency, Washington, DC (USA)
Publication Date: Dec 1947 p 48
Report Number(s): AD-A-077491/9
Document Type: Report
Language: English
Journal Announcement: EDB8005
Availability: NTIS, PC A03/MF A01.
Subfile: ERA (Energy Research Abstracts); NTS (NTIS).
Country of Origin: United States
Country of Publication: United States
Abstract: Inspections were made of the following sunken target ships: SARATOGA, PILOTFISH, APOGON, and NAGATO. A large number of photographs were made to supplement the inspections of the divers. Some of these photographs are incorporated in the body of the following report. Other pictures of less obvious value have been placed in the Annexes which accompany reports on the various ships, and the remainder have been preserved in an Appendix with the thought that some of them might reveal worth-while data upon expert examination.;
Major Descriptors: *NUCLEAR EXPLOSIONS; *SHIPS -- DAMAGE; *SHIPS -- INSPECTION
Descriptors: BIKINI; CAMERAS; CONTAMINATION; PHOTOGRAPHY; TELEVISION CAMERAS; TESTING
Broader Terms: CAMERAS; EXPLOSIONS; ISLANDS; MARSHALL ISLANDS; MICRONESIA; OCEANIA
Subject Categories: 450200* -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives

10/5/904 (Item 604 from file: 103)
00623168 EDB-80-062692
Title: Eniwetok Marine Biological Laboratory annual report, 1973-1974. Final report
Corporate Source: USAEC Division of Biology and Medicine, Washington, DC
Publication Date: (nd) p 61
Report Number(s): DOE/TIC-11180
Document Type: Report
Language: English
Journal Announcement: EDB8006
Availability: Dep. NTIS, PC A04/MF A01.
Subfile: TIC (Technical Information Center).
Country of Origin: United States
Country of Publication: United States
Abstract: This report is for the period 1 June 1973 through 30 June 1974. The Division of Biomedical and Environmental Research (DBER) of the US Atomic Energy Commission has supported the operation of the Eniwetok Marine Biological Laboratory (EMBL) for the past 20 years through Contract AT-(29-2)-226. During the period covered by this report, 74 scientists and support personnel were in residence at EMBL, and short reports on their accomplishments make up the bulk of this document.;
Major Descriptors: *ENIWETOK -- RESEARCH PROGRAMS
Descriptors: ANIMAL GROWTH; AQUATIC ORGANISMS; BEHAVIOR; BIOCHEMISTRY; BIRDS; CORALS; ECOLOGY; REEF
Broader Terms: ANIMALS; CHEMISTRY; CNIDARIA; GEOLOGIC STRUCTURES; GROWTH; ISLANDS; MARSHALL ISLANDS; MICRONESIA; OCEANIA; VERTEBRATES
Subject Categories: 520100* -- Environment, Aquatic -- Basic Studies --

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(-1989)
510100 -- Environment, Terrestrial -- Basic Studies -- (-1989)
550100 -- Behavioral Biology

10/5/905 (Item 605 from file: 103)
00623167 EDB-80-062691
Title: Eniwetok Marine Biological Laboratory annual report, 1971-1972
Corporate Source: USAEC Division of Biology and Medicine, Washington, DC
Publication Date: (nd) p 114
Report Number(s): DOE/TIC-11174
Document Type: Report
Language: English
Journal Announcement: EDB8006
Availability: Dep. NTIS, PC A06/MF A01.
Subfile: TIC (Technical Information Center).
Country of Origin: United States
Country of Publication: United States
Abstract: The Eniwetok Marine Biological Laboratory (EMBL) is located on Eniwetok Atoll in the northern Marshall Islands, 2380 miles southwest of Honolulu. The atoll consists of a chain of 42 islets surrounding an oval lagoon 25 miles long by 20 miles wide. EMBL has been operating for the past 18 years under contract to the Division of Biology and Medicine (DBM) of the US Atomic Energy Commission. This facility has afforded opportunities to an impressive number of scientists to study various aspects of the rich and varied biota of an Indo-Pacific atoll. During this reporting period 110 scientists worked on 76 separate research projects. Brief reports on each of these projects are presented.;
Major Descriptors: *ENIWETOK -- RESEARCH PROGRAMS
Descriptors: AQUATIC ORGANISMS; BEHAVIOR; BIRDS; CORALS; ECOLOGY; ENVIRONMENTAL TRANSPORT; ISLANDS; NUTRIENTS; POPULATION DYNAMICS; REEF; RODENTS
Broader Terms: ANIMALS; CNIDARIA; GEOLOGIC STRUCTURES; ISLANDS; MAMMALS; MARSHALL ISLANDS; MASS TRANSFER; MICRONESIA; OCEANIA; VERTEBRATES
Subject Categories: 520100* -- Environment, Aquatic -- Basic Studies -- (-1989)
510100 -- Environment, Terrestrial -- Basic Studies -- (-1989)
550100 -- Behavioral Biology

10/5/906 (Item 606 from file: 103)
00623158 EDB-80-062682
Title: Eniwetok Marine Biological Laboratory annual report, 1972-1973
Corporate Source: USAEC Division of Biomedical and Environmental Research, Washington, DC
Publication Date: 1973 p (nd)
Report Number(s): DOE/TIC-11179
Document Type: Report
Language: English
Journal Announcement: EDB8006
Availability: Dep. NTIS, PC A06/MF A01.
Subfile: TIC (Technical Information Center).
Country of Origin: United States
Country of Publication: United States
Abstract: The Eniwetok Marine Biological Laboratory (EMBL) is a research facility supported by the Division of Biomedical and Environmental Research (DBER) of the US Atomic Energy Commission under Contract AT-(29-2)-226. This facility is located on Eniwetok Atoll in the northern Marshall Islands (11/sup 0/21'N, 162/sup 0/21'E), 2380 miles southwest of Honolulu. The atoll is roughly elliptical in shape and consists of 42 islets surrounding a central lagoon of approximately 20 by 25 miles. The total land area is 2.26 square miles surrounding a lagoon of about 388 square miles in area. EMBL has been supported continuously by the AEC for the past 19 years, during which time it has afforded unique opportunities to 733 scientists to study the rich and varied biota of an Indo-Pacific atoll. During this reporting period 1 May 1972 to 31 May 1973, 99 scientists worked on 55 separate research

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projects. Brief reports on each of these projects are presented.;
Major Descriptors: *ENIWETOK -- RESEARCH PROGRAMS
Descriptors: ALGAE; AQUATIC ORGANISMS; BEHAVIOR; CORALS; ECOLOGY; FISHES; PHOTOSYNTHESIS; POPULATION DYNAMICS; REEF; RODENTS
Broader Terms: ANIMALS; AQUATIC ORGANISMS; CHEMICAL REACTIONS; CNIDARIA; GEOLOGIC STRUCTURES; ISLANDS; MAMMALS; MARSHALL ISLANDS; MICRONESIA; OCEANIA; PHOTOCHEMICAL REACTIONS; PLANTS; SYNTHESIS; VERTEBRATES
Subject Categories: 520100* -- Environment, Aquatic -- Basic Studies -- (-1989)
510100 -- Environment, Terrestrial -- Basic Studies -- (-1989)
550100 -- Behavioral Biology

10/5/907 (Item 607 from file: 103)
00617742 ERA-05-021122; EDB-80-057266
Author(s): Vizgirda, J.; Ahrens, T.J.
Title: Shock effects in carbonate minerals and rocks. Final report, 1 January-30 June 1978
Corporate Source: California Inst. of Tech., Pasadena (USA). Seismological Lab.
Publication Date: 30 Jun 1978 p 24
Report Number(s): AD-A-071372
Contract Number (DOE): DNA001-76-C-0218
Document Type: Report
Language: English
Journal Announcement: EDB7911
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 ESR spectra of Mn(++) in naturally and laboratory shocked calcite crystals and coral core samples were studied and variations in several spectral parameters were found to be correlative with shock pressure. The amount of splitting in the central transition hyperfine component peaks was observed to decrease in the upper levels of the Cactus Crater core and in core samples shocked in the laboratory to progressively higher pressures. A comparison of the splitting amplitude between the two types of samples allows pressure assignments to the Cactus core of 3.3 GPa at 8m. + or - 5m. and 2.0 GPa at 13m. + or - 5m. Unshocked coral core samples showed no splitting amplitude variation with depth. Results from coral subjected to a long duration pressure pulse in the Miser's Bluff TNT experiment are generally inconsistent. Laboratory shocked single crystal calcite showed similar decreases in hyperfine peak splitting but at pressure levels three times greater than those producing comparable coral sample spectra. The decrease in peak splitting is interpreted to reflect small increases in cation-anion distances produced by mechanical energy input during the shock process. Another parameter, the non-central to central transition peak amplitude, is observed to decrease with increasing pressure in spectra of single crystal calcite, and may provide a means of empirically correlating very low (less than 4.5 GPa) shock pressure levels in calcite.;
Major Descriptors: *CRATERING EXPLOSIONS -- SHOCK WAVES; *ROCKS -- SEISMIC EFFECTS
Descriptors: CALCITE; CARBONATES; ELECTRON SPIN RESONANCE; ENIWETOK; HIGH PRESSURE; HYPERFINE STRUCTURE; MONOCRYSTALS; NUCLEAR EXPLOSIONS; TNT
Broader Terms: ALKALINE EARTH METAL COMPOUNDS; CALCIUM CARBONATES; CALCIUM COMPOUNDS; CARBON COMPOUNDS; CARBONATES; CHEMICAL EXPLOSIVES; CRYSTALS; EXPLOSIONS; EXPLOSIVES; ISLANDS; MAGNETIC RESONANCE; MARSHALL ISLANDS; MICRONESIA; NITRO COMPOUNDS; OCEANIA; ORGANIC COMPOUNDS; ORGANIC NITROGEN COMPOUNDS; OXYGEN COMPOUNDS; RESONANCE
Subject Categories: 450200* -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives

5004028

10/5/908 (Item 608 from file: 103)
00612818 INS-80-006900; EDB-80-052341
Title: Spatial relationship of 1-m equatorial spread F irregularities and

plasma bubbles
Author(s): Tsunoda, R.T.
Affiliation: SRI International, Menlo Park, California 94025
Source: J. Geophys. Res. (United States) v 85:A1. Coden: JGREA
Publication Date: 1 Jan 1980 p 185-190
Document Type: Journal Article
Language: English
Journal Announcement: EDB8004
Subfile: INS (US Atomindex input); AIP (SPIN).
Country of Origin: United States
Abstract: A radar experiment was conducted on August 18, 1978, at Kwajalein Atoll, Marshall Islands, to investigate the spatial relationship of 1-m equatorial spread F irregularities to plasma bubbles (localized depletions in F layer plasma density). East-west scans were made with Altair, an incoherent scatter radar, to spatially map (1) the backscatter produced by field-aligned irregularities and (2) the electron density distribution of the background F layer. Plasma bubbles were spatially mapped for the first time with an incoherent scatter radar. By assuming invariance along the magnetic field lines (over distances of less than 100 km) we show that 1-m field-aligned irregularities are directly related to plasma bubbles.;
Major Descriptors: *IONOSPHERIC STORMS -- PLASMA DENSITY
Descriptors: ELECTRON DENSITY; F REGION; INCOHERENT SCATTERING; RADAR
Broader Terms: EARTH ATMOSPHERE; IONOSPHERE; MEASURING INSTRUMENTS; PLANETARY IONOSPHERES; RANGE FINDERS; SCATTERING
Subject Categories: 640201* -- Atmospheric Physics -- Auroral, Ionospheric, & Magetospheric Phenomena
INIS Subject Categories: B33* -- Atmosphere

10/5/909 (Item 609 from file: 103)
00606561 ERA-05-016679; INS-80-005888; EDB-80-046084
Title: Preconcentration of plutonium radionuclides from natural waters
Author(s): Wong, K.M.; Noshkin, V.E.; Jokela, T.A.; White, M.G.; Dunaway, P.B. (eds.)
Affiliation: Univ. of California, Livermore
Title: Selected environmental plutonium research reports of the NAEG
Corporate Source: Holmes and Narver, Inc., Mercury, NV (USA)
Conference Title: Plutonium information conference
Conference Location: San Diego, CA, USA Conference Date: 28 Feb 1978
Publication Date: Jun 1978 p 583-592
Report Number(s): NVO-192(Vol.2); CONF-780212-(Vol.2)
Document Type: Analytic of a Report; Numerical data
Language: English
Journal Announcement: EDB8004
Availability: Dep. NTIS, PC A19/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 large-volume water sampler using manganese dioxide impregnated cartridges for the in situ separation of plutonium in seawater and groundwater was studied. Plutonium concentrations obtained by this technique are compared with a radiochemical coprecipitation method. Consistent results were obtained between the two methods for water samples from the Pacific Ocean and Eniwetok lagoon. Different results were noted from samples collected in the Eniwetok reef and groundwater stations. We were able to demonstrate, using this preconcentration technique and the coprecipitation method, that the physical-chemical characteristics of Pu in Eniwetok reef and groundwater are different from the lagoon and open ocean.;
Major Descriptors: *GROUND WATER -- SAMPLING; *PLUTONIUM COMPOUNDS -- QUANTITY RATIO; *PLUTONIUM COMPOUNDS -- SEPARATION PROCESSES; *SEAWATER -- SAMPLING
Descriptors: COMPARATIVE EVALUATIONS; ENIWETOK; EXPERIMENTAL DATA; ISOLATED VALUES; PACIFIC OCEAN
Broader Terms: ACTINIDE COMPOUNDS; DATA; DATA FORMS; HYDROGEN COMPOUNDS;

500402

INFORMATION; ISLANDS; MARSHALL ISLANDS; MICRONESIA; NUMERICAL DATA; OCEANIA; OXYGEN COMPOUNDS; SEAS; SURFACE WATERS; TRANSURANIUM COMPOUNDS ; WATER
Subject Categories: 520301* -- Environment, Aquatic -- Radioactive Materials Monitoring & Transport -- Water -- (1987)
INIS Subject Categories: B32* -- Water

10/5/910 (Item 610 from file: 103)
00606526 ERA-05-016616; INS-80-005881; EDB-80-046049
Title: Policy analysis
Author(s): Baalman, R.W.; Dotson, C.W. (eds.)
Title: Pacific Northwest Laboratory annual report for 1979 to the DOE Assistant Secretary for Environment. Part 5. Environmental assessment, control, health, and safety
Corporate Source: Battelle Pacific Northwest Labs., Richland, WA (USA)
Publication Date: Feb 1980 p 1
Report Number(s): PNL-3300(Pt.5)
Document Type: Analytic of a Report
Language: English
Journal Announcement: EDB8004
Availability: Dep. NTIS, PC A07/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 project was to write a document to support a Department of Energy presentation to the people of Enewetak Atoll in the Marshall Islands. The document describes the current radiological conditions resulting from the nuclear weapons tests conducted on Enewetak Atoll between 1948 and 1958. The document provides dose assessments for various living conditions and also discusses the possible health risks the people might face should they decide to return to live on the Atoll.;
Major Descriptors: *ENIWETOK -- RADIOACTIVITY
Descriptors: HEALTH HAZARDS; HUMAN POPULATIONS; RADIATION DOSES
Broader Terms: DOSES; HAZARDS; ISLANDS; MARSHALL ISLANDS; MICRONESIA; OCEANIA; POPULATIONS
Subject Categories: 510302* -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- Terrestrial Ecosystems & Food Chains -- (-1987)
INIS Subject Categories: C22* -- Radionuclide Ecology

10/5/911 (Item 611 from file: 103)
00606507 ERA-05-016587; INS-80-005862; EDB-80-046030
Author(s): Shinn, J.H.; Homan, D.N.; Robison, W.L.
Title: Resuspension studies at Bikini Atoll (Pulmonary exposure from dust-borne plutonium aerosols)
Corporate Source: California Univ., Livermore (USA). Lawrence Livermore Lab.
Publication Date: Feb 1980 p 26
Report Number(s): UCID-18538
Contract Number (DOE): W-7405-ENG-48
Document Type: Report; Numerical data
Language: English
Journal Announcement: EDB8004
Availability: Dep. 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: The following experiments were conducted on Bikini Atoll to provide key parameters for an assessment of inhalation exposure from plutonium-contaminated dust aerosols: (1) a characterization of background (plutonium activity, dust, plutonium, sea spray, and organic aerosol concentrations); (2) a study of plutonium resuspension from a bare field; (3) a study of plutonium resuspension by traffic; and (4) a

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study of personal inhalation exposure. Dust concentrations of 21 ..mu..g m/sup -3/ and sea spray of 34 ..mu..g m/sup -3/ were the background throughout the Bikini Island except within 50 m of the windward beach. Background concentrations of /sup 239 +240/Pu were 60 aCi m/sup -3/ in the coconut grove and 264 aCi m/sup -3/ over rain-stabilized bare soil. The ratio of plutonium activity in aerosols relative to the activity in underlying soil, defined as the enhancement factor, EF, was typically less than one. Enhancement factors increased about 3.8 as a result of tilling. Plutonium resuspension flux was estimated at 0.49 pCi m/sup -2/ year/sup -1/ over most of Bikini Island. Aerosol size distributions associated with mass and with plutonium activity were typically log-normal with median aerodynamic diameter 2.44 ..mu..m, which decreased to 2.0 ..mu..m above freshly tilled soil. The Pu concentration in aerosols collected over disturbed soil increased by a factor of 19.1. Vehicular traffic produced dust pulses typically of 10 s duration, 28 ..mu..g m/sup -3/ average concentration, and plutonium enhancement factor 2.5. Personal dosimetry showed that enhancement of dust by a worker was a factor of 2.64 for heavy work outdoors and 1.86 for light work in and around houses. Pulmonary deposition of plutonium was calculated for various exposure conditions. The pulmonary deposition ranged from 1476 aCi h/sup -1/ to 12 aCi h/sup -1/ with intermediate values for heavy outdoor work and for light work in and around houses.;

Major Descriptors: *LUNGS -- RADIATION DOSES; *PLUTONIUM 239 -- PARTICLE RESUSPENSION; *PLUTONIUM 240 -- PARTICLE RESUSPENSION; *SOILS -- RADIOACTIVITY

Descriptors: BIKINI; DEPOSITION; DUSTS; EXPERIMENTAL DATA; INHALATION; ISOLATED VALUES; MAN; RADIOACTIVE AEROSOLS

Broader Terms: ACTINIDE ISOTOPES; ACTINIDE NUCLEI; AEROSOLS; ALPHA DECAY RADIOISOTOPES; ANIMALS; BODY; COLLOIDS; DATA; DATA FORMS; DISPERSIONS; DOSES; EVEN-EVEN NUCLEI; EVEN-ODD NUCLEI; HEAVY NUCLEI; INFORMATION; INTAKE; ISLANDS; ISOTOPES; MAMMALS; MARSHALL ISLANDS; MICRONESIA; NUCLEI; NUMERICAL DATA; OCEANIA; ORGANS; PLUTONIUM ISOTOPES; PRIMATES; RADIOISOTOPES; RESPIRATORY SYSTEM; SOLS; VERTEBRATES; YEARS LIVING RADIOISOTOPES

Subject Categories: 510301* -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- Soil -- (-1987)
560171 -- Radiation Effects -- Nuclide Kinetics & Toxicology -- Man -- (-1987)
560161 -- Radionuclide Effects, Kinetics, & Toxicology -- Man
500300 -- Environment, Atmospheric -- Radioactive Materials Monitoring & Transport -- (-1989)

INIS Subject Categories: B31* -- Land
C21 -- Tissue Distribution, Metabolism, Toxicology & Removal of Radionuclides
B33 -- Atmosphere

10/5/912 (Item 612 from file: 103)
00606502 ERA-05-016582; INS-80-005857; EDB-80-046025

Title: Alpha-sensitive cellulose nitrate track detectors: applications to the study of environmental contamination

Author(s): Buddemeier, R.W. (Univ. of Hawaii, Honolulu); Biermann, A.H.; Gatrousis, C.; White, M.G.; Dunaway, P.B. (eds.)

Title: Selected environmental plutonium research reports of the NAEG

Corporate Source: Holmes and Narver, Inc., Mercury, NV (USA)

Conference Title: Plutonium information conference

Conference Location: San Diego, CA, USA Conference Date: 28 Feb 1978

Publication Date: Jun 1978 p 593-607

Report Number(s): NVO-192(Vol.2); CONF-780212-(Vol.2)

Document Type: Analytic of a Report; Numerical data

Language: English

Journal Announcement: EDB8004

Availability: Dep. NTIS, PC A19/MF A01.

Subfile: INS (US Atomindex input); ERA (Energy Research Abstracts); TIC (Technical Information Center).

Country of Origin: United States

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Country of Publication: United States
Abstract: Kodak LR-115 Type II cellulose nitrate alpha track detection film was evaluated for its utility in environmental plutonium studies. It was found that with fast and simple etching and reading techniques, the film detects 60 to 90% of the incident alpha particles with energy less than 4 MeV; both precision and efficiency may be increased by careful control of procedures. When applied to previously analyzed soil samples from Eniwetok Atoll, it was found that ball-milled and gross soil samples were both highly heterogeneous in Pu distribution, with most activity concentrated in discrete particles of various types and sizes. For a one-day exposure to soil or a similar solid surface, detection sensitivity (5 x background) is approximately 50 pCi/g of total alpha activity and increases linearly with increased exposure time. Track detection films of this type provide a rapid and inexpensive means of obtaining quantitative estimates of environmental sample activity, and have unique utility for methods evaluation and the investigation of activity distribution as a function of phase, particle size, or organ in a heterogeneous sample.;
Major Descriptors: *PHOTOGRAPHIC FILM DETECTORS -- EVALUATION; *PLUTONIUM COMPOUNDS -- PHOTOGRAPHIC FILM DETECTORS
Descriptors: EXPERIMENTAL DATA; ISOLATED VALUES
Broader Terms: ACTINIDE COMPOUNDS; DATA; DATA FORMS; INFORMATION; MEASURING INSTRUMENTS; NUMERICAL DATA; RADIATION DETECTORS; TRANSURANIUM COMPOUNDS
Subject Categories: 510301* -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- Soil -- (-1987)
440101 -- Radiation Instrumentation -- General Detectors or Monitors & Radiometric Instruments
INIS Subject Categories: B31* -- Land
E41 -- Particle & Radiation Detection & Measuring Instruments & Methods

10/5/913 (Item 613 from file: 103)
00606482 ERA-05-016564; INS-80-005839; EDB-80-046005
Title: Quantitative aspects of transuranic field studies
Author(s): Gilbert, R.O.; Simpson, J.C.; Vaughan, B.E.
Title: Pacific Northwest Laboratory annual report for 1979 to the DOE Assistant Secretary for Environment. Part 2. Ecological sciences
Corporate Source: Battelle Pacific Northwest Labs., Richland, WA (USA)
Publication Date: Feb 1980 p 63
Report Number(s): PNL-3300(Pt.2)
Document Type: Analytic of a Report
Language: English
Journal Announcement: EDB8004
Availability: Dep. NTIS, PC A11/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: Investigation into the development and use of appropriate statistical design and analysis procedures in environmental actinide field studies is continuing. Significant accomplishments of FY 1979 were continued publication of TRAN-STAT, a periodical on Environmental Transuranic Studies, and initiation of a computer simulation study evaluating estimators of ratios, particularly concentration and isotopic ratios. Other activities included membership on the North Marshall Islands Advisory Group, chairmanship of the Statistics and Modeling Panel at the Office of Health and Environmental Research's Actinide Workshop at Arlie House, Virginia, and improving our expertise and capacity to perform Kriging, a technique for estimating spatial patterns of contaminants. Related activities under separate funding included statistical design and analysis for the Nevada Applied Ecology Group and that in connection with decommissioning and decontamination of nuclear facilities.;
Major Descriptors: *ACTINIDE COMPOUNDS -- ENVIRONMENTAL TRANSPORT; *ENVIRONMENTAL TRANSPORT -- STATISTICS

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Descriptors: B CODES; DECOMMISSIONING; DECONTAMINATION; MATHEMATICAL MODELS
Broader Terms: CLEANING; COMPUTER CODES; MASS TRANSFER; MATHEMATICS
Subject Categories: 510300* -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- (-1989)
INIS Subject Categories: B31* -- Land

10/5/914 (Item 614 from file: 103)
00597111 ERA-05-012506; INS-80-004701; EDB-80-036634
Title: Some statistical aspects of the cleanup of Enewetak Atoll
Author(s): Barnes, M.G.; Giacomini, J.J.; Friesen, H.N.; Davis, H.T.; Prairie, R.R.; Truett, T. (comps.)
Affiliation: Desert Research Inst., Las Vegas, NV
Title: 1978 DOE Statistical Symposium
Corporate Source: Sandia Labs., Albuquerque, NM (USA) Oak Ridge National Lab., TN (USA)
Conference Title: 4. DOE statistical symposium
Conference Location: Albuquerque, NM, USA Conference Date: 1 Nov 1978
Publication Date: Jul 1979 p 296-324
Report Number(s): CONF-781108-
Document Type: Analytic of a Report; Conference literature; Numerical data
Language: English
Journal Announcement: EDB8003
Availability: Dep. NTIS, PC A15/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: Cleaning up the radionuclide contamination at Enewetak Atoll has involved a number of statistical design problems. Theoretical considerations led to choosing a grid sampling pattern; practical problems sometimes lead to resampling on a finer grid. Other problems associated with using grids have been both physical and statistical. The standard sampling system is an in situ intrinsic gamma detector which measures americium concentration. The cleanup guidelines include plutonium concentration, so additional sampling of soil is required to establish Pu/Am ratios. The soil sampling design included both guidelines for location of the samples and also a special pattern of subsamples making up composite samples. The large variance of the soil, sample results makes comparison between the two types difficult anyway, but this is compounded by vegetation attenuation of the in situ readings, soil disturbance influences, and differences in devegetation methods. The constraints inherent in doing what amounts to a research and development project, on a limited budget of time and money, in a field engineering environment are also considered.;
Major Descriptors: *AMERICIUM 241 -- RADIATION MONITORING; *ENIWETOK -- DECONTAMINATION; *PLUTONIUM 239 -- RADIATION MONITORING; *RADIATION MONITORING -- STATISTICS; *SAMPLING -- STATISTICS; *SOILS -- RADIOACTIVITY; *SOILS -- SAMPLING
Descriptors: EXPERIMENTAL DATA; ISOLATED VALUES
Broader Terms: ACTINIDE ISOTOPES; ACTINIDE NUCLEI; ALPHA DECAY RADIOISOTOPES; AMERICIUM ISOTOPES; CLEANING; DATA; DATA FORMS; EVEN-ODD NUCLEI; HEAVY NUCLEI; INFORMATION; ISLANDS; ISOTOPES; MARSHALL ISLANDS; MATHEMATICS; MICRONESIA; MONITORING; NUCLEI; NUMERICAL DATA; OCEANIA; ODD-EVEN NUCLEI; PLUTONIUM ISOTOPES; RADIOISOTOPES; YEARS LIVING RADIOISOTOPES
Subject Categories: 510301* -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- Soil -- (-1987)
INIS Subject Categories: B31* -- Land

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10/5/915 (Item 615 from file: 103)
00591544 INS-80-003786; EDB-80-031067
Title: Spatial relationship of 1-meter equatorial spread-F irregularities and depletions in total electron content
Author(s): Tsunoda, R.T.; Towle, D.M.
Affiliation: SRI International, Menlo Park, CA 94025
Source: Geophys. Res. Lett. (United States) v 6:11. Coden: GPRLA

Publication Date: Nov 1979 p 873-876
Document Type: Journal Article
Language: English
Journal Announcement: EDB8002
Subfile: INS (US Atomindex input); AIP (SPIN).
Country of Origin: United States
Abstract: An experiment was conducted at Kwajalein Atoll, Marshall Islands to investigate the spatial relationship of 1-m equatorial spread-F irregularities to total electron content (TEC) depletions. A high-power radar was operated (1) in a backscatter scan mode to spatially map the distribution of 1-m irregularities, and (2) in a dual-frequency, satellite-track mode to obtain the longitudinal TEC variations. We show that radar backscatter ''plumes'' found in the disturbed, nighttime equatorial ionosphere are longitudinally coincident with TEC depletions. We suggest that the TEC depletions are probably due to the presence of plasma ''bubbles'' in the equatorial F layer.;
Major Descriptors: *SPREAD F -- IONOSPHERIC STORMS
Descriptors: BACKSCATTERING; ELECTRON DENSITY; PLASMA INSTABILITY; RADAR
Broader Terms: EARTH ATMOSPHERE; F REGION; INSTABILITY; IONOSPHERE; MEASURING INSTRUMENTS; PLANETARY IONOSPHERES; RANGE FINDERS; SCATTERING
Subject Categories: 640201* -- Atmospheric Physics -- Auroral, Ionospheric, & Magetospheric Phenomena
INIS Subject Categories: B33* -- Atmosphere

10/5/916 (Item 616 from file: 103)
00591064 AIX-10-482105; EDB-80-030587
Title: Fallout radiation and its impact on man
Author(s): Umadevi, P. (Rajasthan Univ., Jaipur (India). Radiation Biology Lab.)
Source: Sci. Rep. (New Delhi) (India) v 15:11. Coden: SCRPA
Publication Date: Nov 1978 p 724-727
Document Type: Journal Article
Language: English
Journal Announcement: EDB7912
Subfile: AIX (non-US Atomindex input).
Country of Origin: India
Abstract: Fallout effects from nuclear explosions are discussed giving examples of the first atom bomb explosion of 1945 in Japan and H-bomb explosion on Bikini Island in Pacific in 1954. Fission and fusion processes which cause nuclear explosions are briefly explained. Genesis of radiation fallout and its types viz. (1) local or early fallout and (2) world-wide or delayed fallout are described. Local fallout being at very low altitude is more harmful as compared to world-wide or delayed fallout which may be either tropospheric or stratospheric. Hazards from radioisotopes such as /sup 131/I, /sup 90/Sr, /sup 89/Sr, /sup 137/Cs and /sup 14/C produced from nuclear fallout are described. Radiations cause a wide range of symptoms and syndromes characterized by 'radiation sickness'. Somatic and genetic effects induced by fallout radiations are explained.;
Major Descriptors: *FALLOUT -- BIOLOGICAL RADIATION EFFECTS
Descriptors: MAN; NUCLEAR EXPLOSIONS; RADIOISOTOPES
Broader Terms: ANIMALS; BIOLOGICAL EFFECTS; EXPLOSIONS; ISOTOPES; MAMMALS; PRIMATES; RADIATION EFFECTS; VERTEBRATES
Subject Categories: 560151* -- Radiation Effects on Animals -- Man
INIS Subject Categories: C21* -- Tissue Distribution, Metabolism, Toxicology & Removal of Radionuclides

10/5/917 (Item 617 from file: 103)
00591038 INS-80-003540; ERA-05-012601; EDB-80-030561
Title: Marshall Islands: educational program
Author(s): Naidu, J.R.
Title: Safety and Environmental Protection Division. Progress report, January 1, 1976-December 31, 1978
Corporate Source: Brookhaven National Lab., Upton, NY (USA)
Publication Date: Oct 1979 p 52-53
Report Number(s): BNL-51066

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Document Type: Analytic of a Report
Language: English
Journal Announcement: EDB8002
Availability: Dep. NTIS, PC A04/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: Education and Training projects include: Marshall Islands Educational Program; and BNL Training Programs.;
Major Descriptors: *BIOLOGICAL RADIATION EFFECTS -- EDUCATION; *BNL -- EDUCATION; *PERSONNEL -- EDUCATION
Descriptors: FALLOUT; GENETIC RADIATION EFFECTS; HEALTH HAZARDS; HUMAN POPULATIONS; INDUSTRY; LAND USE; MARSHALL ISLANDS; RADIATION HAZARDS; SAFETY; WATER RESOURCES
Broader Terms: BIOLOGICAL EFFECTS; BIOLOGICAL RADIATION EFFECTS; GENETIC EFFECTS; HAZARDS; HEALTH HAZARDS; ISLANDS; MICRONESIA; NATIONAL ORGANIZATIONS; OCEANIA; POPULATIONS; RADIATION EFFECTS; RESOURCES; US AEC; US DOE; US ERDA; US ORGANIZATIONS
Subject Categories: 560151* -- Radiation Effects on Animals -- Man
570000 -- Health & Safety
INIS Subject Categories: C15* -- Effects of External Radiation on Man
C52 -- Radiation Hazards & Safety Evaluations of Nuclear Installations

10/5/918 (Item 618 from file: 103)
00591036 INS-80-003538; ERA-05-012599; EDB-80-030559
Title: Environmental protection
Author(s): Hull, A.P.
Title: Safety and Environmental Protection Division. Progress report, January 1, 1976-December 31, 1978
Corporate Source: Brookhaven National Lab., Upton, NY (USA)
Publication Date: Oct 1979 p 1-16
Report Number(s): BNL-51066
Document Type: Analytic of a Report
Language: English
Journal Announcement: EDB8002
Availability: Dep. NTIS, PC A04/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: Environmental Studies and Internal Dosimetry projects include: Environmental Protection; 1977 Environmental Monitoring Report; Sewage Sludge Disposal on the Sanitary Landfill; Radiological Analyses of Marshall Islands Environmental Samples, 1974 to 1976; External Radiation Survey and Dose Predictions for Rongelap, Utirik, Rongerik, Ailuk, and Wotje Atolls; Marshall Islands - Diet and Life Style Study; Dose Reassessment for Populations on Rongelap and Utirik Following Exposure to Fallout from BRAVO Incident (March 1, 1954); Whole Body Counting Results from 1974 to 1979 for Bikini Island Residents; Dietary Radioactivity Intake from Bioassay Data, a Model Applied to /sup 137/Cs Intake by Bikini Island Residents; and External Exposure Measurements at Bikini Atoll. ;
Major Descriptors: *BIOLOGICAL RADIATION EFFECTS -- MEDICAL SURVEILLANCE; *CESIUM 137 -- INGESTION; *HUMAN POPULATIONS -- RADIATION PROTECTION; *MARSHALL ISLANDS -- RADIATION MONITORING; *SANITARY LANDFILLS -- RADIOACTIVE WASTE DISPOSAL; *SEWAGE SLUDGE -- RADIOACTIVE WASTE DISPOSAL
Descriptors: BIKINI; CONTAMINATION; DIET; ENVIRONMENT; FORECASTING; HEALTH HAZARDS; LIFE STYLES; QUALITY OF LIFE; RADIATION DOSES
Broader Terms: ALKALI METAL ISOTOPES; BETA DECAY RADIOISOTOPES; BETA-MINUS DECAY RADIOISOTOPES; BIOLOGICAL EFFECTS; CESIUM ISOTOPES; DOSES; HAZARDS; INTAKE; ISLANDS; ISOTOPES; MANAGEMENT; MARSHALL ISLANDS; MICRONESIA; MONITORING; NUCLEI; OCEANIA; ODD-EVEN NUCLEI; POPULATIONS; RADIATION EFFECTS; RADIOISOTOPES; SEWAGE; WASTE DISPOSAL; WASTE MANAGEMENT; WASTES; 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

10/5/919 (Item 619 from file: 103)
00585554 EDB-80-025076
Author(s): Livingston, R.C.
Title: Comparative equatorial scintillation morphology--American and Pacific sectors. Topical report no. 3, 1 June 1977-30 June 1978
Corporate Source: SRI International, Menlo Park, CA (USA)
Publication Date: 30 Jun 1978 p 55
Report Number(s): AD-A-066094
Contract Number (DOE): DNA001-77-C-0220
Document Type: Report
Language: English
Journal Announcement: EDB7908
Availability: NTIS, PC A04/MF A01.
Subfile: NTS (NTIS).
Country of Origin: United States
Country of Publication: United States
Abstract: This report examines the severity of radio-wave amplitude scintillation measured at two stations near the equator, but far apart in longitude: Kwajalein Atoll in the Marshall Islands, and Ancon, Peru. The data used are observations of the Wideband satellite signal intensity at VHF, UHF, and L-band frequencies. These are presented in terms of the cumulative distribution of S4 index, which provides a precise measure of the level of disturbance that can be readily related to the distribution of signal intensity. The seasonal behavior of the scintillation at the two stations is similar, with each showing a broad 8-to-9-month disturbed season centered about local summer. There is little difference in the occurrence or severity of gigahertz scintillation at the two stations. However, there is a systematic difference between the frequency dependences of the scintillation. The latitude distributions of scintillation show the expected enhancement from propagation geometry at low elevation angles. When these effects are removed to obtain irregularity source strength, the irregularity source regions are found at some distance from the magnetic equator. It is suggested that the weak-to-moderate scintillation that dominates the observations arises from interactions between neutral waves and ionization in the F region.;
Major Descriptors: *F REGION -- KINETICS; *IONOSPHERE -- WAVE PROPAGATION; *RADIOWAVE RADIATION -- TRANSMISSION
Descriptors: COMMUNICATIONS; DISTURBANCES; GEOMAGNETIC EQUATOR; GHZ RANGE 01-100; INTERACTIONS; IONIZATION; MHZ RANGE; PACIFIC OCEAN; PERU; SCINTILLATIONS; SEASONAL VARIATIONS
Broader Terms: EARTH ATMOSPHERE; ELECTROMAGNETIC RADIATION; FREQUENCY RANGE ; GHZ RANGE; IONOSPHERE; LATIN AMERICA; PLANETARY IONOSPHERES; RADIATIONS; SEAS; SOUTH AMERICA; SURFACE WATERS; VARIATIONS
Subject Categories: 640201* -- Atmospheric Physics -- Auroral, Ionospheric, & Magetospheric Phenomena

10/5/920 (Item 620 from file: 103)
00584460 ERA-05-009254; INS-80-002665; EDB-80-023982
Author(s): Bowen, V.T.
Title: Radioelement studies in the oceans. Progress report, January 1-December 31, 1978
Corporate Source: Woods Hole Oceanographic Institution, MA (USA)
Publication Date: Jan 1979 p 13
Report Number(s): COO-3563-80
Contract Number (DOE): EY-76-S-02-3565
Document Type: Report
Language: English
Journal Announcement: EDB8002
Availability: Dep. NTIS, PC A02/MF A01.

5004036

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 bibliographic summary of reports published, submitted, in press or presented at meetings was included. A discussion of 3 cruises taken to collect samples from water, sediment cores, and plankton tows was also included. The geographical areas covered on these cruises were: (1) downwind and down-current from the U.S. Pacific Test Site, (2) across the equator in the Central Pacific, and (3) the Mid-Pacific Gyrie region. Maps are included. Samples were analyzed for a cesium 137, and plutonium on the ship. The samples were also retained for further radionuclide analysis and taxonomy (plankton) at Woods Hole. The dredging operations and problems encounted with in-situ water filtrations and chemical preparations on the first cruise were also discussed. Nutrient analysis of seawater was performed on the second cruise. The results of testing a new recording instrument are included for the third cruise.;
Major Descriptors: *ENIWETOK -- MARINE SURVEYS; *PACIFIC OCEAN -- MARINE SURVEYS
Descriptors: AQUATIC ECOSYSTEMS; CESIUM 137; ENVIRONMENTAL TRANSPORT; OCEANOGRAPHY; PLANKTON; PLUTONIUM; RADIONUCLIDE MIGRATION; SAMPLING; SEAWATER; SEDIMENTS
Broader Terms: ACTINIDES; ALKALI METAL ISOTOPES; AQUATIC ORGANISMS; BETA DECAY RADIOISOTOPES; BETA-MINUS DECAY RADIOISOTOPES; CESIUM ISOTOPES; ECOSYSTEMS; ELEMENTS; ENVIRONMENTAL TRANSPORT; HYDROGEN COMPOUNDS; ISLANDS; ISOTOPES; MARSHALL ISLANDS; MASS TRANSFER; METALS; MICRONESIA; NUCLEI; OCEANIA; ODD-EVEN NUCLEI; OXYGEN COMPOUNDS; RADIOISOTOPES; SEAS ; SURFACE WATERS; TRANSURANIUM ELEMENTS; WATER; YEARS LIVING RADIOISOTOPES
Subject Categories: 520300* -- Environment, Aquatic -- Radioactive Materials Monitoring & Transport -- (1989)
580500 -- Oceanography -- (1980-1989)
INIS Subject Categories: B32* -- Water

10/5/921 (Item 621 from file: 103)
00574141 ERA-05-006238; INS-80-001356; EDB-80-013663
Author(s): Greenhouse, N.A.
Title: Dosimetry methods and results for the former residents of Bikini Atoll
Corporate Source: Brookhaven National Lab., Upton, NY (USA)
Conference Title: 2. Asian regional congress on radiation protection
Conference Location: Manila, Philippines Conference Date: 5 Nov 1979
Publication Date: 1979 p 25
Report Number(s): BNL-26797; CONF-791122-1
Contract Number (DOE): EY-76-C-02-0016
Document Type: Report; Numerical data; Conference literature
Language: English
Journal Announcement: EDB8001
Availability: Dep. 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: The US Government utilized Bikini and Enewetak Atolls in the northern Marshall Islands of Micronesia for atomspheric tests of nuclear explosives in the 1940's and 1950's. The original inhabitants of these atolls were relocated prior to the tests. During the early 1970's, a small but growing population of Marshallese people reinhabited Bikini. Environmental and personnel radiological monitoring programs were begun in 1974 to ensure that doses and dose commitments received by Bikini residents remained within US Federal Radiation Council guidelines. Dramatic increases in /sup 137/Cs body burdens among the inhabitants between April 1977 and 1978 may have played a significant role in the government decision to move the 140 Bikinians in residence off of the atoll in August 1978. The average /sup 137/Cs

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body burden for the population was 2.3 ..mu..Ci in April 1978. Several individuals, however, exceeded the maximum permissible body burden of 3 ..mu..Ci, and some approached 6 ..mu..Ci. The resultant total dose commitment was less than 200 mrem for the average resident. The average total dose for the mean residence interval of approx. 4.5 years was about 1 rem. The sources of exposure, the probable cause of the unexpected increase in /sup 137/Cs body burdens, and the methods for calculating radionuclide intake and resultant doses are discussed. Suggestions are offered as to the implications of the most significant exposure pathways for the future inhabitation of Bikini and Enewetak. (ERB);

Major Descriptors: *CESIUM 137 -- ENVIRONMENTAL EXPOSURE PATHWAY; *FOOD CHAINS -- CONTAMINATION; *HUMAN POPULATIONS -- DOSE COMMITMENTS; *HUMAN POPULATIONS -- ENVIRONMENTAL EXPOSURE PATHWAY; *NUCLEAR EXPLOSIONS -- FALLOUT DEPOSITS; *TERRESTRIAL ECOSYSTEMS -- CONTAMINATION

Descriptors: ATMOSPHERIC EXPLOSIONS; BIKINI; EXPERIMENTAL DATA; ISOLATED VALUES; TESTING

Broader Terms: ALKALI METAL ISOTOPES; BETA DECAY RADIOISOTOPES; BETA-MINUS DECAY RADIOISOTOPES; CESIUM ISOTOPES; DATA; DATA FORMS; ECOSYSTEMS; EXPLOSIONS; FALLOUT; INFORMATION; ISLANDS; ISOTOPES; MARSHALL ISLANDS; MICRONESIA; NUCLEI; NUMERICAL DATA; OCEANIA; ODD-EVEN NUCLEI; POPULATIONS; RADIOISOTOPES; YEARS LIVING RADIOISOTOPES

Subject Categories: 560171* -- Radiation Effects -- Nuclide Kinetics & Toxicology -- Man -- (-1987)
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)
450200 -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives

INIS Subject Categories: C21* -- Tissue Distribution, Metabolism, Toxicology & Removal of Radionuclides
C15 -- Effects of External Radiation on Man
C22 -- Radionuclide Ecology
E14 -- Nuclear Explosions

10/5/922 (Item 622 from file: 103)
00571284 AIX-10-476703; EDB-80-010806

Title: Social contention about safety of nuclear power plant

Author(s): Nemoto, K. (Central Research Inst. of Electric Power Industry, Tokyo (Japan))

Source: Genshiryoku Kogyo (Japan) v 24:9. Coden: GKOGA

Publication Date: Sep 1978 p 34-37

Document Type: Journal Article

Language: Japanese

Journal Announcement: EDB7909

Subfile: AIX (non-US Atomindex input).

Country of Origin: Japan

Abstract: In Japan, the contentions and arguments on the safety of nuclear power generation have been active since its first introduction, and these are greatly influenced by the nation's experiences of atomic bombs in Hiroshima, Nagasaki, and Bikini. As the result, the attitude of peoples toward the acceptance of nuclear power plants is significantly different from that in other countries. The situation in Japan of social contentions about nuclear power safety is explained in two aspects: acceptance of the safety, by peoples and Japanese pattern of safety contentions. In both upstream and downstream of nuclear power generation, not only the safety but also the right or wrong for nuclear power generation itself is discussed. The problem of nuclear power safety has gone into the region beyond the technological viewpoint. The pattern of safety contentions in Japan is the entanglement of three sectors; i.e. local people, labor unions and political parties, enterprises and administration, and intellectuals.;

Major Descriptors: *NUCLEAR POWER PLANTS -- PUBLIC OPINION

5004038

Descriptors: JAPAN; PUBLIC RELATIONS; REACTOR SAFETY
Broader Terms: ASIA; NUCLEAR FACILITIES; POWER PLANTS; SAFETY; THERMAL POWER PLANTS
Subject Categories: 290600* -- Energy Planning & Policy -- Nuclear Energy
220900 -- Nuclear Reactor Technology -- Reactor Safety
INIS Subject Categories: C52* -- Radiation Hazards & Safety Evaluations of Nuclear Installations

10/5/923 (Item 623 from file: 103)
00558509 ERA-05-001790; INS-79-021613; EDB-79-137975
Author(s): Noshkin, V.E.; Wong, K.M.
Title: Plutonium mobilization from sedimentary sources to solution in the marine environment
Corporate Source: California Univ., Livermore (USA). Lawrence Livermore Lab.
Conference Title: 3. Nuclear Energy Agency seminar on marine radioecology
Conference Location: Tokyo, Japan Conference Date: 1 Oct 1979
Publication Date: 1 Oct 1979 p 13
Report Number(s): UCRL-83049; CONF-791050-1
Contract Number (DOE): W-7405-ENG-48
Document Type: Report; Conference literature
Language: English
Journal Announcement: EDB7911
Availability: Dep. 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: Inventories of plutonium radionuclides greatly in excess of global fallout levels persists in the benthic environments of Bikini and Eniwetok Atolls. It now appears that the atolls have reached a chemical steadystate condition with respect to the partitioning of /sup 239 +240/Pu between solution and solid phases of the environment. The mobilized /sup 239 +240/Pu has solute-like characteristics, passes rapidly and readily through dialysis membranes, has adsorption characteristics similar to those of fallout plutonium in the open ocean, and exists in solution primarily as some oxidized +5 or +6 chemical species. Water-column profiles of /sup 239 +240/Pu taken outside the atolls show a plutonium excess in the deep water mass. This remobilized /sup 239 +240/Pu possibly originates from the contaminated sediments previously deposited on the outer slopes of the atolls and surrounding basins.;
Major Descriptors: *PLUTONIUM 239 -- ENVIRONMENTAL TRANSPORT; *PLUTONIUM 240 -- ENVIRONMENTAL TRANSPORT; *SEAWATER -- RADIONUCLIDE MIGRATION; *SEDIMENTS -- RADIONUCLIDE MIGRATION
Descriptors: BIKINI; DATA COMPILATION; DISSOLUTION; ENIWETOK; EQUILIBRIUM; FALLOUT; LIQUIDS; PACIFIC OCEAN; PHASE STUDIES; RADIATION MONITORING; SOLIDS; STEADY-STATE CONDITIONS; TABLES; UPWELLING
Broader Terms: ACTINIDE ISOTOPES; ACTINIDE NUCLEI; ALPHA DECAY RADIOISOTOPES; DATA; DATA FORMS; ENVIRONMENTAL TRANSPORT; EVEN-EVEN NUCLEI; EVEN-ODD NUCLEI; FLUIDS; HEAVY NUCLEI; HYDROGEN COMPOUNDS; INFORMATION; ISLANDS; ISOTOPES; MARSHALL ISLANDS; MASS TRANSFER; MICRONESIA; MONITORING; NUCLEI; NUMERICAL DATA; OCEANIA; OXYGEN COMPOUNDS; PLUTONIUM ISOTOPES; RADIOISOTOPES; SEAS; SURFACE WATERS; WATER; YEARS LIVING RADIOISOTOPES
Subject Categories: 520301* -- Environment, Aquatic -- Radioactive Materials Monitoring & Transport -- Water -- (1987)
520302 -- Environment, Aquatic -- Radioactive Materials Monitoring & Transport -- Aquatic Ecosystems & Food Chains -- (-1987)
INIS Subject Categories: B32* -- Water
C22 -- Radionuclide Ecology

10/5/924 (Item 624 from file: 103)
00558474 AIX-10-432891; EDB-79-137940
Title: Determination of transuranium elements in a so-called 'Bikini ash' sample and in marine sediment samples collected near Bikini Atoll

5004039

Author(s): Hisamatsu, S. (Akita Univ. (Japan)); Sakanoue, M.
Source: Health Phys. (United Kingdom) v 35:2. Coden: HLTPA
Publication Date: Aug 1978 p 301-307
Document Type: Journal Article
Language: English
Journal Announcement: EDB790 TS?A
Subfile: AIX (non-US Atomindex input).
Country of Origin: Japan
Abstract: The concentrations of /sup 239 +240/Pu and /sup 241/Am in the debris from the second thermonuclear test detonation of the USA (Bravo) were determined. This debris, called Bikini Ash, was collected in 1954 on the deck of the Japanese fisherboat '5th Fukuryu-Maru' which was located some 150 km to the east of Bikini Atoll at the time of the thermonuclear test. A portion of the 1954 sample was subjected to radiochemical analysis in 1974. The concentrations of /sup 239 +/ /sup 240/Pu and /sup 241/Am in th sample were determined to be 25.9 + - 1.7 and 12.9 + - 0.9 dis/min/mg, respectively. From these values, the ratio of /sup 241/Pu//sup 239 +240/Pu at time zero was calculated to be 26 + - 3, and this ratio was almost the same as in the Mike thermonuclear debris. The /sup 239 +240/Pu and /sup 241/am contents of the marine sediment samples collected near Bikini Atoll were also analyzed, and a significant contamination with these nuclides was found to be still remaining in this area.;
Major Descriptors: *AMERICIUM 241 -- RADIATION MONITORING; *PLUTONIUM 239 -- RADIATION MONITORING; *PLUTONIUM 240 -- RADIATION MONITORING; *PLUTONIUM 241 -- RADIATION MONITORING; *SEDIMENTS -- RADIOACTIVITY; *THERMONUCLEAR EXPLOSIONS -- FALLOUT DEPOSITS
Descriptors: BIKINI; JAPAN; NUCLEAR WEAPONS; SEA BED; SHIPS
Broader Terms: ACTINIDE ISOTOPES; ACTINIDE NUCLEI; ALPHA DECAY RADIOISOTOPES; AMERICIUM ISOTOPES; ASIA; BETA DECAY RADIOISOTOPES; BETA-MINUS DECAY RADIOISOTOPES; EVEN-EVEN NUCLEI; EVEN-ODD NUCLEI; EXPLOSIONS; FALLOUT; HEAVY NUCLEI; ISLANDS; ISOTOPES; MARSHALL ISLANDS; MICRONESIA; MONITORING; NUCLEAR EXPLOSIONS; NUCLEI; OCEANIA; ODD-EVEN NUCLEI; PLUTONIUM ISOTOPES; RADIOISOTOPES; WEAPONS; YEARS LIVING RADIOISOTOPES
Subject Categories: 500300* -- Environment, Atmospheric -- Radioactive Materials Monitoring & Transport -- (-1989)
520300 -- Environment, Aquatic -- Radioactive Materials Monitoring & Transport -- (1989)
450202 -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)
INIS Subject Categories: B31* -- Land

10/5/925 (Item 625 from file: 103)
00546675 ERA-04-055602; INS-79-020166; EDB-79-126141
Author(s): Greenhouse, N.A.; Miltenberger, R.P.; Lessard, E.T.
Title: External exposure measurements at Bikini Atoll
Corporate Source: Brookhaven National Lab., Upton, NY (USA)
Publication Date: Jan 1979 p 27
Report Number(s): BNL-51003
Contract Number (DOE): EY-76-C-02-0016
Document Type: Report; Numerical data
Language: English
Journal Announcement: EDB7910
Availability: Dep. 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: External exposure rate surveys from 1975 to 1977 on the islands Nam, Eneu and Bikini of Bikini Atoll gave average external exposure rates of 24, 5.7, and 32 ..mu..R/hr respectively. The exposure rate on Eneu Island is uniform, whereas those on Bikini and Nam range from 7.0 to 80. ..mu..R/hr. Based on an assumed living pattern at Bikini Island, the adult male Bikinian is estimated to be in the presence of an external radiation field corresponding to 16 ..mu..R/hr due to debris and fallout from the 1954 BRAVO incident. This corresponds to a 30 year

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dose equivalent of 2.8 rem.;
Major Descriptors: *BIKINI -- RADIATION MONITORING; *HUMAN POPULATIONS -- RADIATION DOSES
Descriptors: DATA COMPILATION; ISLANDS; TABLES
Broader Terms: DATA; DATA FORMS; DOSES; INFORMATION; ISLANDS; MARSHALL ISLANDS; MICRONESIA; MONITORING; NUMERICAL DATA; OCEANIA; POPULATIONS
Subject Categories: 560151* -- Radiation Effects on Animals -- Man
INIS Subject Categories: C15* -- Effects of External Radiation on Man

10/5/926 (Item 626 from file: 103)
00541146 AIX-10-444840; EDB-79-120612
Title: Uranium-series dating of insular phosphorite from Ebon atoll, Micronesia
Author(s): Veeh, H.H. (Flinders Univ. of South Australia, Bedford Park); Burnett, W.C.
Source: Nature (London) (United Kingdom) v 274:5670. Coden: NATUA
Publication Date: 3 Aug 1978 p 460-462
Document Type: Journal Article
Language: English
Journal Announcement: EDB7905
Subfile: AIX (non-US Atomindex input).
Country of Origin: United Kingdom
Abstract: None;
Major Descriptors: *MARSHALL ISLANDS -- GEOLOGIC DEPOSITS; *PHOSPHORITES -- ISOTOPE DATING; *THORIUM 230 -- ISOTOPE DATING; *URANIUM 234 -- ISOTOPE DATING
Descriptors: APATITES; ISOTOPE RATIO; X-RAY DIFFRACTION
Broader Terms: ACTINIDE ISOTOPES; ACTINIDE NUCLEI; AGE ESTIMATION; ALPHA DECAY RADIOISOTOPES; COHERENT SCATTERING; DIFFRACTION; EVEN-EVEN NUCLEI ; HEAVY NUCLEI; ISLANDS; ISOTOPES; MICRONESIA; MINERALS; NUCLEI; OCEANIA; RADIOISOTOPES; ROCKS; SCATTERING; SEDIMENTARY ROCKS; THORIUM ISOTOPES; URANIUM ISOTOPES; YEARS LIVING RADIOISOTOPES
Subject Categories: 580100* -- Geology & Hydrology -- (-1989)
INIS Subject Categories: B31* -- Land

10/5/927 (Item 627 from file: 103)
00533578 EDB-79-113043
Title: Micronesia: America's strategic trust
Author(s): Johnson, G.
Source: Bull. At. Sci. (United States) v 35:2. Coden: BASIA
Publication Date: Feb 1979 p 10-15
Document Type: Journal Article
Language: English
Journal Announcement: EDB7910
Subfile: TIC (Technical Information Center).
Country of Origin: United States
Abstract: Operation Crossroads by the US was designed to test the destructive power of nuclear weapons. The inhabitants on Bikini and Enewetak were moved to uninhabited atolls in the Marshall Islands, with the promise from the US that they would be returned to their islands. During the next 12 years, about 70 atomic and hydrogen bomb blasts devastated the islands. On March 1, 1954, the US detonated Bravo, the first test of a deliverable hydrogen bomb, exposing the Japanese fishermen on the Lucky Dragon add and the inhabitants of Rongelap and Utirik islands to radiation. The struggle of all these islanders being moved from their homelands, their return to contaminated environments in some cases, their medical problems, and trust funds instituted by the United States are discussed. (MCW);
Major Descriptors: *NUCLEAR EXPLOSIONS -- ENVIRONMENTAL IMPACTS; *NUCLEAR EXPLOSIONS -- RADIATION EFFECTS
Descriptors: AGREEMENTS; BIKINI; ENIWETOK; MARSHALL ISLANDS; POPULATION RELOCATION; RADIATION DOSES; RADIATION INJURIES; SOCIO-ECONOMIC FACTORS ; TESTING; USA
Broader Terms: BIOLOGICAL EFFECTS; BIOLOGICAL RADIATION EFFECTS; DOSES; EXPLOSIONS; INJURIES; INSTITUTIONAL FACTORS; ISLANDS; MARSHALL ISLANDS; MICRONESIA; NORTH AMERICA; OCEANIA; RADIATION EFFECTS

Subject Categories: 450202* -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)
530100 -- Environmental-Social Aspects of Energy Technologies -- Social & Economic Studies -- (-1989)
290600 -- Energy Planning & Policy -- Nuclear Energy

10/5/928 (Item 628 from file: 103)
00522205 ERA-04-049297; EDB-79-101670
Title: Hydrogeochemistry of Enewetak Atoll
Author(s): Buddemeier, R.W.; Reese, E.S.; Johnson, V.R. Jr.
Affiliation: Univ of Hawaii, Honolulu
Title: Mid-Pacific Marine Laboratory. Annual report, 1 July 1976--30 September 1977
Publication Date: Feb 1979 p 17
Report Number(s): NVO-0703-1
Document Type: Analytic of a Report
Language: English
Journal Announcement: EDB7908
Subfile: ERA (Energy Research Abstracts); TIC (Technical Information Center).
Country of Origin: United States
Country of Publication: United States
Abstract: During the past year of this continuing study most of the measurements of tidal response characteristics of the groundwater wells on Enjebi, Runit, Japtan, and Medren have been completed. Characterization of the quantity and quality of the groundwater has been extended by in situ probing and by laboratory analysis. Rainfall data collection has been continued. Tritium studies of the groundwater have been expanded and a model of the hydrologic system and the groundwater geochemistry is being developed.;
Major Descriptors: *GROUND WATER -- CHEMICAL ANALYSIS; *MARSHALL ISLANDS -- GEOCHEMISTRY
Descriptors: HYDROLOGY; PLANTS; RADIOISOTOPES; SOILS; TRITIUM
Broader Terms: BETA DECAY RADIOISOTOPES; BETA-MINUS DECAY RADIOISOTOPES; CHEMISTRY; HYDROGEN COMPOUNDS; HYDROGEN ISOTOPES; ISLANDS; ISOTOPES; LIGHT NUCLEI; MICRONESIA; NUCLEI; OCEANIA; ODD-EVEN NUCLEI; OXYGEN COMPOUNDS; RADIOISOTOPES; WATER; YEARS LIVING RADIOISOTOPES
Subject Categories: 580400* -- Geochemistry -- (-1989)

10/5/929 (Item 629 from file: 103)
00522002 INS-79-016088; ERA-04-049264; EDB-79-101467
Title: House mice on Enewetak Atoll
Author(s): Berry, R.J.; Reese, E.S.; Johnson, V.R. Jr.
Affiliation: Royal Free Hospital, London, England
Title: Mid-Pacific Marine Laboratory. Annual report, 1 July 1976--30 September 1977
Corporate Source: Hawaii Univ., Honolulu (USA). Office of Research Administration
Publication Date: Feb 1979 p 12-16
Report Number(s): NVO-0703-1
Document Type: Analytic of a Report; Numerical data
Language: English
Journal Announcement: EDB7908
Subfile: ERA (Energy Research Abstracts); INS (US Atomindex input); TIC (Technical Information Center).
Country of Origin: United Kingdom
Country of Publication: United States
Abstract: Several thousand mice were exposed to radiation during the atomic test period and then flown to Oak Ridge for study. It is thought that the present populations were formed by mice that escaped from these colonies. Mice were trapped and observations were made on body size, organ weight, and hematological characteristics. Genetic differences in mice from different islands are discussed. (HLW);
Major Descriptors: *ENIWETOK -- MICE; *MICE -- BIOLOGICAL RADIATION EFFECTS ; *MICE -- GENETICS
Descriptors: EXPERIMENTAL DATA; HEMATOLOGY; ISOLATED VALUES; MARSHALL

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ISLANDS; NUCLEAR EXPLOSIONS; ORGANS; POPULATIONS; SIZE; WEIGHT
Broader Terms: ANIMALS; BIOLOGICAL EFFECTS; BIOLOGY; BODY; DATA; DATA FORMS ; EXPLOSIONS; INFORMATION; ISLANDS; MAMMALS; MARSHALL ISLANDS; MEDICINE ; MICRONESIA; NUMERICAL DATA; OCEANIA; RADIATION EFFECTS; RODENTS; VERTEBRATES
Subject Categories: 560152* -- Radiation Effects on Animals -- Animals
INIS Subject Categories: C14* -- Effects of External Radiation on Animals

10/5/930 (Item 630 from file: 103)
00521810 ERA-04-049201; EDB-79-101275
Title: Analysis of population structure in Pacific mole crabs
Author(s): Wenner, A.M.; Page, H.M.; Fusaro, C.; Reese, E.S.; Johnson, V.R. Jr.
Affiliation: Univ. of California, Santa Barbara
Title: Mid-Pacific Marine Laboratory. Annual report, 1 July 1976--30 September 1977
Publication Date: Feb 1979 p 60-61
Report Number(s): NVO-0703-1
Document Type: Analytic of a Report
Language: English
Journal Announcement: EDB7908
Subfile: ERA (Energy Research Abstracts); TIC (Technical Information Center).
Country of Origin: United States
Country of Publication: United States
Abstract: Progress is reported on the following research projects: studies on whether the sex reversal (protandry) hypothesis remains viable for Pacific mole crabs; studies on growth rates of males and females; and indirect estimates of the food distribution pattern around the Enewetak Atoll beaches. (HLW);
Major Descriptors: *CRUSTACEANS -- FOOD; *CRUSTACEANS -- GROWTH; *CRUSTACEANS -- POPULATION DYNAMICS
Descriptors: COASTAL REGIONS; FEMALES; MALES; MARSHALL ISLANDS; SEX
Broader Terms: ANIMALS; AQUATIC ORGANISMS; ARTHROPODS; INVERTEBRATES; ISLANDS; MICRONESIA; OCEANIA
Subject Categories: 550100* -- Behavioral Biology
520100 -- Environment, Aquatic -- Basic Studies -- (-1989)

10/5/931 (Item 631 from file: 103)
00521807 ERA-04-049198; EDB-79-101272
Title: Survey of the coconut crab population on Ikuran Island, including the collection of demographic data and behavioral ecology of coral reef fishes
Author(s): Reese, E.S.; Motta, P.J.; MacDonald, C.; Boucher, L.; Reese, E.S.; Johnson, V.R. Jr.
Affiliation: Univ. of Hawaii, Honolulu
Title: Mid-Pacific Marine Laboratory. Annual report, 1 July 1976--30 September 1977
Publication Date: Feb 1979 p 41-44
Report Number(s): NVO-0703-1
Document Type: Analytic of a Report
Language: English
Journal Announcement: EDB7908
Subfile: ERA (Energy Research Abstracts); TIC (Technical Information Center).
Country of Origin: United States
Country of Publication: United States
Abstract: Progress is reported on the following research projects: use of tagging-recapture method to estimate the coconut crab population; studies on demographic data while tagging the crabs and distribution of vegetation; in-depth study of the behavior of 3 species of coral feeders; studies on anatomical adaptations of the feeding apparatus of butterflyfishes and relation of this to feeding behavior; duration of residence and reproductive activity of butterfly and damselfishes; and survey of reference reefs to assess recovery from the typhoon of May 1972. (HLW);

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Major Descriptors: *CRUSTACEANS -- POPULATION DYNAMICS; *FISHES -- BEHAVIOR ; *PLANTS -- DISTRIBUTION
Descriptors: ANATOMY; BIOLOGICAL ADAPTATION; CORALS; DATA COMPILATION; FEEDING; MARSHALL ISLANDS
Broader Terms: ANIMALS; AQUATIC ORGANISMS; ARTHROPODS; CNIDARIA; DATA; INFORMATION; INVERTEBRATES; ISLANDS; MICRONESIA; NUMERICAL DATA; OCEANIA; VERTEBRATES
Subject Categories: 550100* -- Behavioral Biology
520100 -- Environment, Aquatic -- Basic Studies -- (-1989)

10/5/932 (Item 632 from file: 103)
00521805 INS-79-016053; ERA-04-049196; EDB-79-101270
Title: Ecology of island rat populations
Author(s): Jackson, W.B.; Vessey, S.H.; Reese, E.S.; Johnson, V.R. Jr.
Affiliation: Bowling Green State Univ., OH
Title: Mid-Pacific Marine Laboratory. Annual report, 1 July 1976--30 September 1977
Corporate Source: Hawaii Univ., Honolulu (USA). Office of Research Administration
Publication Date: Feb 1979 p 30-33
Report Number(s): NVO-0703-1
Document Type: Analytic of a Report; Numerical data
Language: English
Journal Announcement: EDB7908
Subfile: ERA (Energy Research Abstracts); INS (US Atomindex input); TIC (Technical Information Center).
Country of Origin: United States
Country of Publication: United States
Abstract: Studies on the interaction of population density, behavior, and physiological responses of rats included determining the number of incisor scars on the backs of rodents and tail scars; determining internal parasite loads; and determining adrenal weights. Island populations of mice were smaller in body size than mainland populations; external morphological differences were correlated with serologic patterns. Tables are presented to show results. (HLW);
Major Descriptors: *MARSHALL ISLANDS -- ECOLOGY; *MICE -- MORPHOLOGY; *RATS -- BEHAVIOR; *RATS -- PARASITES; *RATS -- POPULATION DENSITY
Descriptors: ADRENAL GLANDS; BLOOD SERUM; EXPERIMENTAL DATA; ISOLATED VALUES; PHYSIOLOGY; WEIGHT
Broader Terms: ANIMALS; BODY; DATA; DATA FORMS; ENDOCRINE GLANDS; GLANDS; INFORMATION; ISLANDS; MAMMALS; MICRONESIA; NUMERICAL DATA; OCEANIA; ORGANS; RODENTS; VERTEBRATES
Subject Categories: 550100* -- Behavioral Biology
560152 -- Radiation Effects on Animals -- Animals
INIS Subject Categories: C14* -- Effects of External Radiation on Animals

10/5/933 (Item 633 from file: 103)
00521763 ERA-04-049177; EDB-79-101228
Title: Studies on the Tintinnida of Enewetak Atoll
Author(s): Gold, K.; Morales, E.A.
Affiliation: New York Aquarium, Brooklyn
Source: J. Protozool. (United States) v 24:4. Coden: JPROA
Publication Date: 1977 p 580-587
Document Type: Journal Article
Language: English
Journal Announcement: EDB7908
Subfile: ERA (Energy Research Abstracts); TIC (Technical Information Center).
Country of Origin: United States
Abstract: Twenty-six species of Tintinnida were identified in the plankton at Enewetak Atoll. The majority of species in this habitat had hyaline loricae. The agglutinated forms had a high degree of specificity for the types of calcium-containing particles that they incorporated into the loricae. Scanning electron micrographs of loricae are presented for 10 species.;
Major Descriptors: *ZOOPLANKTON -- TAXONOMY

500404

Descriptors: AQUATIC ORGANISMS; ELECTRON MICROSCOPY; ENIWETOK
Broader Terms: AQUATIC ORGANISMS; BIOLOGY; ISLANDS; MARSHALL ISLANDS; MICRONESIA; MICROSCOPY; OCEANIA; PLANKTON
Subject Categories: 520100* -- Environment, Aquatic -- Basic Studies -- (-1989)
550700 -- Microbiology
550800 -- Morphology

10/5/934 (Item 634 from file: 103)
00521760 ERA-04-049175; EDB-79-101225
Title: Reef coral taxonomy workshop at the Mid-Pacific Marine Laboratory, Enewetak Atoll
Author(s): Lang, J.C.; Reese, E.S.; Johnson, V.R. Jr.
Affiliation: Univ. of Texas, Austin
Title: Mid-Pacific Marine Laboratory. Annual report, 1 July 1976--30 September 1977
Publication Date: Feb 1979 p 34
Report Number(s): NVO-0703-1
Document Type: Analytic of a Report
Language: English
Journal Announcement: EDB7908
Subfile: ERA (Energy Research Abstracts); TIC (Technical Information Center).
Country of Origin: United States
Country of Publication: United States
Abstract: About 2,500 specimens of coral from 28 different sites around Enewetak Atoll were collected, labelled, cleaned and divided among approximately 170 species of scleractinians and about 5 species of non-scleractinian corals. A complete collection of the best specimens was given to the MPML; and another complete collection was deposited in the Bishop Museum. Remaining replicates were given to the USNM (Washington), the Rijksmuseum van Natuurlijke Historie (Leiden), and the British Museum (London). Fairly detailed habitat and living appearance records were made for most specimens, and some were photographed underwater. Some of the specimens in the MPML and BPBM collections are being photographed to show skeletal characteristics. This collection and data are currently forming the basis of the Enewetak reef coral guide (Lang et al., manuscript in prep.). The specific information recorded for the specimens will be transferred to tape and stored in the Hawaii Coastal Zone Data Bank. After publication of the guide, all original B and W photographic negatives and color transparencies will be deposited in the Bishop Museum.;
Major Descriptors: *CORALS -- TAXONOMY; *ENIWETOK -- ECOLOGY
Descriptors: MARSHALL ISLANDS; PHOTOGRAPHY
Broader Terms: ANIMALS; BIOLOGY; CNIDARIA; INVERTEBRATES; ISLANDS; MARSHALL ISLANDS; MICRONESIA; OCEANIA
Subject Categories: 520100* -- Environment, Aquatic -- Basic Studies -- (-1989)

10/5/935 (Item 635 from file: 103)
00521756 ERA-04-049171; EDB-79-101221
Author(s): Reese, E.S.; Johnson, V.R. Jr.
Title: Mid-Pacific Marine Laboratory. Annual report, 1 July 1976--30 September 1977
Corporate Source: Hawaii Univ., Honolulu (USA). Office of Research Administration
Publication Date: Feb 1979 p 68
Report Number(s): NVO-0703-1
Contract Number (DOE): EY-76-C-08-0703
Document Type: Report
Language: English
Journal Announcement: EDB7908
Availability: Dep. NTIS, PC A04/MF A01.
Subfile: ERA (Energy Research Abstracts); TIC (Technical Information Center).
Country of Origin: United States

500404 5

Country of Publication: United States
Abstract: Separate abstracts were prepared for 18 papers of the report. (HLW);
Major Descriptors: *AQUATIC ORGANISMS -- BEHAVIOR; *AQUATIC ORGANISMS -- METABOLISM; *AQUATIC ORGANISMS -- POPULATION DYNAMICS; *MARSHALL ISLANDS -- GEOCHEMISTRY; *SEAS -- ECOLOGY
Descriptors: CORALS; FISHES; LEADING ABSTRACT; PLANKTON; RADIOISOTOPES
Broader Terms: ABSTRACTS; ANIMALS; AQUATIC ORGANISMS; CHEMISTRY; CNIDARIA; DOCUMENT TYPES; INVERTEBRATES; ISLANDS; ISOTOPES; MICRONESIA; OCEANIA; SURFACE WATERS; VERTEBRATES
Subject Categories: 520100* -- Environment, Aquatic -- Basic Studies -- (-1989)
580400 -- Geochemistry -- (-1989)
550100 -- Behavioral Biology
550200 -- Biochemistry

10/5/936 (Item 636 from file: 103)
00521711 ERA-04-049148; EDB-79-101176
Title: Role of succession in the terrestrial vegetation of an atoll
Author(s): Zedler, P.H.; Louda, S.; Reese, E.S.; Johnson, V.R. Jr.
Affiliation: San Diego State Univ., CA
Title: Mid-Pacific Marine Laboratory. Annual report, 1 July 1976--30 September 1977
Publication Date: Feb 1979 p 64-66
Report Number(s): NVO-0703-1
Document Type: Analytic of a Report
Language: English
Journal Announcement: EDB7908
Subfile: ERA (Energy Research Abstracts); TIC (Technical Information Center).
Country of Origin: United States
Country of Publication: United States
Abstract: Progress is reported on the following research projects: successional status of each of the more abundant species by observing the number and distribution of individuals by size class; and prediction of the future condition of the vegetation under undisturbed conditions and the response of the vegetation to further disturbance. (HLW);
Major Descriptors: *PLANTS -- ECOLOGY; *PLANTS -- MARSHALL ISLANDS
Descriptors: DATA COMPILATION; DISTRIBUTION; FORECASTING; SAMPLING; SEAS
Broader Terms: DATA; INFORMATION; ISLANDS; MICRONESIA; NUMERICAL DATA; OCEANIA; SURFACE WATERS
Subject Categories: 510100* -- Environment, Terrestrial -- Basic Studies -- (-1989)

10/5/937 (Item 637 from file: 103)
00510718 ERA-04-041572; INS-79-014007; EDB-79-084818
Author(s): Levy, Y.; Friedman, G.M.; Miller, D.S.
Title: Fission- and alpha-track study of biogeochemistry of plutonium and uranium in carbonates of bikini and enewetak atolls. Final report
Corporate Source: Rensselaer Polytechnic Inst., Troy, NY (USA). Dept. of Geology
Publication Date: 31 Dec 1978 p 16
Report Number(s): COO-3462-15
Contract Number (DOE): EY-76-S-02-3462
Document Type: Report
Language: English
Journal Announcement: EDB7907
Availability: Dep. 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: Results of the analysis of uranium concentrations in the 8 coral heads sampled from the Bikini and Enewetak lagoons lead to the following conclusions: (1) no parallel increase in uranium

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concentration was found in the corals contaminated by Pu and Am; (2) in the noncontaminated corals, the fission track analysis shows wider ranges of uranium concentrations (1.8 to 3.1). Thus, in the corals not contaminated by Pu and Am, uranium concentrations similar to the uranium concentration in the contaminated corals were found; (3) uranium content in all corals analyzed was rather homogeneously distributed, i.e., no hot spots, stars, or areas differing in concentration by more than a few percent were detected by the fission track analyses.;
Major Descriptors: *AMERICIUM -- BIOGEOCHEMISTRY; *BIKINI -- CONTAMINATION; *CORALS -- CONTAMINATION; *ENIWETOK -- CONTAMINATION; *NUCLEAR EXPLOSIONS -- ENVIRONMENTAL EFFECTS; *PLUTONIUM -- BIOGEOCHEMISTRY; *URANIUM -- BIOGEOCHEMISTRY
Descriptors: FISSION TRACKS
Broader Terms: ACTINIDES; ANIMALS; CHEMISTRY; CNIDARIA; ELEMENTS; EXPLOSIONS; GEOCHEMISTRY; INVERTEBRATES; ISLANDS; MARSHALL ISLANDS; METALS; MICRONESIA; OCEANIA; PARTICLE TRACKS; TRANSPLUTONIUM ELEMENTS; TRANSURANIUM ELEMENTS
Subject Categories: 450200* -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives
INIS Subject Categories: E14* -- Nuclear Explosions

10/5/938 (Item 638 from file: 103)
00499846 AIX-10-454238; EDB-79-073946
Title: Determination of plutonium in environment
Author(s): Sakanoue, M. (Kanazawa Univ. (Japan). Faculty of Science)
Source: Radioisotopes (Tokyo) (Japan) v 27:7. Coden: RAISA
Publication Date: Jul 1978 p 410-421
Document Type: Journal Article
Language: Japanese
Journal Announcement: EDB7905
Subfile: AIX (non-US Atomindex input).
Country of Origin: Japan
Abstract: Past and present methods of determining the amount of plutonium in the environment are summarized. Determination of the amount of plutonium in uranium ore began in 1941. Plutonium present in polluted environments due to nuclear explosions, nuclear power stations, etc. was measured in soil and sand in Nagasaki in 1951 and in ash in Bikini in 1954. Analytical methods of measuring the least amount of plutonium in the environment were developed twenty years later. Many studies on and reviews of these methods have been reported all over the world, and a standard analytical procedure has been adopted. A basic analytical method of measurement was drafted in Japan in 1976. The yield, treatment of samples, dissolution, separation, control of measurable ray sources determination by ..cap alpha.. spectrometry, cross-check determination, and treatment of samples containing hardly soluble plutonium were examined. At present, the amount of plutonium can be determined by all of these methods. The presence of plutonium was studied further, and the usefulness of determination of the plutonium isotope ratio is discussed.;
Major Descriptors: *PLUTONIUM
Descriptors: ALPHA SPECTROMETERS; ALPHA SPECTROSCOPY; BIBLIOGRAPHIES; CONTAMINATION; ENVIRONMENT; PLUTONIUM 239; PLUTONIUM 240; RADIATION DETECTION; REVIEWS; SAMPLE PREPARATION; SEPARATION PROCESSES; STANDARDIZATION
Broader Terms: ACTINIDE ISOTOPES; ACTINIDE NUCLEI; ACTINIDES; ALPHA DECAY RADIOISOTOPES; DETECTION; DOCUMENT TYPES; ELEMENTS; EVEN-EVEN NUCLEI; EVEN-ODD NUCLEI; HEAVY NUCLEI; ISOTOPES; MEASURING INSTRUMENTS; METALS; NUCLEI; PLUTONIUM ISOTOPES; RADIOISOTOPES; SPECTROMETERS; SPECTROSCOPY; TRANSURANIUM ELEMENTS; YEARS LIVING RADIOISOTOPES
Subject Categories: 400103* -- Radiometric & Radiochemical Procedures -- (-1987)
INIS Subject Categories: B11* -- Chemical & Isotopic Analysis

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10/5/939 (Item 639 from file: 103)
00496131 INS-79-007170; ERA-04-031413; EDB-79-070231

Title: Marine ecology
Title: Puerto Rico Nuclear Center annual report, July 1, 1975--September 30, 1976
Corporate Source: Center for Energy and Environment Research, Caparra Heights (Puerto Rico)
Publication Date: Oct 1977 p 57-102
Report Number(s): CEER-5
Document Type: Analytic of a Report
Language: English
Journal Announcement: EDB7904
Subfile: ERA (Energy Research Abstracts); INS (US Atomindex input); TIC (Technical Information Center).
Country of Origin: Puerto Rico
Country of Publication: Puerto Rico
Abstract: Studies on marine ecology included marine pollution; distribution patterns of Pu and Am in the marine waters, sediments, and organisms of Bikini Atoll and the influence of physical, chemical, and biological factors on their movements through marine biogeochemical systems; transfer and dispersion of organic pollutants from an oil refinery through coastal waters; transfer of particulate pollutants, including sediments dispersed during construction of offshore power plants; and raft culture of the mangrove oysters. (HLW);
Major Descriptors: *AMERICIUM ISOTOPES -- ENVIRONMENTAL TRANSPORT; *BIKINI -- ECOLOGY; *OFFSHORE NUCLEAR POWER PLANTS -- ENVIRONMENTAL EFFECTS; *OYSTERS -- CULTIVATION TECHNIQUES; *PETROLEUM REFINERIES -- ENVIRONMENTAL EFFECTS; *PLUTONIUM ISOTOPES -- ENVIRONMENTAL TRANSPORT; *SEAS -- BIOGEOCHEMISTRY; *SEAS -- ECOLOGY; *SEAS -- WATER POLLUTION; *WATER POLLUTION -- ENVIRONMENTAL TRANSPORT
Descriptors: AQUATIC ORGANISMS; COASTAL WATERS; SEDIMENTS
Broader Terms: ACTINIDE ISOTOPES; ANIMALS; AQUATIC ORGANISMS; CHEMISTRY; GEOCHEMISTRY; INVERTEBRATES; ISLANDS; MARSHALL ISLANDS; MASS TRANSFER; MICRONESIA; MOLLUSCS; NUCLEAR FACILITIES; NUCLEAR POWER PLANTS; OCEANIA ; POLLUTION; POWER PLANTS; SURFACE WATERS; THERMAL POWER PLANTS
Subject Categories: 520200* -- Environment, Aquatic -- Chemicals Monitoring & Transport -- (-1989)
520300 -- Environment, Aquatic -- Radioactive Materials Monitoring & Transport -- (1989)
020900 -- Petroleum -- Environmental Aspects
INIS Subject Categories: C52* -- Radiation Hazards & Safety Evaluations of Nuclear Installations
B32 -- Water

10/5/940 (Item 640 from file: 103)
00477338 ERA-04-027870; INS-79-008085; EDB-79-051437
Author(s): Nelson, V.A.
Title: Radiological survey of plants, animals, and soil at five atolls in the Marshall Islands; September--October 1976
Corporate Source: Washington Univ., Seattle (USA). Lab. of Radiation Ecology
Publication Date: Jan 1979 p 45
Report Number(s): NVO-269-36
Contract Number (DOE): EY-76-S-08-0269
Document Type: Report; Numerical data
Language: English
Journal Announcement: EDB7904
Availability: Dep. 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: The Division of Operational Safety's portion of the Pacific Radioecology Program began in 1974 and it is a continuing program to determine the kinds and amounts of radionuclides distributed in the foods, plants, animals, and soils of the Central Pacific, especially the Marshall Islands. As part of this program, Wotje, Ailuk, Utirik, Rongelap, and Bikini tolls were visited in 1976 and samples collected.

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Results of the radiometric analyses of the samples are presented. Results of these analyses indicate that /sup 90/Sr and /sup 137/Cs are predominant in the terrestrial environment and, in addition, /sup 241/Am and /sup 239/ /sup 240/Pu are also important in the soil from Rongelap and Bikini Atols. Naturally occurring /sup 40/K is the predominant radionuclide in marine organisms, while /sup 60/Co is significant in the tridacnid clams. Amounts of radioactivity vary with distance from the Bikini test site and in relation to the fallout pattern from the March 1954 Bravo test. Thus, samples from Bikini Atol had the greatest amounts of radioactivity while the northern islands of Rongelap had slightly lower amounts. The southern islands of Rongelap Atoll and Utirik Atoll had intermediate amounts of radioactivity while Ailuk and Wotje atolls had the least radioactivity of the atolls visited.;

Major Descriptors: *AMERICIUM 241 -- RADIATION MONITORING; *AMERICIUM 241 -- RADIOECOLOGICAL CONCENTRATION; *ANTIMONY 125 -- RADIATION MONITORING ; *ANTIMONY 125 -- RADIOECOLOGICAL CONCENTRATION; *AQUATIC ECOSYSTEMS -- RADIONUCLIDE MIGRATION; *CESIUM 137 -- RADIATION MONITORING; *CESIUM 137 -- RADIOECOLOGICAL CONCENTRATION; *COBALT 60 -- RADIATION MONITORING; *COBALT 60 -- RADIOECOLOGICAL CONCENTRATION; *CRUSTACEANS -- RADIOACTIVITY; *EUROPIUM 155 -- RADIATION MONITORING; *EUROPIUM 155 -- RADIOECOLOGICAL CONCENTRATION; *FISHES -- RADIOACTIVITY; *MARSHALL ISLANDS -- RADIATION MONITORING; *MARSHALL ISLANDS -- RADIOACTIVITY; *MARSHALL ISLANDS -- RADIOECOLOGICAL CONCENTRATION; *MARSHALL ISLANDS -- RADIOECOLOGY; *MARSHALL ISLANDS -- RADIONUCLIDE MIGRATION; *MOLLUSCS -- RADIOACTIVITY; *PLANTS -- RADIOACTIVITY; *PLUTONIUM 239 -- RADIATION MONITORING; *PLUTONIUM 239 -- RADIOECOLOGICAL CONCENTRATION; *PLUTONIUM 240 -- RADIATION MONITORING; *PLUTONIUM 240 -- RADIOECOLOGICAL CONCENTRATION; *POTASSIUM 40 -- RADIATION MONITORING; *POTASSIUM 40 -- RADIOECOLOGICAL CONCENTRATION; *SOILS -- RADIOACTIVITY; *STRONTIUM 90 -- RADIATION MONITORING; *STRONTIUM 90 -- RADIOECOLOGICAL CONCENTRATION ; *TERRESTRIAL ECOSYSTEMS -- RADIONUCLIDE MIGRATION; *URANIUM 238 -- RADIATION MONITORING; *URANIUM 238 -- RADIOECOLOGICAL CONCENTRATION

Descriptors: COMPILED DATA; TABLES

Broader Terms: ACTINIDE ISOTOPES; ACTINIDE NUCLEI; ALKALI METAL ISOTOPES; ALKALINE EARTH ISOTOPES; ALPHA DECAY RADIOISOTOPES; AMERICIUM ISOTOPES; ANIMALS; ANTIMONY ISOTOPES; AQUATIC ORGANISMS; ARTHROPODS; BETA DECAY RADIOISOTOPES; BETA-MINUS DECAY RADIOISOTOPES; BETA-PLUS DECAY RADIOISOTOPES; CESIUM ISOTOPES; COBALT ISOTOPES; DATA FORMS; ECOLOGICAL CONCENTRATION; ECOLOGY; ECOSYSTEMS; ELECTRON CAPTURE RADIOISOTOPES; ENVIRONMENTAL TRANSPORT; EUROPIUM ISOTOPES; EVEN-EVEN NUCLEI; EVEN-ODD NUCLEI; HEAVY NUCLEI; INTERMEDIATE MASS NUCLEI; INTERNAL CONVERSION RADIOISOTOPES; INVERTEBRATES; ISLANDS; ISOMERIC TRANSITION ISOTOPES; ISOTOPES; LIGHT NUCLEI; MASS TRANSFER; MICRONESIA; MINUTES LIVING RADIOISOTOPES; MONITORING; NUCLEI; OCEANIA; ODD-EVEN NUCLEI; ODD-ODD NUCLEI; PLUTONIUM ISOTOPES; POTASSIUM ISOTOPES; RADIOISOTOPES; RARE EARTH ISOTOPES; RARE EARTH NUCLEI; STRONTIUM ISOTOPES; URANIUM ISOTOPES ; VERTEBRATES; YEARS LIVING RADIOISOTOPES

Subject Categories: 510301* -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- Soil -- (-1987)
510302 -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- Terrestrial Ecosystems & Food Chains -- (-1987)
520302 -- Environment, Aquatic -- Radioactive Materials Monitoring & Transport -- Aquatic Ecosystems & Food Chains -- (-1987)
560172 -- Radiation Effects -- Nuclide Kinetics & Toxicology -- Animals -- (-1987)
560173 -- Radiation Effects -- Nuclide Kinetics & Toxicology -- Plants -- (-1987)

INIS Subject Categories: B31* -- Land
C22 -- Radionuclide Ecology
C21 -- Tissue Distribution, Metabolism, Toxicology & Removal of Radionuclides

10/5/941 (Item 641 from file: 103) 5004049
00470511 INS-79-007169; ERA-04-027871; EDB-79-044610
Author(s): Nelson, V.A.

Title: Radiological survey of plants, animals, and soil in micronesia
Corporate Source: Washington Univ., Seattle (USA)
Publication Date: Nov 1975 p 36
Report Number(s): NVO-0269-35
Contract Number (DOE): EY-76-S-08-0269
Document Type: Report; Numerical data
Language: English
Journal Announcement: EDB7904
Availability: Dep. 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: In 1974 the Laboratory of Radiation Ecology began a program to determine the radionuclides found in foods, plants, animals, and soils of the Central Pacific. As part of this program the present study was undertaken to determine radionuclides found in the common foods and soils in areas of Micronesia other than those areas receiving local fallout from the test sites at Bikini or Enewetak atolls. Areas sampled in 1975 were Majuro Atoll in the Marshall Islands, Truk and Ponape in the Caroline Islands, Guam in the Marianas Islands, and Koror and Babelthaup in the Palau Islands. All samples were analyzed for gamma-emitting radionuclides while some were also analyzed for /sup 90/Sr of /sup 239/ /sup 240/Pu. Results of the analyses indicate that naturally occurring /sup 40/K is the predominant radionuclide in the biological samples. Cesium-137 in amounts less than 1 pCi/g (dry) was the only fallout radionuclide detected in most of the biological samples. Soil samples usually contained /sup 90/Sr, /sup 137/Cs, /sup 238/U, and /sup 239/Pu, while soil from Truk, Palau, and Ponape also contained isotopes of radium and thorium. Soil from Guam also contained /sup 210/Pb and /sup 235/U in addition to the above radionuclides. Considering only the fallout radionuclides, the values for /sup 90/Sr, /sup 137/Cs, and /sup 239/ /sup 240/Pu in samples from Guam, Palau, Truk, Ponape, and Majuro are less than the values for these radionuclides in similar samples from atolls such as Utirik, Rongerik, and Ailinginae in the northern Marshall Islands, and are much less than values of these radionuclides in samples from Bikini and Rongelap atolls.;

Major Descriptors: *BANANAS -- RADIOACTIVITY; *CESIUM 137 -- RADIATION MONITORING; *CESIUM 137 -- RADIOACTIVITY; *COCONUTS -- RADIOACTIVITY; *FISHES -- RADIOACTIVITY; *FRUITS -- RADIOACTIVITY; *PAPAYAS -- RADIOACTIVITY; *PLUTONIUM 239 -- RADIATION MONITORING; *PLUTONIUM 240 -- RADIATION MONITORING; *POTASSIUM 40 -- RADIATION MONITORING; *POTASSIUM 40 -- RADIOACTIVITY; *ROOTS -- RADIOACTIVITY; *STRONTIUM 90 -- RADIATION MONITORING; *STRONTIUM 90 -- RADIOACTIVITY; *CESIUM 137 -- RADIATION MONITORING; *LEAD 210 -- RADIATION MONITORING; *PLUTONIUM 239 -- RADIATION MONITORING; *PLUTONIUM 240 -- RADIATION MONITORING; *RADIUM 210 -- RADIATION MONITORING; *RADIUM 226 -- RADIATION MONITORING; *SOILS -- RADIOACTIVITY; *STRONTIUM 90 -- RADIATION MONITORING; *THORIUM 228 -- RADIATION MONITORING; *THORIUM 232 -- RADIATION MONITORING; *URANIUM 235 -- RADIATION MONITORING; *URANIUM 238 -- RADIATION MONITORING; *CESIUM 137 -- RADIATION MONITORING; *COBALT 60 -- RADIATION MONITORING; *CRUSTACEANS -- RADIOACTIVITY; *PLUTONIUM 239 -- RADIATION MONITORING; *PLUTONIUM 240 -- RADIATION MONITORING; *POTASSIUM 40 -- RADIATION MONITORING; *STRONTIUM 90 -- RADIATION MONITORING

Descriptors: EXPERIMENTAL DATA; FALLOUT DEPOSITS; ISOLATED VALUES; MICRONESIA;

Broader Terms: ACTINIDE ISOTOPES; ACTINIDE NUCLEI; ALKALI METAL ISOTOPES; ALKALINE EARTH ISOTOPES; ALPHA DECAY RADIOISOTOPES; ANIMALS; AQUATIC ORGANISMS; ARTHROPODS; BETA DECAY RADIOISOTOPES; BETA-MINUS DECAY RADIOISOTOPES; BETA-PLUS DECAY RADIOISOTOPES; CESIUM ISOTOPES; COBALT ISOTOPES; DATA; DATA FORMS; ELECTRON CAPTURE RADIOISOTOPES; EVEN-EVEN NUCLEI; EVEN-ODD NUCLEI; FALLOUT; FOOD; FRUITS; HEAVY NUCLEI; INFORMATION; INTERMEDIATE MASS NUCLEI; INTERNAL CONVERSION RADIOISOTOPES; INVERTEBRATES; ISOMERIC TRANSITION ISOTOPES; ISOTOPES;

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LEAD ISOTOPES; LIGHT NUCLEI; MINUTES LIVING RADIOISOTOPES; MONITORING; NUCLEI; NUMERICAL DATA; OCEANIA; ODD-EVEN NUCLEI; ODD-ODD NUCLEI; PLUTONIUM ISOTOPES; POTASSIUM ISOTOPES; RADIOISOTOPES; RADIUM ISOTOPES; STRONTIUM ISOTOPES; THORIUM ISOTOPES; URANIUM ISOTOPES; VERTEBRATES; YEARS LIVING RADIOISOTOPES

Subject Categories: 510301* -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- Soil -- (-1987)
510302 -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- Terrestrial Ecosystems & Food Chains -- (-1987)
520302 -- Environment, Aquatic -- Radioactive Materials Monitoring & Transport -- Aquatic Ecosystems & Food Chains -- (-1987)
560173 -- Radiation Effects -- Nuclide Kinetics & Toxicology -- Plants -- (-1987)
560172 -- Radiation Effects -- Nuclide Kinetics & Toxicology -- Animals -- (-1987)

INIS Subject Categories: B31* -- Land
C22 -- Radionuclide Ecology
C21 -- Tissue Distribution, Metabolism, Toxicology & Removal of Radionuclides

10/5/942 (Item 642 from file: 103)
00464650 ERA-04-024553; EDB-79-038749
Author(s): Smith, S.V.; Foster, M.A.
Title: Mid-Pacific Marine Laboratory. Annual report, July 1, 1975--June, 30, 1976
Corporate Source: Hawaii Univ., Honolulu (USA)
Publication Date: Sep 1978 p 120
Report Number(s): NVO-0628-2
Contract Number (DOE): EX-76-S-08-0628
Document Type: Report
Language: English
Journal Announcement: EDB7903
Availability: Dep. NTIS, PC A06/MF A01.
Subfile: ERA (Energy Research Abstracts); TIC (Technical Information Center).
Country of Origin: United States
Country of Publication: United States

Abstract: The two major categories of study are general ecology and biogeochemistry. The biogeochemical studies clearly tie to a major MPML goal of research leading towards understanding of the cycling of materials in atoll ecosystems. In general, the listed biogeochemical studies represent inventories of materials (including materials of potential medical importance) in various ecosystem components and assessing material fluxes. Within the general field biology ecology studies, there is a shift towards quantification and an increasing proportion of studies related to population dynamics. Material fluxes (in the form of food-web dynamics) figure prominently in the studies. Both of these shifts are also consistent with the goal stated above. MPML remains an important site for the study of environmental physiology and possible radiation-induced genetic alterations. Oceanographic and physiographic studies are leading towards a better understanding of physical advective processes and ecosystem compartment characteristics. Terrestrial studies are being given increasing attention, in large part because of the practical importance of the terrestrial environment to the returning Enewetakese. Finally, two studies represent a venture into a new field for MPML: training of students and teachers in the Marshall Islands.;

Major Descriptors: *AQUATIC ECOSYSTEMS -- BIOLOGICAL RADIATION EFFECTS; *BIOGEOCHEMISTRY; *OCEANOGRAPHY; *SEAS -- BIOGEOCHEMISTRY; *SEAS -- ECOLOGY; *TERRESTRIAL ECOSYSTEMS -- BIOLOGICAL RADIATION EFFECTS
Descriptors: EDUCATION; FOOD CHAINS; GENETICS; PHYSIOLOGY; POPULATION DYNAMICS; RESEARCH PROGRAMS
Broader Terms: BIOLOGICAL EFFECTS; BIOLOGY; CHEMISTRY; ECOSYSTEMS; GEOCHEMISTRY; RADIATION EFFECTS; SURFACE WATERS
Subject Categories: 520100* -- Environment, Aquatic -- Basic Studies -- (-1989)

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560152 -- Radiation Effects on Animals -- Animals
550400 -- Genetics
550500 -- Metabolism
INIS Subject Categories: B32* -- Water
C14 -- Effects of External Radiation on Animals

10/5/943 (Item 643 from file: 103)
00453691 INS-79-003326; EDB-79-027789
Title: Risks for radiation workers
Author(s): Rotblat, J.
Source: Bull. At. Sci. (United States) v 34:7. Coden: BASIA
Publication Date: Sep 1978 p 41-46
Document Type: Journal Article
Language: English
Journal Announcement: EDB7901
Subfile: INS (US Atomindex input); TIC (Technical Information Center).
Country of Origin: United States
Abstract: The following topics are discussed: recommendations of the International Commission on Radiological Protection; methods for determining dose limits to workers; use of data from survivors of Hiroshima and Nagasaki for estimating risk factors; use of data from survivors of nuclear explosions in Marshall Islands, uranium miners, and patients exposed to diagnostic and therapeutic radiation; risk factors for radioinduced malignancies; evidence that risk factors for persons exposed to partial-body radiation and Japanese survivors are too low; greater resistance of A-bomb survivors to radiation; and radiation doses received by U.K. medical workers and by U.K. fuel reprocessing workers. It is suggested that the dose limit for radiation workers should be reduced by a factor of 5. (HLW);
Major Descriptors: *A-BOMB SURVIVORS -- RADIATION DOSES; *MEDICAL PERSONNEL -- RADIATION DOSES; *MEDICAL PERSONNEL -- RADIATION HAZARDS; *MINES -- RADIATION DOSES; *PERSONNEL -- RADIATION DOSES; *PERSONNEL -- RADIATION HAZARDS; *RADIATION DOSES -- DATA COMPILATION; *RADIATION HAZARDS -- RECOMMENDATIONS
Descriptors: DOSE LIMITS; ICRP; MARSHALL ISLANDS; NEOPLASMS; NUCLEAR EXPLOSIONS; PATIENTS; RADIOINDUCTION; RADIOTHERAPY; REPROCESSING; SAFETY STANDARDS; UNITED KINGDOM; URANIUM MINES
Broader Terms: DATA; DISEASES; DOSES; EUROPE; EXPLOSIONS; HAZARDS; HEALTH HAZARDS; INFORMATION; INTERNATIONAL ORGANIZATIONS; ISLANDS; MEDICINE; MICRONESIA; MINES; NUCLEAR MEDICINE; NUMERICAL DATA; OCEANIA; PERSONNEL ; PROFESSIONAL PERSONNEL; RADIOLOGY; SAFETY STANDARDS; SEPARATION PROCESSES; STANDARDS; THERAPY
Subject Categories: 560151* -- Radiation Effects on Animals -- Man
INIS Subject Categories: C15* -- Effects of External Radiation on Man

10/5/944 (Item 644 from file: 103)
00435531 INS-78-020123; ERA-04-004432; EDB-79-003628
Author(s): Barnes, M.G.
Title: Statistical design and analysis in the cleanup of environmental radionuclide contamination. DRI publication No. 45012 (Eniwetok cleanup before return of residents)
Corporate Source: Nevada Univ., Reno (USA). Desert Research Inst.
Publication Date: Jul 1978 p 63
Report Number(s): NVO-1253-12
Contract Number (DOE): EY-76-C-08-1253
Note: Thesis
Document Type: Report
Language: English
Journal Announcement: EDB7812
Availability: Dep. NTIS, PC A04/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 cleanup of Eniwetok Island before the return of former residents is discussed. Of the contaminants in the soil of the atoll,

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the most important for cleanup are Pu-238, 239,240, and Am-241, which are present in sufficient quantities to require cleanup, and isotopes of Sr and Cs which also are present and must be considered since these elements can be taken up by food plants such as coconut, pandanus, and breadfruit, and passed on to man. The design of the cleanup sampling program is described. In addition to soil contamination, much metal and concrete debris, not all of it contaminated, as well as buildings and equipment, remain from the testing. The clean-up agreement covered all of this material, contaminated or not.;

Major Descriptors: *ENIWETOK -- DECONTAMINATION; *ENIWETOK -- HUMAN POPULATIONS; *FOOD -- SAMPLING; *HUMAN POPULATIONS -- RADIATION PROTECTION; *SOILS -- SAMPLING

Descriptors: AMERICIUM 241; ATMOSPHERIC EXPLOSIONS; CESIUM ISOTOPES; ENVIRONMENTAL TRANSPORT; FALLOUT; NUCLEAR EXPLOSIONS; PLANNING; PLUTONIUM 238; PLUTONIUM 239; PLUTONIUM 240; RADIATION MONITORING; RADIOACTIVITY; RADIONUCLIDE MIGRATION; STATISTICAL MECHANICS; STRONTIUM ISOTOPES; SURFACE CLEANING; TIME DEPENDENCE

Broader Terms: ACTINIDE ISOTOPES; ACTINIDE NUCLEI; ALKALI METAL ISOTOPES; ALKALINE EARTH ISOTOPES; ALPHA DECAY RADIOISOTOPES; AMERICIUM ISOTOPES; CLEANING; ENVIRONMENTAL TRANSPORT; EVEN-EVEN NUCLEI; EVEN-ODD NUCLEI; EXPLOSIONS; HEAVY NUCLEI; ISLANDS; ISOTOPES; MARSHALL ISLANDS; MASS TRANSFER; MECHANICS; MICRONESIA; MONITORING; NUCLEI; OCEANIA; ODD-EVEN NUCLEI; PLUTONIUM ISOTOPES; POPULATIONS; RADIOISOTOPES; SURFACE FINISHING; YEARS LIVING RADIOISOTOPES

Subject Categories: 510301* -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- Soil -- (-1987)
510302 -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- Terrestrial Ecosystems & Food Chains -- (-1987)
450202 -- Explosions & Explosives -- Nuclear -- Weaponry -- (-1989)

INIS Subject Categories: B31* -- Land
C22 -- Radionuclide Ecology
E14 -- Nuclear Explosions

10/5/945 (Item 645 from file: 103)

00433301 GAP-79-000113; EDB-79-001398

Author(s): Lawrence, D.; Masuda, R.

Title: Solar thermosiphon systems class conducted by the County of Maui for the Maunaolu Vocational/Educational Program at Maunaolu Campus, Island of Maui, State of Hawaii. Summary report, January--May 1978

Corporate Source: California Univ., Livermore (USA). Lawrence Livermore Lab.

Publication Date: 1978 p 54

Report Number(s): UCRL-13872

Contract Number (DOE): W-7405-ENG-48

Document Type: Report

Language: English

Journal Announcement: EDB7812

Availability: Dep. NTIS, PC A04/MF A01.

Subfile: GAP (General and Practical); TIC (Technical Information Center).

Country of Origin: United States

Country of Publication: United States

Abstract: The course description, course outline, lesson outlines, class handout materials, information sheets, references, and a list of class participants are included. (MHR);

Major Descriptors: *SOLAR WATER HEATERS -- CONSTRUCTION; *SOLAR WATER HEATERS -- INSTALLATION; *SOLAR WATER HEATERS -- MAINTENANCE; *SOLAR WATER HEATING -- MANUALS; *SOLAR WATER HEATING -- THERMOSYPHON EFFECT

Descriptors: DEVELOPING COUNTRIES; EDUCATION; EDUCATIONAL TOOLS; FLAT PLATE COLLECTORS; HAWAII; INSOLATION; MARSHALL ISLANDS; REMOTE AREAS

Broader Terms: APPLIANCES; CONVECTION; DOCUMENT TYPES; EDUCATION; HEATERS; HEATING; ISLANDS; MICRONESIA; NORTH AMERICA; OCEANIA; SOLAR COLLECTORS; SOLAR HEATING; USA; WATER HEATERS; WESTERN REGION

Subject Categories: 140907* -- Solar Thermal Utilization -- Water Heating

10/5/946 (Item 646 from file: 103)

5004053

00426013 ERA-04-001300; EDB-78-125194
Author(s): Cooper, H.F. Jr.
Title: Estimates of crater dimensions for near-surface explosions of nuclear and high-explosive sources
Corporate Source: R and D Associates, Marina del Rey, CA (USA)
Publication Date: Sep 1976 p 54
Report Number(s): RDA-TR-2604-001
Contract Number (DOE): W-7405-ENG-48
Document Type: Report
Language: English
Journal Announcement: EDB7811
Availability: Dep. NTIS, PC A04/MF A01.
Subfile: ERA (Energy Research Abstracts); TIC (Technical Information Center).
Country of Origin: United States
Country of Publication: United States
Abstract: Crater data from numerous high-explosive (HE) experiments and from fewer nuclear explosive (NE) tests are used to develop an empirically based procedure for predicting crater dimensions from nuclear explosions in various geologic media. The HE crater data are used to rank the cratering efficiency of various geologies. NE crater data from dry soil at the Nevada Test Site and from saturated coral at Eniwetok and Bikini atolls are used to relate NE and HE cratering efficiency. Crater shapes from explosive and impact craters are examined to provide a basis for estimating crater radius and depth in a given geology once the crater volume is known. Best estimates of the crater volume and dimensions are presented along with an estimated range of uncertainty.;
Major Descriptors: *CHEMICAL EXPLOSIONS -- USES; *CRATERING EXPLOSIONS -- PERFORMANCE; *NUCLEAR EXPLOSIONS -- USES
Descriptors: CALCULATION METHODS; FORECASTING; SIZE; UNDERGROUND EXPLOSIONS
Broader Terms: EXPLOSIONS
Subject Categories: 450201* -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives -- Containment
450100 -- Military Technology, Weaponry, & National Defense -- Chemical Explosions & Explosives

10/5/947 (Item 647 from file: 103)
00418331 ERA-03-053478; INS-78-016387; EDB-78-117512
Author(s): Greenhouse, N.A.; Miltenberger, R.P.; Cua, F.T.
Title: Radiological analyses of Marshall Islands environmental samples, 1974--1976
Corporate Source: Brookhaven National Lab., Upton, NY (USA)
Publication Date: 12 Dec 1977 p 48
Report Number(s): BNL-50796
Contract Number (DOE): EY-76-C-02-0016
Document Type: Report
Language: English
Journal Announcement: EDB7810
Availability: Dep. 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: Results are reported from the radiological analysis of environmental samples collected in the Marshall Islands during 1974 through 1976. Most of the samples were collected on or near the Bikini Atoll and included plants, soil, fish, catchment water, and sediments, with emphasis on local marine and terrestrial food items. Data are presented from ..gamma.. spectral analysis and the content of /sup 90/Sr and transuranic elements in the samples.;
Major Descriptors: *BIKINI -- AQUATIC ECOSYSTEMS; *BIKINI -- TERRESTRIAL ECOSYSTEMS; *MARSHALL ISLANDS -- AQUATIC ECOSYSTEMS; *MARSHALL ISLANDS -- TERRESTRIAL ECOSYSTEMS; *STRONTIUM 90 -- ENVIRONMENTAL TRANSPORT; *TRANSURANIUM ELEMENTS -- ENVIRONMENTAL TRANSPORT
Descriptors: DIET; ENVIRONMENT; FISHES; GAMMA SPECTROSCOPY; PLANTS;

500405

RADIATION MONITORING; RADIONUCLIDE MIGRATION; SAMPLING; SEDIMENTS; SOILS; SURFACE WATERS; TIME DEPENDENCE
Broader Terms: ALKALINE EARTH ISOTOPES; ANIMALS; AQUATIC ORGANISMS; BETA DECAY RADIOISOTOPES; BETA-MINUS DECAY RADIOISOTOPES; BIOMASS; ECOSYSTEMS; ELEMENTS; ENERGY SOURCES; ENVIRONMENTAL TRANSPORT; EVEN-EVEN NUCLEI; INTERMEDIATE MASS NUCLEI; ISLANDS; ISOTOPES; MARSHALL ISLANDS; MASS TRANSFER; MONITORING; NUCLEI; RADIOISOTOPES; RENEWABLE ENERGY SOURCES; SPECTROSCOPY; STRONTIUM ISOTOPES; VERTEBRATES; 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

10/5/948 (Item 648 from file: 103)
00411316 ERA-03-053531; NTS-78-066473; EDB-78-110496
Author(s): Marsh, K.V.; Jokela, T.A.; Eagle, R.J.; Noshkin, V.E.
Title: Radiological and chemical studies of ground water at Enewetak Atoll. 2. Residence time of Cactus Crater
Corporate Source: California Univ., Livermore (USA). Lawrence Livermore Lab.
Publication Date: 8 May 1978 p 25
Report Number(s): UCRL-51913(Pt.2)
Contract Number (DOE): W-7405-ENG-48
Document Type: Report
Language: English
Journal Announcement: EDB7810
Availability: Dep. NTIS, PC A02/MF A01.
Subfile: NTS (NTIS); ERA (Energy Research Abstracts); TIC (Technical Information Center).
Country of Origin: United States
Country of Publication: United States
Abstract: This is the second in a series of reports on a ground water study at Enewetak Atoll conducted jointly by the Lawrence Livermore Laboratory and the University of Hawaii under the sponsorship of DOE division of Biology and Environmental Research. The purpose of this study is to provide data characterizing ground water for possible use by returning Marshallese and to investigate the hydrology and recycling of radionuclides in an atoll environment. This report describes fluorescent dye tracing used to assess the flushing characteristics, dilution rate, and water dispersal in Cactus Crater. A simple model explains experimental observations in terms of tidal effects. The mean residence time of water in the crater is about 2.6 days, depending on the tidal range; mixing is complete within 24 hours and water loss occurs mainly by overflow at high tide. This paper also addresses possible consequences of filling the crater with contaminated soil for disposal.;
Major Descriptors: *ENIWETOK -- GROUND WATER; *GROUND WATER -- HYDROLOGY; *GROUND WATER -- WATER QUALITY
Descriptors: DRINKING WATER; MARSHALL ISLANDS; RADIOACTIVITY
Broader Terms: HYDROGEN COMPOUNDS; ISLANDS; MARSHALL ISLANDS; OXYGEN COMPOUNDS; WATER
Subject Categories: 520301* -- Environment, Aquatic -- Radioactive Materials Monitoring & Transport -- Water -- (1987)

5004055

10/5/949 (Item 649 from file: 103)
00405375 INS-78-014866; ERA-03-051034; NTS-78-065257; EDB-78-104555
Author(s): Koranda, J.J.; Robison, W.; Thompson, S.E.; Stuart, M.L.
Title: Enewetak Radioecology Research Program. I. Ecological studies on Engebi Island, 1975--1976
Corporate Source: California Univ., Livermore (USA). Lawrence Livermore Lab.
Publication Date: 23 Feb 1978 p 23
Report Number(s): UCRL-52409-1

Contract Number (DOE): W-7405-ENG-48
Document Type: Report
Language: English
Journal Announcement: EDB7809
Availability: Dep. NTIS, PC A02/MF A01.
Subfile: NTS (NTIS); ERA (Energy Research Abstracts); INS (US Atomindex input); TIC (Technical Information Center).
Country of Origin: United States
Country of Publication: United States
Abstract: As part of the Lawrence Livermore Laboratory Enewetak Radioecology Research Program, we studied radionuclide cycling from soil to plant to soil on Engebi Island at the Enewetak Atoll. Mature and dying leaves, young and old litter, humus, and soil beneath these organic strata were collected from 1975-76 at three Engebi sites. To study radionuclide depth distributions, five trenches of > 1 m were dug and sampled. From three representative sites, we found that /sup 137/Cs rapidly cycles from the plant biomass through the litter and humus into the vegetation. Continuously deposited litter decomposes within 6 to 12 months, but the constituent radionuclides are released early during physical decomposition. Soil radionuclides generally occur in the upper 40 cm of the soil profile, strongly associated with the organic horizon. Radionuclides such as /sup 60/Co, /sup 152 -155/Eu, /sup 207/Bi, and /sup 241/Am are complexed in the finely divided organic matter or humus where /sup 137/Cs and /sup 40/K predominate. Our data suggest that there is a circulating pool of rapidly cycling /sup 137/Cs in the Engebi ecosystem that may be entirely associated with the plant biomass and organic strata of the soil. Soilbound radionuclides below the humus are low in concentration and may not enter into this pool because they are below the vegetation root zone, where they may be leached by rainwater. This information is needed in making realistic long-term radionuclide dose assessments for the Enewetak peoples.;
Major Descriptors: *AMERICIUM 241 -- DIFFUSION; *AMERICIUM 241 -- RADIOECOLOGICAL CONCENTRATION; *ANTIMONY 125 -- DIFFUSION; *ANTIMONY 125 -- RADIOECOLOGICAL CONCENTRATION; *BISMUTH 207 -- DIFFUSION; *BISMUTH 207 -- RADIOECOLOGICAL CONCENTRATION; *CESIUM 137 -- DIFFUSION ; *CESIUM 137 -- RADIOECOLOGICAL CONCENTRATION; *COBALT 60 -- DIFFUSION ; *COBALT 60 -- RADIOECOLOGICAL CONCENTRATION; *ENIWETOK -- RADIOECOLOGY; *ENIWETOK -- RADIONUCLIDE KINETICS; *ENIWETOK -- RADIONUCLIDE MIGRATION; *EUROPIUM 152 -- DIFFUSION; *EUROPIUM 152 -- RADIOECOLOGICAL CONCENTRATION; *EUROPIUM 155 -- DIFFUSION; *EUROPIUM 155 -- RADIOECOLOGICAL CONCENTRATION; *HUMUS -- RADIONUCLIDE MIGRATION; *PLANTS -- RADIONUCLIDE KINETICS; *POTASSIUM 40 -- DIFFUSION; *POTASSIUM 40 -- RADIOECOLOGICAL CONCENTRATION; *SOILS -- RADIONUCLIDE MIGRATION
Descriptors: FOREST LITTER
Broader Terms: ACTINIDE ISOTOPES; ACTINIDE NUCLEI; ALKALI METAL ISOTOPES; ALPHA DECAY RADIOISOTOPES; AMERICIUM ISOTOPES; ANTIMONY ISOTOPES; BETA DECAY RADIOISOTOPES; BETA-MINUS DECAY RADIOISOTOPES; BETA-PLUS DECAY RADIOISOTOPES; BIOLOGICAL MATERIALS; BIOMASS; BISMUTH ISOTOPES; CESIUM ISOTOPES; COBALT ISOTOPES; ECOLOGICAL CONCENTRATION; ECOLOGY; ELECTRON CAPTURE RADIOISOTOPES; ENERGY SOURCES; ENVIRONMENTAL TRANSPORT; EUROPIUM ISOTOPES; HEAVY NUCLEI; HOURS LIVING RADIOISOTOPES; INTERMEDIATE MASS NUCLEI; INTERNAL CONVERSION RADIOISOTOPES; ISLANDS; ISOMERIC TRANSITION ISOTOPES; ISOTOPES; LIGHT NUCLEI; MARSHALL ISLANDS; MASS TRANSFER; MINUTES LIVING RADIOISOTOPES; NUCLEI; ODD-EVEN NUCLEI; ODD-ODD NUCLEI; POTASSIUM ISOTOPES; RADIOISOTOPES; RARE EARTH ISOTOPES; RARE EARTH NUCLEI; RENEWABLE ENERGY SOURCES; YEARS LIVING RADIOISOTOPES
Subject Categories: 510300* -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- (-1989)
560173 -- Radiation Effects -- Nuclide Kinetics & Toxicology -- Plants -- (-1987)
INIS Subject Categories: B31* -- Land
C21 -- Tissue Distribution, Metabolism, Toxicology & Removal of Radionuclides

10/5/950 (Item 650 from file: 103)

00399737 AIX-09-386169; EDB-78-098917
Title: Analysis of alpha emitters in the coral, Favites virens, from Bikini lagoon by solid-state track detection
Author(s): Levy, Y.; Miller, D.S.; Friedman, G.M. (Rensselaer Polytechnic Inst., Troy, N.Y. (USA). Dept. of Geology); Noshkin, V.E.
Source: Health Phys. (United Kingdom) v 34:3. Coden: HLTPA
Publication Date: Mar 1978 p 209-217
Document Type: Journal Article
Language: English
Journal Announcement: EDB7807
Subfile: AIX (non-US Atomindex input).
Country of Origin: United States
Abstract: A quantitative method for the non-destructive analysis of alpha emitters in CaCO/sub 3/ matrices by solid-state track detection in cellulose nitrate was developed. 0.4pCi/g in an area of 4 mm/sup 2/ can be measured routinely; smaller concentrations can be determined but with a lower resolution. Calibration methods used were a Pu source of 0.15 ..mu..Ci in conjunction with polycarbonate and CaCO/sub 3/ absorbers of different thickness, 2-30 ..mu..m, and a powdered coral sample from Enewetak Atoll which had been radiochemically analyzed for plutonium radionuclides, /sup 241/Am and other long-lived fission and activation products. Slabs of a coral, Favites virens, from Bikini lagoon were analyzed. A quantity of the alpha emitters detected in regions of the coral identified with growth during the years of nuclear testing, 1954, 1956 and 1959, are found in small discrete spots. Thin sections cut parallel to the direction of coral growth give different patterns of distribution. No such hot spots are evident in any post-test year growth sections although plutonium and other long lived fission and activation products were measured in these sections by radiochemical techniques.;
Major Descriptors: *CORALS -- ALPHA DETECTION; *PLUTONIUM ISOTOPES -- RADIOECOLOGICAL CONCENTRATION
Descriptors: ALPHA DECAY RADIOISOTOPES; AMERICIUM 241; ANIMAL GROWTH; BIKINI; CALCIUM CARBONATES; DISTRIBUTION; FALLOUT; NITROCELLULOSE; NONDESTRUCTIVE TESTING; NUCLEAR EXPLOSIONS; PHOTOGRAPHIC FILM DETECTORS ; QUANTITATIVE CHEMICAL ANALYSIS; RADIOMETRIC ANALYSIS; SENSITIVITY; TIME DEPENDENCE
Broader Terms: ACTINIDE ISOTOPES; ACTINIDE NUCLEI; ALKALINE EARTH METAL COMPOUNDS; ALPHA DECAY RADIOISOTOPES; AMERICIUM ISOTOPES; ANIMALS; CALCIUM COMPOUNDS; CARBOHYDRATES; CARBON COMPOUNDS; CARBONATES; CHARGED PARTICLE DETECTION; CHEMICAL ANALYSIS; CHEMICAL EXPLOSIVES; CNIDARIA; ECOLOGICAL CONCENTRATION; ESTERS; EXPLOSIONS; EXPLOSIVES; GROWTH; HEAVY NUCLEI; INVERTEBRATES; ISLANDS; ISOTOPES; MARSHALL ISLANDS; MATERIALS TESTING; MEASURING INSTRUMENTS; NITRIC ACID ESTERS; NUCLEI; ODD-EVEN NUCLEI; ORGANIC COMPOUNDS; OXYGEN COMPOUNDS; POLYSACCHARIDES; QUANTITATIVE CHEMICAL ANALYSIS; RADIATION DETECTION; RADIATION DETECTORS; RADIOISOTOPES; SACCHARIDES; TESTING; YEARS LIVING RADIOISOTOPES
Subject Categories: 560172* -- Radiation Effects -- Nuclide Kinetics & Toxicology -- Animals -- (-1987)
053000 -- Nuclear Fuels -- Environmental Aspects
INIS Subject Categories: C21* -- Tissue Distribution, Metabolism, Toxicology & Removal of Radionuclides

10/5/951 (Item 651 from file: 103)
00393290 ERA-03-043799; EDB-78-092470
Author(s): Walker, D.N.; Szuszczewicz, E.P.; Holmes, J.C.
Title: Real-time display of ionospheric electron density profiles from a rocket-borne plasma probe: the payload, acquisition system, and the real-time results. Interim report
Corporate Source: Naval Research Lab., Washington, D.C. (USA)
Publication Date: Nov 1977 p 21
Report Number(s): AD-A-047823; NRL-MR-3649
Document Type: Report
Language: English
Journal Announcement: EDB7803

5004057

Availability: NTIS PC A02/MF A01.
Subfile: ERA (Energy Research Abstracts); NTS (NTIS).
Country of Origin: United States
Country of Publication: United States
Abstract: This is the first in a series of reports dealing with the results of a major DNA program coordinating rocket, satellite, and ground-based equatorial studies at Kwajalein Atoll in the Marshall Islands. This report concentrates on the NRL contribution to the overall program, the direct measurement of the ionospheric plasma state as determined by on-board pulsed-plasma-probe (P3) observations of electron energies, densities, and density fluctuation power spectra. In particular, the authors describe their newly developed data acquisition system which acquired and displayed in real-time the ionospheric electron density profile as it was being measured by the P3 technique during the rocket flight.;
Major Descriptors: *IONOSPHERE -- ELECTRON DENSITY
Descriptors: DATA ACQUISITION SYSTEMS; ELECTRONS; ENERGY; F REGION; FLUCTUATIONS; PLASMA; ROCKETS; SPECTRA
Broader Terms: EARTH ATMOSPHERE; ELEMENTARY PARTICLES; FERMIONS; IONOSPHERE ; LEPTONS; VARIATIONS
Subject Categories: 640201* -- Atmospheric Physics -- Auroral, Ionospheric, & Magetospheric Phenomena

10/5/952 (Item 652 from file: 103)
00392781 INS-78-012007; NTS-78-063395; ERA-03-043694; EDB-78-091961
Author(s): Greenhouse, N.A.; Miltenberger, R.P.
Title: External radiation survey and dose predictions for Rongelap, Utirik, Rongerik, Ailuk, and Wotje Atolls
Corporate Source: Brookhaven National Lab., Upton, N.Y. (USA)
Publication Date: 13 Dec 1977 p 28
Report Number(s): BNL-50797
Contract Number (DOE): EY-76-C-02-0016
Document Type: Report
Language: English
Journal Announcement: EDB7808
Availability: Dep. NTIS, PC A03/MF A01.
Subfile: ERA (Energy Research Abstracts); NTS (NTIS); INS (US Atomindex input); TIC (Technical Information Center).
Country of Origin: United States
Country of Publication: United States
Abstract: External radiation measurements were made at several atolls in the northern Marshall Islands, which are known or suspected to have been the recipients of tropospheric fallout during the Pacific Testing Programs. Sufficient data were available to ascertain realistic dose predictions for the inhabitants of Rongelap and Utirik Atolls where the 30 year integral doses from external sources exclusive of background radiation were 0.65 and 0.06 rem respectively. These estimates are based on realistic life-style models based on observations of each atoll community. Ailuk and Wotje Atolls were found to be represenatives of regional background radiation levels.;
Major Descriptors: *HUMAN POPULATIONS -- RADIATION DOSES; *MARSHALL ISLANDS -- HUMAN POPULATIONS
Descriptors: EXTERNAL IRRADIATION; FALLOUT DEPOSITS; GAMMA SOURCES; NATURAL RADIOACTIVITY; TIME DEPENDENCE
Broader Terms: DOSES; FALLOUT; IRRADIATION; ISLANDS; POPULATIONS; RADIATION SOURCES; RADIOACTIVITY
Subject Categories: 560151* -- Radiation Effects on Animals -- Man
INIS Subject Categories: C15* -- Effects of External Radiation on Man

10/5/953 (Item 653 from file: 103)
00387434 INS-78-011074; ERA-03-041691; NTS-78-062177; EDB-78-081837
Author(s): Larsen, P.R.; Conard, R.A.; Knudsen, K.; Robbins, J.; Wolff, J.; Rall, J.E.; Dobyns, B.
Title: Thyroid hypofunction appearing as a delayed manifestation of accidental exposure to radioactive fallout in a Marshallese population
Corporate Source: Brookhaven National Lab., Upton, N.Y. (USA)

5004058

Conference Title: Symposium on late biological effects of ionizing radiation
Conference Location: Vienna, Austria Conference Date: 13 Mar 1978
Publication Date: 1978 p 18
Report Number(s): BNL-24104; CONF-780306-5; IAEA-SM-224/607
Contract Number (DOE): EY-76-C-02-0016
Document Type: Report; Conference literature
Language: English
Journal Announcement: EDB7807
Availability: Dep. NTIS, PC A02/MF A01.
Subfile: NTS (NTIS); ERA (Energy Research Abstracts); INS (US Atomindex input); TIC (Technical Information Center).
Country of Origin: United States
Country of Publication: United States
Abstract: The increased incidence of thyroid nodularity and carcinoma appearing as a late effect after exposure of the human thyroid to ionizing radiation is well-recognized. Despite the high prevalence of thyroid nodularity in Marshallese inadvertently exposed to fallout in 1954, only two subjects, both about one year of age at exposure, have been found to have primary hypothyroidism. The recent availability of sophisticated immunoassay techniques for thyroxine (T/sub 4/) and thyrotropin (TSH) has allowed more thorough thyroid evaluation of the exposed population who do not have known thyroid abnormalities (43 Rongelap people). Four of 43 Rongelapese had abnormally high basal TSH and TRH-induced TSH release on two such tests as opposed to only 2 of 214 controls. Plasma T/sub 4/ concentrations were low, or low-normal in these individuals. These results indicate the presence of early thyroid dysfunction. Several other subjects have shown at least one abnormal finding but have not had the required number of tests to meet the established criteria. In /sup 3///sub 4/ of these subjects the estimated thyroid exposure dose was less than 400 rads. Hypothyroidism has been previously noted after therapeutic doses of /sup 131/I for hyperthyroidism, but not in individuals exposed to the relatively low levels of thyroidal radiation (less than 400 rads) estimated for these individuals.;
Major Descriptors: *FALLOUT -- BIOLOGICAL RADIATION EFFECTS; *HYPOTHYROIDISM -- RADIOINDUCTION; *MAN -- BIOLOGICAL RADIATION EFFECTS ; *MAN -- LOW DOSE IRRADIATION; *MARSHALL ISLANDS -- FALLOUT; *THYROID -- BIOLOGICAL RADIATION EFFECTS
Descriptors: DELAYED RADIATION EFFECTS; HUMAN POPULATIONS; INTERNAL IRRADIATION; PHYSIOLOGY; THYROID HORMONES
Broader Terms: ANIMALS; BIOLOGICAL EFFECTS; BIOLOGICAL RADIATION EFFECTS; BODY; DISEASES; ENDOCRINE DISEASES; ENDOCRINE GLANDS; GLANDS; HORMONES; IRRADIATION; ISLANDS; MAMMALS; ORGANS; PEPTIDE HORMONES; POPULATIONS; PRIMATES; RADIATION EFFECTS; VERTEBRATES
Subject Categories: 560171* -- Radiation Effects -- Nuclide Kinetics & Toxicology -- Man -- (-1987)
INIS Subject Categories: C21* -- Tissue Distribution, Metabolism, Toxicology & Removal of Radionuclides

10/5/954 (Item 654 from file: 103)
00381672 ERA-03-038247; EDB-78-076075
Title: Effects of temperature on photosynthesis and respiration in hermatypic corals
Author(s): Coles, S.L.; Jokiel, P.L.
Affiliation: Hawaii Inst. of Marine Biology, Kaneohe
Source: Mar. Biol. (Germany, Federal Republic of) v 43:3. Coden: MBIOA
Publication Date: 1977 p 209-216
Document Type: Journal Article
Language: English
Journal Announcement: EDB7807
Subfile: ERA (Energy Research Abstracts); TIC (Technical Information Center).
Country of Origin: United States
Abstract: Photosynthesis and respiration rates of the reef corals Pocillopora damicornis (Linn.), Montipora verrucosa (Lamarck), Porites

5001059

compressa Dana and Fungia scutaria Lamarck were measured under controlled temperatures. Results indicate that coral metabolism is closely adapted to ambient temperature conditions. Tropical corals measured at Enewetak, Marshall Islands, showed greater primary production compared to maintenance requirements at elevated temperatures than did subtropical varieties of the same species in Hawaii. Photosynthesis:respiration (P:R) ratios were significantly and negatively related with temperature between 18/sup 0/ and 31/sup 0/C for all Hawaiian corals, whereas at Enewetak this ratio generally showed a curvilinear relationship for this temperature range. Extrapolations of P:R regressions on temperatures to a value of 2.0 (estimated as a minimum required for long-term functional autotrophy) coincide for Hawaiian specimens with published upper lethal temperatures. Extrapolation of P:R regressions for Enewetak specimens at temperatures above 25/sup 0/C suggests lethal temperatures for these corals to be 2 to 5 C/sup 0/ higher than for Hawaiian corals, in good agreement with recent experimental findings. Interspecific differences in P:R temperature regressions for Hawaiian corals corelating with upper lethal temperature tolerances are described.;
Major Descriptors: *CORALS -- TEMPERATURE EFFECTS
Descriptors: AMBIENT TEMPERATURE; ENIWETOK; HAWAII; MARSHALL ISLANDS; METABOLISM; MORTALITY; PHOTOSYNTHESIS; PRODUCTIVITY; RESPIRATION
Broader Terms: ANIMALS; CHEMICAL REACTIONS; CNIDARIA; INVERTEBRATES; ISLANDS; MARSHALL ISLANDS; NORTH AMERICA; PHOTOCHEMICAL REACTIONS; SYNTHESIS; USA; WESTERN REGION
Subject Categories: 560204* -- Thermal Effects -- Invertebrates -- (-1987)

10/5/955 (Item 655 from file: 103)
00381228 ERA-03-037941; EDB-78-075631
Title: Solar occultation measurements of the water vapor mixing ratio in the stratosphere and mesosphere from the Salyut-4 orbital station
Author(s): Kondratev, K.Ya.; Buznikov, A.A.; Grechko, G.M.; Gubarev, A.A.; Pokrovsky, A.G.
Affiliation: Univ. of Leningrad
Title: Proceedings of the tenth international symposium on remote sensing of environment
Conference Title: 10. international symposium on remote sensing of environment
Conference Location: Ann Arbor, MI, USA Conference Date: 6 Oct 1975
Publication Date: 1975 p 327-332
Report Number(s): CONF-7510172-P1
Document Type: Analytic of a Report; Conference literature
Language: English
Journal Announcement: EDB7807
Subfile: ERA (Energy Research Abstracts); TIC (Technical Information Center).
Country of Origin: USSR
Country of Publication: United States
Abstract: The results of solar occultation measurements of the water vapor mixing ratio in the stratosphere and mesosphere performed in January, 1975 over Marshall Islands with the spectrometer installed on the ''Salyut-4'' orbital station are discussed. The solar occultation measurements were performed at sunrise. An IR spectrometer with the channel range of 3800 to 3825 cm/sup -1/ and spectral resolution of 0.8 cm/sup -1/ was used. The results obtained revealed the presence of a ''dry'' stratosphere with the mixing ratio of about 10/sup -6/ over Marshall Islands at the time of the experiment.;
Major Descriptors: *MESOSPHERE -- WATER VAPOR; *STRATOSPHERE -- WATER VAPOR ; *WATER VAPOR -- MONITORING
Descriptors: MARSHALL ISLANDS; MIXING; SPECTROMETERS; SUN
Broader Terms: EARTH ATMOSPHERE; FLUIDS; GASES; ISLANDS; MEASURING INSTRUMENTS; STARS; VAPORS
Subject Categories: 500100* -- Environment, Atmospheric -- Basic Studies -- (-1989)

10/5/956 (Item 656 from file: 103)

00371058 ERA-03-031890; NTS-78-059118; INS-78-008654; EDB-78-065461
Author(s): Wong, K.M.; Nioshkin, V.E.; Jokela, T.A.
Title: Preconcentration of plutonium radionuclides from natural waters (Pu in Eniwetok ground water, lagoon and open ocean waters)
Corporate Source: California Univ., Livermore (USA). Lawrence Livermore Lab.
Conference Title: Plutonium information conference
Conference Location: San Diego, CA, USA Conference Date: 28 Feb 1978
Publication Date: Feb 1978 p 12
Report Number(s): UCRL-80686; CONF-780212-1
Contract Number (DOE): W-7405-ENG-48
Document Type: Report; Conference literature
Language: English
Journal Announcement: EDB7805
Availability: Dep. NTIS, PC A02/MF A01.
Subfile: INS (US Atomindex input); NTS (NTIS); ERA (Energy Research Abstracts); TIC (Technical Information Center).
Country of Origin: United States
Country of Publication: United States
Abstract: A large volume water sampler using manganese dioxide impregnated cartridges for the in situ separation of plutonium in sea water and ground water was studied. Plutonium concentrations obtained by this technique are compared with a radiochemical coprecipitation method. Consistent results were obtained between the two methods for water samples from the Pacific Ocean and Enewetak lagoon. Different results were noted from samples collected in the Enewetak reef and ground water stations. Using this preconcentration technique and the coprecipitation method it was shown that the physical-chemical characteristics of Pu in Enewetak reef and ground water are different from the lagoon and open ocean.;
Major Descriptors: *ENIWETOK -- RADIATION MONITORING; *GROUND WATER -- CHEMICAL COMPOSITION; *PLUTONIUM -- ENVIRONMENTAL TRANSPORT; *PLUTONIUM -- SEPARATION PROCESSES; *SEAWATER -- CHEMICAL COMPOSITION
Descriptors: COASTAL WATERS; FRESH WATER; PACIFIC OCEAN
Broader Terms: ACTINIDES; ELEMENTS; HYDROGEN COMPOUNDS; ISLANDS; MARSHALL ISLANDS; MASS TRANSFER; METALS; MONITORING; OXYGEN COMPOUNDS; SEAS; SURFACE WATERS; TRANSURANIUM ELEMENTS; WATER
Subject Categories: 520301* -- Environment, Aquatic -- Radioactive Materials Monitoring & Transport -- Water -- (1987)
400100 -- Analytical & Separations Chemistry
INIS Subject Categories: B32* -- Water
B11 -- Chemical & Isotopic Analysis

10/5/957 (Item 657 from file: 103)
00366652 AIX-08-344134; NTS-78-058656; EDB-78-061055
Title: Measurement of radioactivity
Author(s): Yamagata, N. (Institute of Public Health, Tokyo (Japan)); Katsurayama, K.; Tsujimoto, T. (eds.)
Title: Report of the symposium on radioactivity measuring methods
Conference Title: Symposium on radioactivity measuring methods
Conference Location: Kumatori, Osaka, Japan Conference Date: 28 Aug 1974
Publication Date: 1975 p 1-10
Report Number(s): KURRI-TR-138; CONF-740869-
Document Type: Analytic of a Report; Conference literature
Language: Japanese
Journal Announcement: EDB7712
Subfile: NTS (NTIS); AIX (non-US Atomindex input).
Country of Origin: Japan
Country of Publication: Japan
Abstract: The measurement of environmental radioactivity in Japan started from the time of the nuclear test at Bikini in 1954, and Science and Technology Agency has established ''Measuring Procedure of Radioactivity'' in 1957. This is total beta radiation measurement, and now the revised draught including nine points to be revised has been made. Since then, analyzing procedures were established for radioactive strontium, cesium-137, radioactive iodine, and radioactive cobalt, with

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NaI(Tl) scintillation spectrometers, for radioactive zirconium and instrumental analysis using Ge(Li) semiconductor detectors. Presently the tritium-analyzing procedure is under discussion. As the manuals for individual analyses have been instituted, the ''general manual'' for applying those has become to be required. The problems lie not in individual procedures but in the purpose of radioactivity measurement, monitoring method, and the evaluation of data obtained. The compilation of the manual started in 1973, but now temporarily stopped because of a new problem which is the opinion insisting that manual is to include the procedures for the estimation of population exposure dose based on the data obtained.;

Major Descriptors: *ENVIRONMENT -- RADIATION MONITORING; *JAPAN -- RADIATION MONITORING; *NATURAL RADIOACTIVITY -- RADIATION MONITORING

Descriptors: CESIUM 137; CHEMICAL ANALYSIS; COBALT 60; IODINE 131; MANUALS; RADIATION DETECTION; RADIOACTIVITY; STRONTIUM 90; TRITIUM; ZIRCONIUM 95

Broader Terms: ALKALI METAL ISOTOPES; ALKALINE EARTH ISOTOPES; ASIA; BETA DECAY RADIOISOTOPES; BETA-MINUS DECAY RADIOISOTOPES; CESIUM ISOTOPES; COBALT ISOTOPES; DAYS LIVING RADIOISOTOPES; DOCUMENT TYPES; EVEN-EVEN NUCLEI; EVEN-ODD NUCLEI; HYDROGEN ISOTOPES; INTERMEDIATE MASS NUCLEI; INTERNAL CONVERSION RADIOISOTOPES; IODINE ISOTOPES; ISOMERIC TRANSITION ISOTOPES; ISOTOPES; LIGHT NUCLEI; MINUTES LIVING RADIOISOTOPES; MONITORING; NUCLEI; ODD-EVEN NUCLEI; ODD-ODD NUCLEI; RADIOACTIVITY; RADIOISOTOPES; STRONTIUM ISOTOPES; YEARS LIVING RADIOISOTOPES; ZIRCONIUM ISOTOPES

Subject Categories: 440101* -- Radiation Instrumentation -- General Detectors or Monitors & Radiometric Instruments
500300 -- Environment, Atmospheric -- Radioactive Materials Monitoring & Transport -- (-1989)

INIS Subject Categories: E41* -- Particle & Radiation Detection & Measuring Instruments & Methods

10/5/958 (Item 658 from file: 103)

00362937 ERA-03-025152; NTS-78-004852; INS-78-006196; EDB-78-051565

Author(s): Levy, Y.; Miller, D.S.; Friedman, G.M.

Title: Fission- and alpha-track study of biogeochemistry of plutonium and uranium in carbonates of Bikini and Enewetak atolls. Summary report, 1 July 1974--31 August 1977

Corporate Source: Rensselaer Polytechnic Inst., Troy, N.Y. (USA). Dept. of Geology

Publication Date: Sep 1977 p 45

Report Number(s): COO-3462-14

Contract Number (DOE): EY-76-S-02-3462

Note: Portions of document are illegible

Document Type: Report

Language: English

Journal Announcement: EDB7804

Availability: NTIS, MF A01.

Subfile: INS (US Atomindex input); NTS (NTIS); ERA (Energy Research Abstracts); TIC (Technical Information Center).

Country of Origin: United States

Country of Publication: United States

Abstract: Alpha emitters of pCi/g amounts have been detected with a resolution of a few micrometers using a solid state track detector (cellulose nitrate) to map the activity in a coral sample from Bikini. Calibration methods used include: a Pu source of 0.15 ..mu..Ci in conjunction with polycarbonate and CaCO/sub 3/ absorbers of different thicknesses (2 to 30 micrometers), and a powdered coral sample which had been analyzed previously for alpha emitters by chemical methods in conjunction with an alpha spectrometer. 0.04 mm/sup 3/ can be measured routinely; lower concentrations can be determined but with less resolution. The alpha emitter concentration in CaCO/sub 3/ of the coral Favites virens from Bikini lagoon was analyzed by placing the detector directly on the slab sample for thirty days. Analyses of sections and thin sections of this coral slab cut perpendicular to one another, but parallel to the direction of coral growth, give very different concentrations and distributions of alpha emitters.;

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Major Descriptors: *CORALS -- CHEMICAL COMPOSITION; *ENIWETOK -- BIOGEOCHEMISTRY; *PLUTONIUM -- MICRODOSIMETRY; *PLUTONIUM -- TISSUE DISTRIBUTION; *URANIUM -- MICRODOSIMETRY; *URANIUM -- TISSUE DISTRIBUTION
Descriptors: ALPHA DOSIMETRY; AUTORADIOGRAPHY; BIKINI; CARBONATES; RADIOECOLOGICAL CONCENTRATION
Broader Terms: ACTINIDES; ANIMALS; CARBON COMPOUNDS; CHEMISTRY; CNIDARIA; DISTRIBUTION; DOSIMETRY; ECOLOGICAL CONCENTRATION; ELEMENTS; GEOCHEMISTRY; INVERTEBRATES; ISLANDS; MARSHALL ISLANDS; METALS; OXYGEN COMPOUNDS; TRANSURANIUM ELEMENTS
Subject Categories: 520302* -- Environment, Aquatic -- Radioactive Materials Monitoring & Transport -- Aquatic Ecosystems & Food Chains -- (-1987)
INIS Subject Categories: C21* -- Tissue Distribution, Metabolism, Toxicology & Removal of Radionuclides

10/5/959 (Item 659 from file: 103)
00357886 NTS-78-003664; ERA-03-022201; INS-78-005505; EDB-78-046514
Author(s): Colsher, C.S.; Robison, W.L.; Gudiksen, P.H.
Title: Evaluation of the radionuclide concentrations in soil and plants from the 1975 terrestrial survey of Bikini and Eneu Islands
Corporate Source: California Univ., Livermore (USA). Lawrence Livermore Lab.
Publication Date: 21 Jan 1977 p 118
Report Number(s): UCRL-51879(Pt.3)
Contract Number (DOE): W-7405-ENG-48
Document Type: Report
Language: English
Journal Announcement: EDB7803
Availability: Dep. NTIS, PC A04/MF E01.
Subfile: INS (US Atomindex input); ERA (Energy Research Abstracts); NTS (NTIS); TIC (Technical Information Center).
Country of Origin: United States
Country of Publication: United States
Abstract: In June 1975 a radiological survey was conducted of the terrestrial environment of Bikini and Eneu islands (Bikini Atoll) to evaluate the potential radiation dose to the returning Bikini population. In this report, we present measurements of the radionuclide concentration in soil profiles and in dominant species of edible and nonedible, indicator plants. The use of these data to derive relationships to predict the plant uptake of radionuclides from soil is described. Approximately 620 soil and vegetation samples from Bikini and Eneu Islands were analyzed by Ge(Li) gamma spectrometry and by wet chemistry. The predominant radionuclides in these samples were /sup 60/Co, /sup 90/Sr, /sup 137/Cs, /sup 239,240/Pu, /sup 241/Pu, and /sup 241/Am.;
Major Descriptors: *BIKINI -- RADIATION MONITORING; *PLANTS -- RADIONUCLIDE KINETICS; *SOILS -- RADIONUCLIDE MIGRATION
Descriptors: AMERICIUM 241; CESIUM 137; COBALT 60; ENVIRONMENT; FALLOUT DEPOSITS; FOOD; FOOD CHAINS; PLUTONIUM 239; PLUTONIUM 240; PLUTONIUM 241; RADIOACTIVITY; 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; BIOMASS; CESIUM ISOTOPES; COBALT ISOTOPES; ECOSYSTEMS; ENERGY SOURCES; ENVIRONMENTAL TRANSPORT; EVEN-EVEN NUCLEI; EVEN-ODD NUCLEI; FALLOUT; HEAVY NUCLEI; INTERMEDIATE MASS NUCLEI; INTERNAL CONVERSION RADIOISOTOPES; ISLANDS; ISOMERIC TRANSITION ISOTOPES; ISOTOPES; MARSHALL ISLANDS; MASS TRANSFER; MINUTES LIVING RADIOISOTOPES; MONITORING; NUCLEI; ODD-EVEN NUCLEI; ODD-ODD NUCLEI; PLUTONIUM ISOTOPES; RADIOISOTOPES; RENEWABLE ENERGY SOURCES; STRONTIUM ISOTOPES; YEARS LIVING RADIOISOTOPES
Subject Categories: 510301* -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- Soil -- (-1987)
510302 -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- Terrestrial Ecosystems & Food Chains -- (-1987)

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560173 -- Radiation Effects -- Nuclide Kinetics & Toxicology -- Plants -- (-1987)
400103 -- Radiometric & Radiochemical Procedures -- (-1987)
INIS Subject Categories: B31* -- Land
C22 -- Radionuclide Ecology
C21 -- Tissue Distribution, Metabolism, Toxicology & Removal of Radionuclides
B11 -- Chemical & Isotopic Analysis

10/5/960 (Item 660 from file: 103)
00345211 ERA-03-015906; INS-78-002860; NTS-78-002254; EDB-78-033839
Author(s): Schell, W.R.
Title: Biogeochemistry of Transuranics, Bikini. Annual progress report, 26 February 1976--25 February 1977 (Pu and Am separation from large water volumes)
Corporate Source: Washington Univ., Seattle (USA). Coll. of Fisheries
Publication Date: 28 Dec 1976 p 42
Report Number(s): RLO-2225-T18-20
Contract Number (DOE): EY-76-S-06-2225-018
Document Type: Report
Language: English
Journal Announcement: EDB7802
Availability: Dep. NTIS, PC A04/MF A01.
Subfile: NTS (NTIS); 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 on a study to evaluate the cycling of the transuranic radionuclides in the aquatic environment, their distribution within ecosystems, their uptake by biota and their sinks at Bikini. This year, the study has been to evaluate the Battelle large volume water sampler, BLVWS. Laboratory and field experiments on the collection efficiency for Pu, Am and other radionuclides using Al/sub 2/O/sub 3/ and Chelex-100 sorption beds in fresh and salt water have been completed. The sampler, with three or four sorption beds, has proven to be a reliable collector for Pu and Am, giving concentration values comparable to conventional sampling methods in laboratory studies with known radionuclide concentrations and in field studies where the concentrations were unknown. Possible speciation of Pu into colloidal, particulate, and soluble fractions has been indicated in both the tank and field collections. The larger volumes of water which were processed by the BLVWS method, (4 vs. 0.09 m/sup 3/), in the near Washington Coastal waters, gave lower detection limits for Pu concentrations than those found by the conventional batch sample method. Interpretations of the Pu concentrations found in sediment and water samples collected at Bikini Atoll in 1972 and 1976 have been made.;
Major Descriptors: *AMERICIUM -- SEPARATION PROCESSES; *BIKINI -- RADIATION MONITORING; *FRESH WATER -- SAMPLING; *PLUTONIUM -- SEPARATION PROCESSES; *SEAWATER -- SAMPLING; *TRANSURANIUM ELEMENTS -- ENVIRONMENTAL TRANSPORT
Descriptors: AQUATIC ECOSYSTEMS; CHEMISORPTION; ENVIRONMENT; PLANTS; TERRESTRIAL ECOSYSTEMS
Broader Terms: ACTINIDES; BIOMASS; CHEMICAL REACTIONS; ECOSYSTEMS; ELEMENTS ; ENERGY SOURCES; HYDROGEN COMPOUNDS; ISLANDS; MARSHALL ISLANDS; MASS TRANSFER; METALS; MONITORING; OXYGEN COMPOUNDS; RENEWABLE ENERGY SOURCES; SEPARATION PROCESSES; SORPTION; TRANSPLUTONIUM ELEMENTS; TRANSURANIUM ELEMENTS; WATER
Subject Categories: 520300* -- Environment, Aquatic -- Radioactive Materials Monitoring & Transport -- (1989)
510300 -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- (-1989)
400105 -- Separation Procedures
INIS Subject Categories: B32* -- Water 5004064
B31 -- Land
B11 -- Chemical & Isotopic Analysis

10/5/961 (Item 661 from file: 103)
00334345 AIX-08-340389; EDB-78-022972
Title: Concentrations, physico-chemical states and mean residence times of /sup 210/Pb and /sup 210/Po in marine and estuarine waters
Author(s): Schell, W.R. (Washington Univ., Seattle (USA). Lab. of Radiation Ecology)
Source: Geochim. Cosmochim. Acta (United Kingdom) v 41:8. Coden: GCACA
Publication Date: Aug 1977 p 1019-1031
Document Type: Journal Article
Language: English
Journal Announcement: EDB7711
Subfile: AIX (non-US Atomindex input).
Country of Origin: United States
Abstract: The concentrations and physico-chemical states of /sup 210/Pb have been measured in Bikini Atoll and Washington State coastal waters, and /sup 210/Po in Washington coastal waters. Lead-210 concentrations of 113 and 133 dpm.m/sup -3/ were found in surface water collections near Bikini Atoll and 29 to 153 dpm.m/sup -3/ in Bikini Lagoon. The concentrations of /sup 210/Pb in and near Bikini and in Washington State waters increased with depth in the upper 150 m at a rate of 0.35 to 0.45 dpm.m /sup -3/.m/sup -1/. On the North Equatorial Current waters near Bikini Atoll /sup 210/Pb was found associated predominantly with the soluble (colloidal) fraction, but in Washington coastal waters /sup 210/Pb and /sup 210/Po were found associated with the particulate (> 0.3 ..mu..m) fraction. The mean residence times of /sup 210/Pb, calculated from the atmospheric input to marine waters from precipitation and the concentrations measured in surface water, were consistent with the physico-chemical states of /sup 210/Pb found in samples collected in deep ocean and coastal waters. Approximate values of the mean residence times were calculated, for the upper 50 m, to be as follows: 58 days in the Strait of Juan de Fuca, 128 days at the 5-mile (8 km) station off Cape Flattery (Washington), 163 days at the 12-mile (19 km) station off Cape Flattery, and 2.6 yr near Bikini Atoll. It appears that /sup 210/Pb and /sup 210/Po can be used to trace particle removal rates in the upper layers of marine waters.;
Major Descriptors: *COASTAL WATERS -- LEAD 210; *COASTAL WATERS -- POLONIUM 210; *LEAD 210 -- RADIONUCLIDE MIGRATION; *POLONIUM 210 -- RADIONUCLIDE MIGRATION
Descriptors: CHEMICAL STATE; ESTUARIES; LAYERS; LEVELS; PARTICLES; QUANTITATIVE CHEMICAL ANALYSIS; QUANTITY RATIO; RADIOECOLOGICAL CONCENTRATION; SEAS; SEAWATER; TRACER TECHNIQUES
Broader Terms: ALPHA DECAY RADIOISOTOPES; BETA DECAY RADIOISOTOPES; BETA-MINUS DECAY RADIOISOTOPES; CHEMICAL ANALYSIS; DAYS LIVING RADIOISOTOPES; ECOLOGICAL CONCENTRATION; ENVIRONMENTAL TRANSPORT; EVEN-EVEN NUCLEI; HEAVY NUCLEI; HYDROGEN COMPOUNDS; ISOTOPE APPLICATIONS; ISOTOPES; LEAD ISOTOPES; MASS TRANSFER; NUCLEI; OXYGEN COMPOUNDS; POLONIUM ISOTOPES; RADIOISOTOPES; SURFACE WATERS; WATER; YEARS LIVING RADIOISOTOPES
Subject Categories: 520301* -- Environment, Aquatic -- Radioactive Materials Monitoring & Transport -- Water -- (1987)
INIS Subject Categories: B32* -- Water

10/5/962 (Item 662 from file: 103)
00334340 ERA-03-010961; NTS-78-001165; INS-78-001678; EDB-78-022967
Author(s): Nelson, V.A.
Title: Radiological survey of plants, animals, and soil at Christmas Island and seven atolls in the Marshall Islands. Progress report for 1974--1975
Corporate Source: Washington Univ., Seattle (USA). Lab. of Radiation Ecology
Publication Date: Jan 1977 p 78
Report Number(s): NVO-269-32
Contract Number (DOE): EY-76-S-08-0269 5004065
Document Type: Report
Language: English

Journal Announcement: EDB7801
Availability: Dep. NTIS, PC A05/MF A01.
Subfile: INS (US Atomindex input); NTS (NTIS); ERA (Energy Research Abstracts); TIC (Technical Information Center).
Country of Origin: United States
Country of Publication: United States
Abstract: The Division of Operational Safety or DOS (now Safety Standards and Compliance) portion of the Laboratory of Radiation Ecology (LRE) Pacific Radiocology Program (formerly Johnston Atoll Program) began on 1 July 1974 and is continuing. The purpose of this program is to determine the kinds and amounts of radionuclides distributed in the foods, plants, animals, and soil of the Central Pacific, especially the Marshall Islands. Five field trips were conducted for this program between April 1974 and August 1975, and about 600 samples were collected. Results of the analyses indicate that /sup 90/Sr and /sup 137/Cs are dominant in the terrestrial environment and, in addition, /sup 241/Am and /sup 239,240/Pu are also important in the soil from Bikini and Rongelap atolls. Cobalt-60 and /sup 55/Fe are predominant in the marine environment together with naturally occurring /sup 40/K. Amounts of radioactivity vary between atolls and between islands within an atoll in relation to the distance from the nuclear weapons test sites. Bikini atoll has the highest amounts of radioactivity, but the northern islands of Rongelap Atoll have only slightly lower amounts. Rongerik and Ailinginae atolls and the southern islands of Rongelap Atoll have similar amounts of radioactivity which are lower than Bikini by factors of 5 to 10 or more. Values at Utirik Atoll are lower still, but are higher than amounts at Wotho and Kwajalein atolls. Christmas Island in the Line Islands has the least amount of radioactivity of the areas surveyed for this report.;
Major Descriptors: *AMERICIUM 241 -- ENVIRONMENTAL TRANSPORT; *AQUATIC ECOSYSTEMS -- RADIONUCLIDE KINETICS; *CESIUM 137 -- ENVIRONMENTAL TRANSPORT; *COBALT 60 -- ENVIRONMENTAL TRANSPORT; *IRON 55 -- ENVIRONMENTAL TRANSPORT; *MARSHALL ISLANDS -- RADIATION MONITORING; *MARSHALL ISLANDS -- RADIONUCLIDE KINETICS; *NUCLEAR EXPLOSIONS -- FALLOUT; *PLUTONIUM 239 -- ENVIRONMENTAL TRANSPORT; *PLUTONIUM 240 -- ENVIRONMENTAL TRANSPORT; *STRONTIUM 90 -- ENVIRONMENTAL TRANSPORT; *TERRESTRIAL ECOSYSTEMS -- RADIONUCLIDE KINETICS
Descriptors: AQUATIC ORGANISMS; BIKINI; CRUSTACEANS; FISHES; FOOD; PLANTS; SAMPLING; SOILS; TIME DEPENDENCE; WILD ANIMALS
Broader Terms: ACTINIDE ISOTOPES; ACTINIDE NUCLEI; ALKALI METAL ISOTOPES; ALKALINE EARTH ISOTOPES; ALPHA DECAY RADIOISOTOPES; AMERICIUM ISOTOPES; ANIMALS; AQUATIC ORGANISMS; ARTHROPODS; BETA DECAY RADIOISOTOPES; BETA-MINUS DECAY RADIOISOTOPES; BIOMASS; CESIUM ISOTOPES; COBALT ISOTOPES; ECOSYSTEMS; ELECTRON CAPTURE RADIOISOTOPES; ENERGY SOURCES; EVEN-EVEN NUCLEI; EVEN-ODD NUCLEI; EXPLOSIONS; HEAVY NUCLEI; INTERMEDIATE MASS NUCLEI; INTERNAL CONVERSION RADIOISOTOPES; INVERTEBRATES; IRON ISOTOPES; ISLANDS; ISOMERIC TRANSITION ISOTOPES; ISOTOPES; MARSHALL ISLANDS; MASS TRANSFER; MINUTES LIVING RADIOISOTOPES ; MONITORING; NUCLEI; ODD-EVEN NUCLEI; ODD-ODD NUCLEI; PLUTONIUM ISOTOPES; RADIOISOTOPES; RENEWABLE ENERGY SOURCES; STRONTIUM ISOTOPES; VERTEBRATES; YEARS LIVING RADIOISOTOPES
Subject Categories: 520300* -- Environment, Aquatic -- Radioactive Materials Monitoring & Transport -- (1989)
510301 -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- Soil -- (-1987)
510302 -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- Terrestrial Ecosystems & Food Chains -- (-1987)
450200 -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives
INIS Subject Categories: B32* -- Water
B31 -- Land
C22 -- Radionuclide Ecology
E14 -- Nuclear Explosions

10/5/963 (Item 663 from file: 103) 5004066
00334311 AIX-08-332321; ERA-03-013079; EDB-78-022938

Title: Plutonium and americium in soils of Bikini Atoll
Author(s): Nevissi, A.; Schell, W.R.; Nelson, V.A. (Washington Univ., Seattle (USA). Coll. of Fisheries; Washington Univ., Seattle (USA). Lab. of Radiation Ecology)
Title: Transuranium nuclides in the environment
Conference Title: IAEA international symposium on transuranium nuclides in the environment
Conference Location: San Francisco, CA, USA Conference Date: 17 Nov 1975
Publisher: International Atomic Energy Agency,Vienna
Publication Date: 1976 p 691-700
Note: See CONF-751105--
Document Type: Analytic of a Book; Conference literature
Language: English
Journal Announcement: EDB7712
Subfile: ERA (Energy Research Abstracts); AIX (non-US Atomindex input).
Country of Origin: United States
Country of Publication: International Atomic Energy Agency (IAEA)
Abstract: A study has been made to determine the concentrations of plutonium and americium in surface soils and in soil profiles on Bikini Atoll. The soils consist of calcareous materials and a thin layer of organic matter, which has produced a shallow, organically rich horizon suitable for certain plant growth. During the testing period from 1946 through 1958 Bikini Atoll was the site of 23 nuclear detonations, which contaminated the islands of the atoll with radioactive fall-out, including the transuranium elements. Plutonium and americium measurements of surface soil samples collected on 6 of the 26 islands of the atoll show that sup(239,240)Pu values vary from 0.5 to 360 pCi/g and /sup 241/Am values from 1.2 to 45 pCi/g. The vertical distribution of plutonium in soil varies from area to area. Although about 98% of the plutonium is retained in the top 25 cm in one core profile, the remaining 2% is detectable as deep as 100 cm. The suspension and resuspension of plutonium and plutonium-bearing particles by rainwater (150 to 175 cm/a) seems to be the principal mode of plutonium transport in the soil. Plutonium is found associated with the algal crust of the atoll soils. The present concentrations of sup(239,240)Pu and their distribution at Bikini are not likely to change significantly, whereas /sup 241/Am concentrations will increase by /sup 241/Pu decay and will approach a maximum value in about 50 years.;
Major Descriptors: *AMERICIUM 241 -- TRANSLOCATION; *BIKINI -- CONTAMINATION; *PLUTONIUM 239 -- TRANSLOCATION; *PLUTONIUM 240 -- TRANSLOCATION; *SOILS -- RADIONUCLIDE MIGRATION
Descriptors: STRONTIUM 90
Broader Terms: ACTINIDE ISOTOPES; ACTINIDE NUCLEI; ALKALINE EARTH ISOTOPES; ALPHA DECAY RADIOISOTOPES; AMERICIUM ISOTOPES; BETA DECAY RADIOISOTOPES ; BETA-MINUS DECAY RADIOISOTOPES; ENVIRONMENTAL TRANSPORT; EVEN-EVEN NUCLEI; EVEN-ODD NUCLEI; HEAVY NUCLEI; INTERMEDIATE MASS NUCLEI; ISLANDS; ISOTOPES; MARSHALL ISLANDS; MASS TRANSFER; NUCLEI; ODD-EVEN NUCLEI; PLUTONIUM ISOTOPES; RADIOISOTOPES; STRONTIUM ISOTOPES; YEARS LIVING RADIOISOTOPES
Subject Categories: 510301* -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- Soil -- (-1987)
INIS Subject Categories: B31* -- Land

10/5/964 (Item 664 from file: 103)
00329433 AIX-08-332350; ERA-03-010968; EDB-78-018060
Title: Plutonium radionuclides in the groundwaters at Enewetak Atoll
Author(s): Noshkin, V.E.; Wong, K.M.; Marsh, K.; Eagle, R.; Holladay, G. (California Univ., Livermore (USA). Lawrence Livermore Lab.); Buddemeier, R.W. (Hawaii Univ., Honolulu (USA))
Title: Transuranium nuclides in the environment
Conference Title: Symposium on transuranium nuclides in the environment
Conference Location: San Francisco, Calif., USA Conference Date: 17 - 21 Nov 1975
Publisher: IAEA,Vienna
Publication Date: 1976 p 517-542
Document Type: Analytic of a Book; Conference literature

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Language: English
Journal Announcement: EDB7712
Subfile: ERA (Energy Research Abstracts); AIX (non-US Atomindex input).
Country of Origin: United States
Country of Publication: International Atomic Energy Agency (IAEA)
Abstract: In 1974 a groundwater program was initiated at Enewetak Atoll to study systematically the hydrology and the groundwater geochemistry on selected islands of the Atoll. The program provides chemical and radiochemical data for assessment of water quality on those islands designated for rehabilitation. These and other data are used to interpret the mechanisms by which radionuclides are cycled in the soil-groundwater system. Because of the international concern over long-term buildup, availability, and transport of plutonium in the environment, this program emphasizes analysis of the element. The results of the study show that on all islands sampled, small quantities of plutonium radionuclides have migrated through the soil columns and are redistributed throughout the groundwater reservoirs. The observed maximum surface concentrations are less than 0.02% of the maximum recommended concentration for drinking water. Concentrations of /sup 137/Cs are found to correlate with water freshness, but those of sup(239,240)Pu show no such relationship. The mechanisms moving sup(239,240)Pu through the groundwater reservoirs are independent of the processes controlling the cycling of /sup 137/Cs and fresh water. A reasonable linear correlation is found between mean surface-water concentrations and soil burdens. The quantities of sup(239,240)Pu migrating to the groundwater surface layers do not correlate with any other known differences in the physical, chemical or biological characteristics of the islands.;
Major Descriptors: *GROUND WATER -- GEOCHEMISTRY; *GROUND WATER -- RADIONUCLIDE MIGRATION; *PLUTONIUM 239 -- RADIATION MONITORING; *PLUTONIUM 240 -- RADIATION MONITORING
Descriptors: CESIUM 137; CONTAMINATION; ENIWETOK; SOILS
Broader Terms: ACTINIDE ISOTOPES; ACTINIDE NUCLEI; ALKALI METAL ISOTOPES; ALPHA DECAY RADIOISOTOPES; BETA DECAY RADIOISOTOPES; BETA-MINUS DECAY RADIOISOTOPES; CESIUM ISOTOPES; CHEMISTRY; ENVIRONMENTAL TRANSPORT; EVEN-EVEN NUCLEI; EVEN-ODD NUCLEI; HEAVY NUCLEI; HYDROGEN COMPOUNDS; ISLANDS; ISOTOPES; MARSHALL ISLANDS; MASS TRANSFER; MONITORING; NUCLEI; ODD-EVEN NUCLEI; OXYGEN COMPOUNDS; PLUTONIUM ISOTOPES; RADIOISOTOPES; WATER; YEARS LIVING RADIOISOTOPES
Subject Categories: 520301* -- Environment, Aquatic -- Radioactive Materials Monitoring & Transport -- Water -- (1987)
580400 -- Geochemistry -- (-1989)
INIS Subject Categories: B32* -- Water

10/5/965 (Item 665 from file: 103)
00322326 AIX-08-332321; EDB-78-010953
Title: Plutonium and americium in soils of Bikini Atoll
Author(s): Nevissi, A.; Schell, W.R.; Nelson, V.A. (Washington Univ., Seattle (USA). Coll. of Fisheries; Washington Univ., Seattle (USA). Lab. of Radiation Ecology)
Title: Transuranium nuclides in the environment
Conference Title: Symposium on transuranium nuclides in the environment
Conference Location: San Francisco, Calif., USA Conference Date: 17 - 21 Nov 1975
Publisher: IAEA,Vienna
Publication Date: 1976 p 691-700
Document Type: Analytic of a Book; Conference literature
Language: English
Journal Announcement: EDB7712
Subfile: AIX (non-US Atomindex input).
Country of Origin: United States
Country of Publication: International Atomic Energy Agency (IAEA)
Abstract: A study has been made to determine the concentrations of plutonium and americium in surface soils and in soil profiles on Bikini Atoll. The soils consist of calcareous materials and a thin layer of organic matter, which has produced a shallow, organically rich horizon

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suitable for certain plant growth. During the testing period from 1946 through 1958 Bikini Atoll was the site of 23 nuclear detonations, which contaminated the islands of the atoll with radioactive fall out, including the transuranium elements. Plutonium and americium measurements of surface soil samples collected on 6 of the 26 islands of the atoll show that sup(239,240)Pu values vary from 0.5 to 360 pCi/g and /sup 241/Am values from 1.2 to 45 pCi/g. The vertical distribution of plutonium in soil varies from area to area. Although about 98% of the plutonium is retained in the top 25 cm in one core profile, the remaining 2% is detectable as deep as 100 cm. The suspension and resuspension of plutonium and plutonium-bearing particles by rainwater (150 to 175 cm/a) seems to be the principal mode of plutonium transport in the soil. Plutonium is found associated with the algal crust of the atoll soils. The present concentrations of sup(239,240)Pu and their distribution at Bikini are not likely to change significantly, whereas /sup 241/Am concentrations will increase by /sup 241/Pu decay and will approach a maximum value in about 50 years.;

Major Descriptors: *AMERICIUM 241 -- RADIATION MONITORING; *BIKINI -- CONTAMINATION; *PLUTONIUM 239 -- RADIATION MONITORING; *PLUTONIUM 240 -- RADIATION MONITORING; *SOILS -- RADIONUCLIDE MIGRATION

Descriptors: STRONTIUM 90

Broader Terms: ACTINIDE ISOTOPES; ACTINIDE NUCLEI; ALKALINE EARTH ISOTOPES; ALPHA DECAY RADIOISOTOPES; AMERICIUM ISOTOPES; BETA DECAY RADIOISOTOPES ; BETA-MINUS DECAY RADIOISOTOPES; ENVIRONMENTAL TRANSPORT; EVEN-EVEN NUCLEI; EVEN-ODD NUCLEI; HEAVY NUCLEI; INTERMEDIATE MASS NUCLEI; ISLANDS; ISOTOPES; MARSHALL ISLANDS; MASS TRANSFER; MONITORING; NUCLEI; ODD-EVEN NUCLEI; PLUTONIUM ISOTOPES; RADIOISOTOPES; STRONTIUM ISOTOPES; YEARS LIVING RADIOISOTOPES

Subject Categories: 510301* -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- Soil -- (-1987)

INIS Subject Categories: B31* -- Land

10/5/966 (Item 666 from file: 103)

00309693 AIX-08-337631; EDB-77-148144

Title: Types and effects of radiation coming from nuclear weapons

Author(s): Messerschmidt, O. (Laboratorium fuer Experimentelle Radiologie, Neuherberg/Muenchen (Germany, F.R.)); Marx, R. (ed.) (Muenchen Univ. (Germany, F.R.). 1. Medizinische Klinik); Thies, H.A. (ed.) (Staedtische Krankenanstalten Heilbronn (Germany, F.R.). Chirurgische Klinik)

Title: Strahlen, Blutgerinnung und Haemostase. XVI. Hamberger Symposium ueber Blutgerinnung

Publisher: Schattauer,Stuttgart, Germany, F.R.

Publication Date: 1974 p 9-27

Document Type: Analytic of a Book

Language: German

Journal Announcement: EDB7710

Subfile: AIX (non-US Atomindex input).

Country of Origin: Germany, Federal Republic of

Country of Publication: Germany, Federal Republic of

Abstract: The article shows which effects can be expected from an atomic explosion, such as neutron and gamma rays, pressure surge, thermal radiation and at which KT-values and at which distance from the centre influence the individual noxious substances is most pronounced. Combined effects and delayed effects are discussed. The results of the numerous studies on the effects of the A-bomb dropping on Hiroshima and Nagazaki are shown. Results of animal experiments are used for explanation. Furthermore, the effect of radioactive fallout is described. As an example, the author points out the Marshall islands on which radioactive fallout was noticed after a nuclear weapon test by the Americans.;

Major Descriptors: *A-BOMB SURVIVORS -- DELAYED RADIATION EFFECTS; *NUCLEAR EXPLOSIONS -- FALLOUT

Descriptors: EPIDEMIOLOGY; FISSION PRODUCTS; HIROSHIMA; HUMAN POPULATIONS; MAN; MARSHALL ISLANDS; NAGASAKI; NUCLEAR WEAPONS; RADIATION BURNS; RADIATION INJURIES

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Broader Terms: ANIMALS; ASIA; BIOLOGICAL EFFECTS; BIOLOGICAL RADIATION EFFECTS; BURNS; EXPLOSIONS; INJURIES; ISLANDS; ISOTOPES; JAPAN; LOCAL RADIATION EFFECTS; MAMMALS; POPULATIONS; PRIMATES; RADIATION EFFECTS; RADIATION INJURIES; RADIOACTIVE MATERIALS; VERTEBRATES; WEAPONS
Subject Categories: 560151* -- Radiation Effects on Animals -- Man
INIS Subject Categories: C15* -- Effects of External Radiation on Man

10/5/967 (Item 667 from file: 103)
00296089 ERA-02-057437; NTS-77-000071; INS-77-016461; EDB-77-134498
Author(s): Robison, W.L.; Phillips, W.A.; Colsher, C.S.
Title: Dose assessment at Bikini Atoll (/sup 90/Sr, /sup 137/Cs)
Corporate Source: California Univ., Livermore (USA). Lawrence Livermore Lab.
Publication Date: 8 Jun 1977 p 51
Report Number(s): UCRL-51879(Pt.5)
Contract Number (DOE): W-7405-ENG-48
Document Type: Report
Language: English
Journal Announcement: EDB7710
Availability: Dep. NTIS, PC A04/MF A01.
Subfile: INS (US Atomindex input); NTS (NTIS); ERA (Energy Research Abstracts); TIC (Technical Information Center).
Country of Origin: United States
Country of Publication: United States
Abstract: Bikini Atoll is one of two sites in the northern Marshall Islands that was used by the United States as testing grounds for the nuclear weapons program from 1946 to 1958. In 1969 a general cleanup began at Bikini Atoll. Subsistence crops, coconut and Pandanus fruit, were planted on Bikini and Eneu Islands, and housing was constructed on Bikini Island. A second phase of housing was planned for the interior of Bikini Island. Preliminary data indicated that external gamma doses in the interior of the island might be higher than in other parts of the island. Therefore, to select a second site for housing on the island with minimum external exposure, a survey of Bikini Atoll was conducted in June 1975. External gamma measurements were made on Bikini and Eneu Islands, and soil and vegetations samples collected to evaluate the potential doses via terrestrial food chains and inhalation. Estimates of potential dose via the marine food chain were based upon data collected on previous trips to the atoll. The terrestrial pathway contributes the greater percentage, external gamma exposure contributes the next highest, and inhalation and marine pathways contribute minor fractions of the total whole body and bone marrow doses. The radionuclides contributing the major fraction of the dose are /sup 90/Sr and /sup 137/Cs. All living patterns involving Bikini Island exceed federal guidelines for 30-yr population doses. The Eneu Island living pattern leads to doses that are slightly less than federal guidelines. All patterns evaluated for Bikini Atoll lead to higher doses than those on the southern islands at Enewetak Atoll.;
Major Descriptors: *BIKINI -- RADIATION MONITORING; *HUMAN POPULATIONS -- RADIATION MONITORING; *PLANTS -- RADIATION MONITORING; *SOILS -- RADIATION MONITORING
Descriptors: CESIUM 137; CROPS; FOOD CHAINS; GAMMA RADIATION; HOUSES; INHALATION; MARSHALL ISLANDS; RADIATION DOSES; STRONTIUM 90
Broader Terms: ALKALI METAL ISOTOPES; ALKALINE EARTH ISOTOPES; BETA DECAY RADIOISOTOPES; BETA-MINUS DECAY RADIOISOTOPES; BIOMASS; BUILDINGS; CESIUM ISOTOPES; DOSES; ELECTROMAGNETIC RADIATION; ENERGY SOURCES; EVEN-EVEN NUCLEI; INTAKE; INTERMEDIATE MASS NUCLEI; IONIZING RADIATIONS; ISLANDS; ISOTOPES; MARSHALL ISLANDS; MONITORING; NUCLEI; ODD-EVEN NUCLEI; POPULATIONS; RADIATIONS; RADIOISOTOPES; RENEWABLE ENERGY SOURCES; RESIDENTIAL BUILDINGS; STRONTIUM ISOTOPES; YEARS LIVING RADIOISOTOPES
Subject Categories: 560161* -- Radionuclide Effects, Kinetics, & Toxicology -- Man
560163 -- Radionuclide Effects-Internal Source -- Plants -- (-1987)
INIS Subject Categories: C21* -- Tissue Distribution, Metabolism, Toxicology & Removal of Radionuclides

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10/5/968 (Item 668 from file: 103)
00290518 INS-77-014722; ERA-02-055159; EDB-77-128889
Title: Irradiation and thyroid carcinoma: legacy and controversy
Author(s): Frohman, L.A.
Affiliation: Michael Reese Medical Center, Chicago
Source: J. Chronic Dis. (United States) v 29:10. Coden: JOCDA
Publication Date: Oct 1976 p 609-612
Document Type: Journal Article
Language: English
Journal Announcement: EDB7709
Subfile: ERA (Energy Research Abstracts); INS (US Atomindex input); TIC (Technical Information Center).
Country of Origin: United States
Abstract: Some topics discussed are as follows: thyroid carcinoma in populations exposed to thermonuclear fallout in Japan and the Marshallese Islands; high frequency of prior head and neck irradiation in patients with thyroid carcinoma; nodular thyroid disease in patients following radiotherapy of tonsils and nasopharyngeal region; use of plasma thyroglobulin level and /sup 99m/Tc-pertechnetate for detecting thyroid carcinoma; analysis of risk factors and prediction of future occurrence of tumors; surgical procedures for thyroid carcinomas; and the role of thyroxine suppressive therapy. (HLW);
Major Descriptors: *CARCINOMAS -- DIAGNOSIS; *CARCINOMAS -- RADIOINDUCTION; *HUMAN POPULATIONS -- BIOLOGICAL RADIATION EFFECTS; *RADIOTHERAPY -- SIDE EFFECTS; *THYROID -- CARCINOMAS
Descriptors: FALLOUT; JAPAN; MARSHALL ISLANDS; NUCLEAR EXPLOSIONS; SURGERY; THYROXINE
Broader Terms: AMINO ACIDS; ASIA; BIOLOGICAL EFFECTS; BODY; CARBOXYLIC ACIDS; DISEASES; ENDOCRINE GLANDS; EXPLOSIONS; GLANDS; HORMONES; ISLANDS; MEDICINE; NEOPLASMS; NUCLEAR MEDICINE; ORGANIC ACIDS; ORGANIC COMPOUNDS; ORGANIC HALOGEN COMPOUNDS; ORGANIC IODINE COMPOUNDS; ORGANS; PEPTIDE HORMONES; POPULATIONS; RADIATION EFFECTS; RADIOLOGY; THERAPY; THYROID HORMONES
Subject Categories: 560151* -- Radiation Effects on Animals -- Man
INIS Subject Categories: C15* -- Effects of External Radiation on Man

10/5/969 (Item 669 from file: 103)
00270829 ERA-02-046594; EDB-77-109091
Title: Thermal tolerance in tropical versus subtropical Pacific reef corals
Author(s): Coles, S.L. (Hawaiian Electric Co. Inc., Honolulu); Jokiel, P.L.; Lewis, C.R.
Source: Pac. Sci. (United States) v 30:2. Coden: PASCA
Publication Date: Apr 1976 p 159-166
Document Type: Journal Article
Language: English
Journal Announcement: EDB7708
Subfile: ERA (Energy Research Abstracts); TIC (Technical Information Center).
Country of Origin: United States
Abstract: Upper lethal temperature tolerances of reef corals in Hawaii and at Enewetak, Marshall Islands, were determined in the field and under controlled laboratory conditions. Enewetak corals survived in situ temperatures of nearly 34/sup 0/C, whereas 32/sup 0/C was lethal to Hawaiian corals for similar short-term exposures. Laboratory determinations indicate that the upper thermal limits of Hawaiian corals are approximately 2/sup 0/C less than congeners from the tropical Pacific. Differences in coral thermal tolerances correspond to differences in the ambient temperature patterns between geographic areas.;
Major Descriptors: *CORALS -- TEMPERATURE EFFECTS
Descriptors: HAWAII; MARSHALL ISLANDS; TOLERANCE; TROPICAL REGIONS
Broader Terms: ANIMALS; CNIDARIA; INVERTEBRATES; ISLANDS; NORTH AMERICA; USA; WESTERN REGION
Subject Categories: 560204* -- Thermal Effects -- Invertebrates -- (-1987)

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10/5/970 (Item 670 from file: 103)
00270568 ERA-02-046519; EDB-77-108826
Title: Keloid in the gray reef shark, Carcharhinus amblyrhynchos
Author(s): Smith, A.C.; Hartley, F.K.
Affiliation: Univ. of Hawaii, Honolulu
Source: Pac. Sci. (United States) v 30:2. Coden: PASCA
Publication Date: Apr 1976 p 109-112
Document Type: Journal Article
Language: English
Journal Announcement: EDB7708
Subfile: ERA (Energy Research Abstracts); TIC (Technical Information Center).
Country of Origin: United States
Abstract: A gray reef shark, Carcharhinus amblyrhynchos, was captured at Enewetak Atoll, the Marshall Islands, in 1972. Near the right pectoral fin was a large fungating tumor. Microscopically, no evidence of microorganisms or definite malignant transformation was observed, and inflammation and necrosis were minimal. However, the tumor appeared to be a keloid, the first to be reported in sharks.;
Major Descriptors: *FISHES -- NEOPLASMS
Descriptors: MARSHALL ISLANDS; SKIN; TISSUES
Broader Terms: ANIMALS; AQUATIC ORGANISMS; BODY; DISEASES; ISLANDS; ORGANS; VERTEBRATES
Subject Categories: 550900* -- Pathology

10/5/971 (Item 671 from file: 103)
00270455 ERA-02-046472; EDB-77-108711
Title: Sun and shade differences in productivity of reef corals
Author(s): Wethey, D.S.; Porter, J.W.
Affiliation: Univ. of Michigan, Ann Arbor
Source: Nature (London) (United Kingdom) v 262:5566. Coden: NATUA
Publication Date: 22 Jul 1976 p 281-282
Document Type: Journal Article
Language: English
Journal Announcement: EDB7708
Subfile: ERA (Energy Research Abstracts); TIC (Technical Information Center).
Country of Origin: United States
Abstract: The coral Pavona praetorta was collected west of Eniwetok Island and rates of photosynthesis were determined in the dinoflagellates living as symbionts in the coral. Relative to maximum photosynthetic rates the deep water individuals saturate their photosynthetic machinery at lower radiation intensities than the shallow water individual. This is analogous to the sun and shade differences for canopy and understory plants. The acclimation to ambient light regime in corals suggests that extrapolation from measurements or individuals at one depth to the population over the whole depth range is not valid. (HLW);
Major Descriptors: *ALGAE -- PHOTOSYNTHESIS; *ALGAE -- PRODUCTIVITY; *CORALS -- PRODUCTIVITY
Descriptors: BIOLOGICAL EFFECTS; DEPTH; SUN; SYMBIOSIS; VISIBLE RADIATION
Broader Terms: ANIMALS; BIOMASS; CHEMICAL REACTIONS; CNIDARIA; DIMENSIONS; ELECTROMAGNETIC RADIATION; ENERGY SOURCES; INVERTEBRATES; PHOTOCHEMICAL REACTIONS; PLANTS; RADIATIONS; RENEWABLE ENERGY SOURCES; STARS; SYNTHESIS
Subject Categories: 550500* -- Metabolism

10/5/972 (Item 672 from file: 103)
00270030 INS-77-012050; ERA-02-046213; EDB-77-108283
Title: Safety and Environmental Protection Division. Progress report, January 1, 1974--December 31, 1975 (Radionuclides in Bikini foods during 1974 and 1975 and environmental monitoring data for BNL during 1975)
Corporate Source: Brookhaven National Lab., Upton, NY (USA)
Publication Date: Jan 1977 p 57
Report Number(s): BNL-50606

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Contract Number (DOE): EY-76-C-02-0016
Document Type: Report
Language: English
Journal Announcement: EDB7708
Availability: Dep. NTIS, PC A04/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: Progress is reported in the analysis of food chain samples collected during 1974 and 1975 at the Bikini Atoll in the Marshall Islands for /sup 90/Sr, /sup 137/Cs, /sup 239/Pu, /sup 240/Pu, and /sup 241/Am remaining in the environment from the 1946-1958 nuclear tests. Data on levels of radioactivity in environmental samples and SO/sub 2/ and NO/sub x/ in air samples collected in the vicinity of Brookhaven National Laboratory during 1975 are reported. Samples of surface air, surface waters, ground water, sediments and biota from streams, soils, grass, and milk were analyzed. Abstracts of papers published during 1974 and 1975 are included. (CH);
Major Descriptors: *AMERICIUM 241 -- ENVIRONMENTAL TRANSPORT; *BIKINI -- FOOD; *CESIUM 137 -- ENVIRONMENTAL TRANSPORT; *FOOD -- RADIOACTIVITY; *PLUTONIUM 239 -- ENVIRONMENTAL TRANSPORT; *PLUTONIUM 240 -- ENVIRONMENTAL TRANSPORT; *STRONTIUM 90 -- ENVIRONMENTAL TRANSPORT; *BNL -- RESEARCH PROGRAMS; *BNL -- WASTE MANAGEMENT
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; EVEN-EVEN NUCLEI; EVEN-ODD NUCLEI; HEAVY NUCLEI; INTERMEDIATE MASS NUCLEI; ISLANDS; ISOTOPES; MANAGEMENT; MARSHALL ISLANDS; MASS TRANSFER; MONITORING; NATIONAL ORGANIZATIONS; NUCLEI; ODD-EVEN NUCLEI; PLUTONIUM ISOTOPES; RADIOACTIVE MATERIALS; RADIOACTIVE WASTES; RADIOISOTOPES; STRONTIUM ISOTOPES; US AEC; US ERDA; US ORGANIZATIONS; WASTES; YEARS LIVING RADIOISOTOPES
Subject Categories: 500200* -- Environment, Atmospheric -- Chemicals Monitoring & Transport -- (-1989)
500300 -- Environment, Atmospheric -- Radioactive Materials Monitoring & Transport -- (-1989)
510300 -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- (-1989)
510302 -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- Terrestrial Ecosystems & Food Chains -- (-1987)
520300 -- Environment, Aquatic -- Radioactive Materials Monitoring & Transport -- (1989)
INIS Subject Categories: C52* -- Radiation Hazards & Safety Evaluations of Nuclear Installations
B33 -- Atmosphere
B31 -- Land
C22 -- Radionuclide Ecology
B32 -- Water

10/5/973 (Item 673 from file: 103)
00270008 ERA-02-049697; EDB-77-108261
Author(s): Hartmann, G.K.
Title: Wave making by an underwater explosion
Corporate Source: Naval Surface Weapons Center, Silver Spring, MD (USA)
Publication Date: Sep 1976 p 167
Report Number(s): AD-A-038276; NSWC/WOL/MP-76-15
Document Type: Report
Language: English
Journal Announcement: EDB7707
Availability: NTIS, PC A08/MF A01.
Subfile: ERA (Energy Research Abstracts); NTS (NTIS).
Country of Origin: United States
Country of Publication: United States
Abstract: A historical account of wave making experiments made during and immediately after World War II, from the smallest to the largest scale

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including the Atom Baker Bikini is presented. The various theories of explosive wave making are discussed and comparisons are made between the observations and the theoretical expectations. Scaling laws are examined for the two distinct cases: explosion bubble containment (deep case) and explosion bubble blowout (shallow case). The influence of the sea bottom is considered. A general conclusion is reached that it is possible to reconcile theory and experiment within a factor of two with regard to wave amplitude and within a few percent with regard to wave period. The number of experiments which are directly applicable to the conditions imposed by theory is limited. Theory in some cases assumes the presence of a rigid bottom, and in other cases no bottom at all; whereas in most experiments a non rigid bottom is present. A synthesis of all these results is made leading to a semiempirical prescription by which explosively generated waves may be predicted. The conclusions are not inconsistent with later work in this field done in the last decade. ;

Major Descriptors: *NUCLEAR EXPLOSIONS -- WATER WAVES; *WATER WAVES -- SCALING LAWS
Descriptors: UNDERWATER EXPLOSIONS
Broader Terms: EXPLOSIONS
Subject Categories: 450200* -- Military Technology, Weaponry, & National Defense -- Nuclear Explosions & Explosives

10/5/974 (Item 674 from file: 103)
00238327 INS-77-009323; ERA-02-036188; EDB-77-076278
Author(s): Noshkin, V.E.; Robison, W.L.; Wong, K.M.; Eagle, R.J.
Title: Evaluation of the radiological quality of the water on Bikini and Eneu Islands in 1975: dose assessment based on initial sampling
Corporate Source: California Univ., Livermore (USA). Lawrence Livermore Lab.
Publication Date: 21 Jan 1977 p 27
Report Number(s): UCRL-51879(Pt.4)
Contract Number (DOE): W-7405-ENG-48
Document Type: Report
Language: English
Journal Announcement: EDB7706
Availability: Dep. NTIS $4.00.
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 report describes the radiological quality of the groundwater on the two main islands (Eneu and Bikini) of Bikini Atoll during June 1975 (from data obtained from water samples collected at old and new well sites on both islands) and the cistern water on Bikini Island. Based on analyses of these samples, we found that the cistern water from Bikini Island is both chemically and radiologically acceptable as drinking water in accordance with standard limits established by the U.S. Public Health Service. However, on both islands the quality of the groundwater varied from one site to another. At some wells both chemical and radiological quality are acceptable; at others one or both are unacceptable according to U.S. Public Health Standards. The doses we predict from consumption of both cistern and groundwater are acceptable under federal guidelines. However, doses predicted from consumption of groundwater are high enough to warrant careful evaluation of other potential exposure pathways.;
Major Descriptors: *BIKINI -- RADIATION MONITORING; *DRINKING WATER -- RADIOACTIVITY; *GROUND WATER -- RADIOACTIVITY; *HUMAN POPULATIONS -- RADIATION DOSES
Descriptors: ENVIRONMENT; INTERNAL IRRADIATION; SAMPLING
Broader Terms: DOSES; HYDROGEN COMPOUNDS; IRRADIATION; ISLANDS; MARSHALL ISLANDS; MONITORING; OXYGEN COMPOUNDS; POPULATIONS; WATER
Subject Categories: 510300* -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- (-1989)
510101 -- Environment, Terrestrial -- Basic Studies -- Radiometric Techniques -- (-1989)

400405

INIS Subject Categories: B31* -- Land

10/5/975 (Item 675 from file: 103)
00232068 ERA-02-030837; INS-77-008288; EDB-77-069946
Author(s): Mount, M.E.; Robison, W.L.; Thompson, S.E.; Hamby, K.O.; Prindle, A.L.; Levy, H.B.
Title: Analytical program: 1975 Bikini radiological survey
Corporate Source: California Univ., Livermore (USA). Lawrence Livermore Lab.
Publication Date: 11 Nov 1976 p 30
Report Number(s): UCRL-51879(Pt.2)
Contract Number (DOE): W-7405-ENG-48
Document Type: Report
Language: English
Journal Announcement: EDB7705
Availability: Dep. NTIS $4.00.
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 analytical program for samples of soil, vegetation, and animal tissue collected during the June 1975 field survey of Bikini and Eneu islands is described. The phases of this program are discussed in chronological order: initial processing of samples, gamma spectrometry, and wet chemistry. Included are discussions of quality control programs, reproducibility of measurements, and comparisons of gamma spectrometry with wet chemistry determinations of /sup 241/Am. Wet chemistry results are used to examine differences in Pu:Am ratios and Pu-isotope ratios as a function of the type of sample and the location where samples were collected.;
Major Descriptors: *ANIMALS -- RADIOACTIVITY; *BIKINI -- RADIATION MONITORING; *PLANTS -- RADIOACTIVITY; *SOILS -- RADIATION MONITORING; *SOILS -- RADIOACTIVITY
Descriptors: ENVIRONMENT; GAMMA SPECTROSCOPY; RADIOMETRIC ANALYSIS; SAMPLING; TERRESTRIAL ECOSYSTEMS; TISSUES
Broader Terms: BIOMASS; BODY; CHEMICAL ANALYSIS; ECOSYSTEMS; ENERGY SOURCES ; ISLANDS; MARSHALL ISLANDS; MONITORING; QUANTITATIVE CHEMICAL ANALYSIS ; RENEWABLE ENERGY SOURCES; SPECTROSCOPY
Subject Categories: 510101* -- Environment, Terrestrial -- Basic Studies -- Radiometric Techniques -- (-1989)
400103 -- Radiometric & Radiochemical Procedures -- (-1987)
INIS Subject Categories: B31* -- Land
B11 -- Chemical & Isotopic Analysis

10/5/976 (Item 676 from file: 103)
00219468 ERA-02-025469; INS-77-006728; EDB-77-057277
Author(s): Robison, W.L.; Noshkin, V.E.
Title: Plutonium concentrations in dietary and inhalation pathways at Bikini and New York
Corporate Source: California Univ., Livermore (USA). Lawrence Livermore Lab.
Publication Date: 27 Sep 1976 p 21
Report Number(s): UCRL-52176
Contract Number (DOE): W-7405-ENG-48
Document Type: Report
Language: English
Journal Announcement: EDB7704
Availability: Dep. NTIS $3.50.
Subfile: INS (US Atomindex input); ERA (Energy Research Abstracts); TIC (Technical Information Center).
Country of Origin: United States
Country of Publication: United States
Abstract: This report assesses the plutonium intake via inhalation and ingestion for residents of New York and residents of Bikini Atoll. Based on inhalation and ingestion intake, the plutonium transferred to urine would be roughly seven times greater at Bikini than at New York.

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This ratio compares with data reported to the authors showing urine samples from Bikini residents had about ten times the Pu of urine samples from New York residents. The comparison of these ratios indicates that differences in the levels of intake in the New York and Bikini populations can account for the relative difference between the Pu concentrations observed in urine samples from the two locations.;
Major Descriptors: *HUMAN POPULATIONS -- RADIONUCLIDE KINETICS; *PLUTONIUM -- ENVIRONMENTAL TRANSPORT; *PLUTONIUM -- TISSUE DISTRIBUTION
Descriptors: BIKINI; COMPARATIVE EVALUATIONS; DIET; FALLOUT DEPOSITS; FOOD CHAINS; INGESTION; INHALATION; INTERNAL IRRADIATION; NEW YORK CITY; RADIATION DOSES; RADIOACTIVITY; SURFACE AIR
Broader Terms: ACTINIDES; AIR; DISTRIBUTION; DOSES; ELEMENTS; FALLOUT; FLUIDS; GASES; INTAKE; IRRADIATION; ISLANDS; MARSHALL ISLANDS; MASS TRANSFER; METALS; MID-ATLANTIC REGION; NEW YORK; NORTH AMERICA; POPULATIONS; TRANSURANIUM ELEMENTS; USA
Subject Categories: 560171* -- Radiation Effects -- Nuclide Kinetics & Toxicology -- Man -- (-1987)
INIS Subject Categories: C21* -- Tissue Distribution, Metabolism, Toxicology & Removal of Radionuclides

10/5/977 (Item 677 from file: 103)
00219456 ERA-02-025468; INS-77-006723; EDB-77-057265
Author(s): Colsher, C.S.
Title: Derivation of plant-soil relationships for dose assessment on Bikini Atoll (Radiation dose to returning population)
Corporate Source: California Univ., Livermore (USA). Lawrence Livermore Lab.
Publication Date: Nov 1976 p 37
Report Number(s): UCID-17313
Contract Number (DOE): W-7405-ENG-48
Document Type: Report
Language: English
Journal Announcement: EDB7704
Availability: Dep. NTIS $4.00.
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 of the terrestrial environment of Bikini and Eneu Islands (Bikini Atoll) was conducted in June 1975 to evaluate the potential radiation dose to the returning Bikini population. This report presents measurements of the radionuclide concentration in soil profiles and in dominant species of edible and nonedible indicator plants and describes the use of these data to derive relationships to predict the plant uptake of radionuclides from soil. Soil-plant concentration factors together with leaf-leaf and fruit-leaf concentration ratios for indicator and edible plant species from the same area are calculated to quantitatively assess and compare the uptake of /sup 90/Sr, /sup 137/Cs, and /sup 239/'/sup 240/Pu. In general, the concentration factors for /sup 137/Cs in terrestrial vegetation are greater than those for /sup 90/Sr and the concentration factors for both these nuclides exceed those for /sup 239/'/sup 240/Pu by ten to one hundred-fold. Uptake of /sup 90/Sr and /sup 239/'/sup 240/Pu by fruit is less than that by mature leaves; however, the opposite is true for /sup 137/Cs. The relative contribution of the individual plant species to the internal dose to man varies with the nuclide. The use of concentration factors and concentration ratios to predict nuclide concentrations in fruit from those in soil or leaves is prescribed.;
Major Descriptors: *BIKINI -- TERRESTRIAL ECOSYSTEMS; *CESIUM 137 -- ENVIRONMENTAL TRANSPORT; *FOOD -- RADIOACTIVITY; *HUMAN POPULATIONS -- INTERNAL IRRADIATION; *HUMAN POPULATIONS -- RADIATION DOSES; *PLUTONIUM 239 -- ENVIRONMENTAL TRANSPORT; *PLUTONIUM 240 -- ENVIRONMENTAL TRANSPORT; *STRONTIUM 90 -- ENVIRONMENTAL TRANSPORT
Descriptors: DOSE COMMITMENTS; ENVIRONMENT; FOOD CHAINS; FRUITS; PLANTS; RADIONUCLIDE KINETICS; RADIONUCLIDE MIGRATION; SOILS; VEGETABLES

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Broader Terms: ACTINIDE ISOTOPES; ACTINIDE NUCLEI; ALKALI METAL ISOTOPES; ALKALINE EARTH ISOTOPES; ALPHA DECAY RADIOISOTOPES; BETA DECAY RADIOISOTOPES; BETA-MINUS DECAY RADIOISOTOPES; BIOMASS; CESIUM ISOTOPES ; DOSES; ECOSYSTEMS; ENERGY SOURCES; ENVIRONMENTAL TRANSPORT; EVEN-EVEN NUCLEI; EVEN-ODD NUCLEI; FOOD; HEAVY NUCLEI; INTERMEDIATE MASS NUCLEI; IRRADIATION; ISLANDS; ISOTOPES; MARSHALL ISLANDS; MASS TRANSFER; NUCLEI ; ODD-EVEN NUCLEI; PLUTONIUM ISOTOPES; POPULATIONS; RADIOISOTOPES; RENEWABLE ENERGY SOURCES; STRONTIUM ISOTOPES; YEARS LIVING RADIOISOTOPES
Subject Categories: 560161* -- Radionuclide Effects, Kinetics, & Toxicology -- Man
510300 -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- (-1989)
INIS Subject Categories: C21* -- Tissue Distribution, Metabolism, Toxicology & Removal of Radionuclides
B31 -- Land

10/5/978 (Item 678 from file: 103)
00219143 INS-77-006651; ERA-02-027409; EDB-77-056951
Title: Laboratory experiments on the transfer of plutonium from marine sediments to seawater and to marine organisms
Author(s): Mo, T.; Lowman, F.G.; Cushing, C.E. Jr. (ed.)
Affiliation: Puerto Rico Nuclear Center, Mayaguez
Title: Radioecology and energy resources (/sup 239/Pu, /sup 240/Pu)
Conference Title: 4. national symposium on radioecology
Conference Location: Corvallis, OR, USA Conference Date: 12 May 1975
Publisher: Halsted Press,New York
Publication Date: 1976 p 86-95
Note: CONF-750503--
Document Type: Analytic of a Book; Conference literature
Language: English
Journal Announcement: EDB7704
Subfile: ERA (Energy Research Abstracts); INS (US Atomindex input); TIC (Technical Information Center).
Country of Origin: Puerto Rico
Country of Publication: United States
Abstract: The leachability of /sup 239/,/sup 240/Pu from a fine calcareous sediment to aerated open seawater and to anoxic seawater was measured. The ratio of the specific activity of /sup 239/,/sup 240/Pu of the water to that of the sediment was 2.52 x 10/sup -5/ for aerated water and 2.54 x 10/sup -6/ for anoxic water. Experiments on the uptake of /sup 239/,/sup 240/Pu by the clams Donax denticulatus and Lucina pectinata were done in aquaria containing kilogram quantities of sediment from the Bravo Crater at Bikini Atoll. The concentration factor for /sup 239/,/sup 240/Pu by the soft parts of these clams was about 200. All the plutonium taken up in the soft parts of the Lucina was associated with the gill, mantle and siphon. No plutonium was detected in the adductor muscles or hepatopancreas of the Lucina. The smooth surfaces of the shells of the Donax concentrated plutonium by a factor of not more than 10, but the rough shell surfaces of the Lucina concentrated plutonium by a factor of 1.10 x 10/sup 4/ over that in the seawater. Marine periphyton cultured on glass plates in an aquarium concentrated /sup 239/,/sup 240/Pu by a factor of about 7 x 10/sup 3/ over that in the seawater.;
Major Descriptors: *MOLLUSCS -- RADIONUCLIDE MIGRATION; *PLUTONIUM 239 -- UPTAKE; *PLUTONIUM 240 -- UPTAKE; *SEAWATER -- RADIONUCLIDE MIGRATION; *SEDIMENTS -- RADIONUCLIDE MIGRATION
Descriptors: AQUATIC ORGANISMS; LEACHING; OXYGEN; TISSUE DISTRIBUTION
Broader Terms: ACTINIDE ISOTOPES; ACTINIDE NUCLEI; ALPHA DECAY RADIOISOTOPES; ANIMALS; AQUATIC ORGANISMS; CRYOGENIC FLUIDS; DISSOLUTION; DISTRIBUTION; ELEMENTS; ENVIRONMENTAL TRANSPORT; EVEN-EVEN NUCLEI; EVEN-ODD NUCLEI; FLUIDS; HEAVY NUCLEI; HYDROGEN COMPOUNDS; INVERTEBRATES; ISOTOPES; MASS TRANSFER; NONMETALS; NUCLEI; OXYGEN COMPOUNDS; PLUTONIUM ISOTOPES; RADIOISOTOPES; SEPARATION PROCESSES; WATER; YEARS LIVING RADIOISOTOPES
Subject Categories: 520300* -- Environment, Aquatic -- Radioactive

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Materials Monitoring & Transport -- (1989)
560172 -- Radiation Effects -- Nuclide Kinetics & Toxicology -- Animals -- (-1987)
INIS Subject Categories: B32* -- Water
C21 -- Tissue Distribution, Metabolism, Toxicology & Removal of Radionuclides

10/5/979 (Item 679 from file: 103)
00219142 INS-77-006650; ERA-02-027408; EDB-77-056950
Title: Concentrations and physical--chemical states of /sup 55/Fe in Bikini Atoll Lagoon
Author(s): Schell, W.R.; Cushing, C.E. Jr. (ed.)
Affiliation: Univ. of Washington, Seattle
Title: Radioecology and energy resources
Conference Title: 4. national symposium on radioecology
Conference Location: Corvallis, OR, USA Conference Date: 12 May 1975
Publisher: Halsted Press,New York
Publication Date: 1976 p 271-276
Contract Number (DOE): AT(45-1)-2225-T18
Note: CONF-750503--
Document Type: Analytic of a Book; Conference literature
Language: English
Journal Announcement: EDB7704
Subfile: ERA (Energy Research Abstracts); INS (US Atomindex input); TIC (Technical Information Center).
Country of Origin: United States
Country of Publication: United States
Abstract: Iron-55 is a neutron-induced radionuclide produced in large quantities from ferrous materials in the immediate vicinity of a nuclear detonation. Bikini Atoll Lagoon is labeled at the present time with /sup 55/Fe at concentrations which are greater than for any of the remaining bomb-produced radionuclides; the concentrations found in the water are 120 to 680 pCi/m/sup 3/ and are estimated to be partitioned into 45 percent particulate (>0.3 ..mu..m), 45 percent colloidal and 10 percent soluble. The particulate and soluble fractions were determined by use of a Battelle Large Volume Water Sampler. The sediments in the lagoon and craters appear to be the sources of /sup 55/Fe and other radionuclides in the lagoon water. In spite of a 70-fold or greater decrease in radioactivity by decay since the last nuclear detonations at Bikini in 1958, some sediment contain concentrations of /sup 55/Fe as great as 300 pCi/g, dry weight.;
Major Descriptors: *BIKINI -- CONTAMINATION; *BIKINI -- RADIATION MONITORING; *IRON 55 -- RADIATION MONITORING; *IRON 55 -- RADIOECOLOGICAL CONCENTRATION; *LAKES -- CONTAMINATION; *LAKES -- RADIATION MONITORING; *SEDIMENTS -- CONTAMINATION; *SEDIMENTS -- RADIATION MONITORING
Descriptors: CHEMICAL STATE; NUCLEAR EXPLOSIONS
Broader Terms: BETA DECAY RADIOISOTOPES; ECOLOGICAL CONCENTRATION; ELECTRON CAPTURE RADIOISOTOPES; EVEN-ODD NUCLEI; EXPLOSIONS; INTERMEDIATE MASS NUCLEI; IRON ISOTOPES; ISLANDS; ISOTOPES; MARSHALL ISLANDS; MONITORING; NUCLEI; RADIOISOTOPES; SURFACE WATERS; YEARS LIVING RADIOISOTOPES
Subject Categories: 520300* -- Environment, Aquatic -- Radioactive Materials Monitoring & Transport -- (1989)
INIS Subject Categories: B32* -- Water

10/5/980 (Item 680 from file: 103)
00219136 INS-77-006644; ERA-02-027402; EDB-77-056944
Title: Efficiency of a large volume water sampler for some radionuclides in salt and fresh water
Author(s): Nevissi, A.; Schell, W.R.; Cushing, C.E. Jr. (ed.)
Affiliation: Univ. of Washington, Seattle
Title: Radioecology and energy resources (/sup 210/Po, /sup 207/Bi, /sup 155/Eu, /sup 241/Am, /sup 239/Pu, /sup 240/Pu, /sup 60/Co)
Conference Title: 4. national symposium on radioecology
Conference Location: Corvallis, OR, USA Conference Date: 12 May 1975
Publisher: Halsted Press,New York

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Publication Date: 1976 p 277-282
Note: See CONF-750503--
Document Type: Analytic of a Book; Conference literature
Language: English
Journal Announcement: EDB7704
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 Battelle Large Volume Water Sampler collects nuclides in particulate form on Millipore filters and nuclides in soluble form on sorption beds. Laboratory experiments showed quantitative retention of /sup 210/Po, /sup 207/Bi, /sup 155/Eu and /sup 241/Am on 0.3..mu..m Millipore filters and a single sorption bed of 200-mesh aluminum oxide, 6-mm thick. However, a quantitative evaluation of the retention of /sup 239/ /sup 240/Pu and /sup 60/Co required the measurements of radionuclides sorbed on successive aluminum oxide beds: for a two-bed series the sorption efficiency was 40% for /sup 239/ /sup 240/Pu and 50% for /sup 60/Co. Field experiments at Bikini Atoll with 2000 to 4000 l water samples indicated quantitative retention of ''soluble'' /sup 155/ Eu, /sup 207/Bi and /sup 241/Am of sizes smaller than 0.3..mu..m on a single aluminum oxide bed. For /sup 239/ /sup 240/Pu the sorption efficiency calculated from two beds was not constant and ranged from 15 to 96%; the sorption efficiency for /sup 210/Pb was 50 to 95%. The physical and chemical forms of the radionuclides are believed to account for the variability in the sorption efficiencies, and the use of the sampler to determine these forms is discussed.;
Major Descriptors: *AMERICIUM 241 -- RADIATION MONITORING; *BIKINI -- RADIATION MONITORING; *BISMUTH 207 -- RADIATION MONITORING; *COBALT 60 -- RADIATION MONITORING; *EUROPIUM 155 -- RADIATION MONITORING; *FRESH WATER -- RADIATION MONITORING; *FRESH WATER -- SAMPLING; *PLUTONIUM 239 -- RADIATION MONITORING; *PLUTONIUM 240 -- RADIATION MONITORING; *POLONIUM 210 -- RADIATION MONITORING; *SEAWATER -- RADIATION MONITORING; *SEAWATER -- SAMPLING
Descriptors: EFFICIENCY; FILTERS; SAMPLERS
Broader Terms: ACTINIDE ISOTOPES; ACTINIDE NUCLEI; ALPHA DECAY RADIOISOTOPES; AMERICIUM ISOTOPES; BETA DECAY RADIOISOTOPES; BETA-MINUS DECAY RADIOISOTOPES; BETA-PLUS DECAY RADIOISOTOPES; BISMUTH ISOTOPES; COBALT ISOTOPES; DAYS LIVING RADIOISOTOPES; ELECTRON CAPTURE RADIOISOTOPES; EUROPIUM ISOTOPES; EVEN-EVEN NUCLEI; EVEN-ODD NUCLEI; HEAVY NUCLEI; HYDROGEN COMPOUNDS; INTERMEDIATE MASS NUCLEI; INTERNAL CONVERSION RADIOISOTOPES; ISLANDS; ISOMERIC TRANSITION ISOTOPES; ISOTOPES; LABORATORY EQUIPMENT; MARSHALL ISLANDS; MINUTES LIVING RADIOISOTOPES; MONITORING; NUCLEI; ODD-EVEN NUCLEI; ODD-ODD NUCLEI; OXYGEN COMPOUNDS; PLUTONIUM ISOTOPES; POLONIUM ISOTOPES; RADIOISOTOPES; RARE EARTH ISOTOPES; RARE EARTH NUCLEI; WATER; YEARS LIVING RADIOISOTOPES
Subject Categories: 520300* -- Environment, Aquatic -- Radioactive Materials Monitoring & Transport -- (1989)
053000 -- Nuclear Fuels -- Environmental Aspects
INIS Subject Categories: B32* -- Water
C52 -- Radiation Hazards & Safety Evaluations of Nuclear Installations

10/5/981 (Item 681 from file: 103)
00219096 INS-77-006626; ERA-02-027380; EDB-77-056904
Title: /sup 137/Cs and /sup 60/Co in a terrestrial community at Enewetak Atoll
Author(s): Bastian, R.K.; Jackson, W.B.; Cushing, C.E. Jr. (ed.)
Affiliation: Bowling Green State Univ., OH
Title: Radioecology and energy resources
Conference Title: 4. national symposium on radioecology
Conference Location: Corvallis, OR, USA Conference Date: 12 May 1975
Publisher: Halsted Press,New York
Publication Date: 1976 p 314-320
Note: See CONF-750503--
Document Type: Analytic of a Book; Conference literature

5004070

Language: English
Journal Announcement: EDB7704
Subfile: ERA (Energy Research Abstracts); INS (US Atomindex input); TIC (Technical Information Center).
Country of Origin: United States
Country of Publication: United States
Abstract: Our previous studies have established basic population parameters and geographic distribution of rats (Rattus rattus and R. exulans) at Enewetak. Also documented were /sup 137/Cs and /sup 60/Co levels for selected plant and rat tissues. Additional samples now have been analyzed, and this paper is a detailed extension of earlier (1965), but very limited, data. In addition, recent (1972-1973) survey data by the AEC are presented for correlation. Samples of soil, plant and animal materials were collected in 1967 and 1971 on Runit Islet on five transects: at the major test site and at distances of 200 m, 1030 m, 1710 m and 2460 m from it. Most of the total external gamma radiation is contributed by /sup 137/Cs and /sup 60/Co. Both isotopes were observed in all soil, plant and rat samples, with concentrations correlated with closeness to the test site and level of physiological activity. Generally (except at the test site) activities of /sup 137/Cs and /sup 60/Co in the top 50 cm of the soil were between 0.1 and 2 pCi/g. In plants the range was between 2 and 200 pCi/g; in animal tissues, between 0.5 and 500 pCi/g. General agreement with the AEC data was found.;
Major Descriptors: *CESIUM 137 -- RADIOECOLOGICAL CONCENTRATION; *COBALT 60 -- RADIOECOLOGICAL CONCENTRATION; *ENIWETOK; *PLANTS -- CONTAMINATION; *RATS -- CONTAMINATION; *SOILS -- CONTAMINATION; *TISSUES -- CONTAMINATION
Descriptors: COMMUNITIES
Broader Terms: ALKALI METAL ISOTOPES; ANIMALS; BETA DECAY RADIOISOTOPES; BETA-MINUS DECAY RADIOISOTOPES; BIOMASS; BODY; CESIUM ISOTOPES; COBALT ISOTOPES; ECOLOGICAL CONCENTRATION; ENERGY SOURCES; INTERMEDIATE MASS NUCLEI; INTERNAL CONVERSION RADIOISOTOPES; ISLANDS; ISOMERIC TRANSITION ISOTOPES; ISOTOPES; MAMMALS; MARSHALL ISLANDS; MINUTES LIVING RADIOISOTOPES; NUCLEI; ODD-EVEN NUCLEI; ODD-ODD NUCLEI; RADIOISOTOPES; RENEWABLE ENERGY SOURCES; RODENTS; VERTEBRATES; YEARS LIVING RADIOISOTOPES
Subject Categories: 510300* -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- (-1989)
INIS Subject Categories: B31* -- Land

10/5/982 (Item 682 from file: 103)
00207665 ERA-02-023383; INS-77-005948; EDB-77-045392
Author(s): Conard, R.A.
Title: Summary of thyroid findings in Marshallese 22 years after exposure to radioactive fallout
Corporate Source: Brookhaven National Lab., Upton, NY (USA)
Conference Title: Conference on radiation in associated thyroid cancer
Conference Location: Chicago, IL, USA Conference Date: 30 Sep 1976
Publication Date: 1976 p 19
Report Number(s): BNL-21924; CONF-760939-1
Contract Number (DOE): E(30-1)-16
Document Type: Report; Conference literature
Language: English
Journal Announcement: EDB7703
Availability: Dep. NTIS $3.50.
Subfile: INS (US Atomindex input); ERA (Energy Research Abstracts); TIC (Technical Information Center).
Country of Origin: United States
Country of Publication: United States
Abstract: Inhabitants of several atolls in the Marshall Islands were accidently exposed to fallout radiation following a detonation of a high yield thermonuclear device during experiments at Bikini in the Pacific Proving Grounds in March 1954. The most serious acute effects of the exposure were due to penetrating gamma radiation. Contamination of the skin in the Rongelap group resulted in widespread beta burns and

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epilation. These lesions healed and hair regrew normally within several months. Radiochemical urine analyses revealed that measurable amounts of radionuclides, including /sup 131/I, were absorbed internally from ingestion of contaminated food and water and from inhalation. No acute effects due to this internal exposure were seen. Late thyroid effects from radioiodine absorption are described. Follow-up examinations have revealed, except for one fatal case of leukemia and extensive thyroid lesions, only a few findings that might be related to radiation exposure. A group of more than 200 Rongelap people who were relatives of exposed people, but had been away from the island at the time of the accident, moved back with the exposed people to their home island in 1957 and have served as an ideal comparison population for the studies. Results of medical examinations carried out on these populations for the past 22 years are reviewed.;

Major Descriptors: *HUMAN POPULATIONS -- BIOLOGICAL RADIATION EFFECTS; *HUMAN POPULATIONS -- DELAYED RADIATION EFFECTS; *HUMAN POPULATIONS -- EXTERNAL IRRADIATION; *HUMAN POPULATIONS -- INTERNAL IRRADIATION; *IODINE 131 -- BODY BURDEN; *MARSHALL ISLANDS -- FALLOUT DEPOSITS; *MARSHALL ISLANDS -- HUMAN POPULATIONS

Descriptors: ACUTE IRRADIATION; DOSE COMMITMENTS; LATENCY PERIOD; RADIOSENSITIVITY; THYROID

Broader Terms: ACUTE EXPOSURE; BETA DECAY RADIOISOTOPES; BETA-MINUS DECAY RADIOISOTOPES; BIOLOGICAL EFFECTS; BIOLOGICAL RADIATION EFFECTS; BODY; DAYS LIVING RADIOISOTOPES; ENDOCRINE GLANDS; FALLOUT; GLANDS; INTERMEDIATE MASS NUCLEI; IODINE ISOTOPES; IRRADIATION; ISLANDS; ISOTOPES; NUCLEI; ODD-EVEN NUCLEI; ORGANS; POPULATIONS; RADIATION EFFECTS; RADIOISOTOPES

Subject Categories: 560151* -- Radiation Effects on Animals -- Man
560161 -- Radionuclide Effects, Kinetics, & Toxicology -- Man

INIS Subject Categories: C15* -- Effects of External Radiation on Man
C21 -- Tissue Distribution, Metabolism, Toxicology & Removal of Radionuclides

10/5/983 (Item 683 from file: 103)

00207329 AIX-08-289864; EDB-77-045053

Title: Radioactivity in rain. Development of research concerning fall-out since the Vikini affair

Author(s): Kuroda, P.K. (Arkansas Univ., Fayetteville (USA). Dept. of Chemistry)

Source: Kagaku (Tokyo) (Japan) v 45:11. Coden: KAGTA

Publication Date: Nov 1975 p 649-657

Document Type: Journal Article

Language: Japanese

Journal Announcement: EDB7702

Subfile: AIX (non-US Atomindex input).

Country of Origin: United States

Abstract: The study related to the natural radioactivity in rain did not make rapid progress in the first half of the 20th century though the existence of radioactivity in rain was discovered by C.T.R. Wilson in 1900. In the latter half of the century, however, a large amount of fission products by nuclear experiments caused the rapid progress in the research on artificial radioactivity in rain. The amount of fission products in rain water as well as in atmosphere has been decreasing recently, and many scholars treat the research on fall-out lightly. The radioactivity in rain owing to the nuclear experiments by China and France is still considerably strong, and a lot of interesting results have been obtained by the study applying the artificial radioactive elements in rain water as the tracer. Concerning the natural radioactivity in rain, /sup 210/Pb, /sup 210/Bi and /sup 210/Po, the long life decay products of radon, may play extremely important role in the field of meteorology and geochemistry in future, as natural radioactive tracers existing in atmosphere in high concentration.;

Major Descriptors: *RAIN -- RADIOACTIVITY

Descriptors: BIKINI; CHINA; CONTAMINATION; EARTH ATMOSPHERE; FALLOUT; FRANCE; METEOROLOGY; NUCLEAR EXPLOSIONS; REVIEWS; SEASONAL VARIATIONS; UNDERGROUND EXPLOSIONS

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Broader Terms: ASIA; ATMOSPHERIC PRECIPITATIONS; DOCUMENT TYPES; EUROPE; EXPLOSIONS; ISLANDS; MARSHALL ISLANDS; VARIATIONS
Subject Categories: 500300* -- Environment, Atmospheric -- Radioactive Materials Monitoring & Transport -- (-1989)
INIS Subject Categories: B33* -- Atmosphere

10/5/984 (Item 684 from file: 103)
00201088 AIX-08-283890; EDB-77-038763
Title: Chromosomal estimation of radiation effects in man
Author(s): Ishihara, T. (National Inst. of Radiological Sciences, Chiba (Japan))
Source: Hiroshima Igaku (Japan) v 29:3. Coden: HIRGA
Publication Date: Mar 1976 p 307-310
Document Type: Journal Article
Language: Japanese
Journal Announcement: EDB7702
Subfile: AIX (non-US Atomindex input).
Country of Origin: Japan
Abstract: The estimation of exposure dose based on chromosome aberrations was described. The results of estimation of exposure dose based on chromosome aberrations of peripheral lymphocytes on individuals exposed to /sup 192/Ir by accident, Bikini victims, and atomic bomb survivors were divided into subjects who had been observed from immediately after exposure and those who were observed after the lapse of many years, for comparison. In cases soon after exposure, results of very high precision were obtained as far as the low dose range. In cases after the lapse of many years, quantitative estimation to a considerable extent was also possible.;
Major Descriptors: *A-BOMB SURVIVORS -- CHROMOSOMAL ABERRATIONS
Descriptors: BIOLOGICAL DOSEMETERS; DICENTRIC CHROMOSOMES; IN VITRO; INCUBATION; RADIATION DOSES; RING CHROMOSOMES; TIME DEPENDENCE
Broader Terms: CHROMOSOMES; DOSEMETERS; DOSES; MEASURING INSTRUMENTS; MUTATIONS
Subject Categories: 560151* -- Radiation Effects on Animals -- Man
INIS Subject Categories: C55* -- Personnel Dosimetry & Monitoring

10/5/985 (Item 685 from file: 103)
00201081 AIX-08-283659; EDB-77-038756
Title: Clinical observations over 20 years period of Bikini victims
Author(s): Kumatori, T. (National Inst. of Radiological Sciences, Chiba (Japan))
Source: Hiroshima Igaku (Japan) v 29:3. Coden: HIRGA
Publication Date: Mar 1976 p 311-316
Document Type: Journal Article
Language: Japanese
Journal Announcement: EDB7702
Subfile: AIX (non-US Atomindex input).
Country of Origin: Japan
Abstract: The author outlined the results of medical examinations performed in a period of 20 years on the Japanese fishermen who were exposed at Bikini in 1954. Exposure doses were estimated, and the progress of medical examinations for skin injury, hematological changes, cytogenetic changes, and spermatogenetic disturbance was described. In view of internal exposure, none of the long half-life nuclides was retained in the body. The victims were compared with the victims exposed in Marshall Islands.;
Major Descriptors: *A-BOMB SURVIVORS -- DELAYED RADIATION EFFECTS
Descriptors: BIKINI; BLOOD PLATELETS; CHROMOSOMAL ABERRATIONS; EARLY RADIATION EFFECTS; EOSINOPHILS; ERYTHROCYTES; RADIATION DOSES; RADIODERMATITIS; SPERMATOZOA; TIME DEPENDENCE
Broader Terms: BIOLOGICAL EFFECTS; BIOLOGICAL MATERIALS; BIOLOGICAL RADIATION EFFECTS; BLOOD; BLOOD CELLS; BODY FLUIDS; DERMATITIS; DISEASES; DOSES; GAMETES; GERM CELLS; INJURIES; ISLANDS; LEUKOCYTES; LOCAL RADIATION EFFECTS; MARSHALL ISLANDS; MUTATIONS; RADIATION EFFECTS ; RADIATION INJURIES; SKIN DISEASES
Subject Categories: 560151* -- Radiation Effects on Animals -- Man

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INIS Subject Categories: C15* -- Effects of External Radiation on Man

10/5/986 (Item 686 from file: 103)
00195122 AIX-07-278512; EDB-77-032747
Title: Plutonium levels in Kwajalein Lagoon
Author(s): Noshkin, V.E; Eagle, R.J.; Wong, K.M. (California Univ., Livermore (USA). Lawrence Livermore Lab.)
Source: Nature (London) (United Kingdom) v 262:5571. Coden: NATUA
Publication Date: 26 Aug 1976 p 745-748
Document Type: Journal Article
Language: English
Journal Announcement: EDB7702
Subfile: AIX (non-US Atomindex input).
Country of Origin: United States
Abstract: Reported plutonium levels in fish from both Kwajalein and Enewetak lagoons suggest that Kwajalein Lagoon contains significantly more plutonium in its environment than would be expected from worldwide fallout levels alone, although quantities of plutonium greater than fallout concentrations have not been detected in the lagoon water. If there is no reason to reject the published fish data, then individuals on Kwajalein Atoll who supplement their diet with foods from the local marine environment may have plutonium body burdens similar to the low levels predicted for individuals on similar diets at Enewetak Atoll. ;
Major Descriptors: *FISHES -- RADIOACTIVITY; *PLUTONIUM 239 -- RADIOECOLOGICAL CONCENTRATION; *PLUTONIUM 240 -- RADIOECOLOGICAL CONCENTRATION
Descriptors: DIET; ENIWETOK; FALLOUT; LAKES; MARSHALL ISLANDS; RADIOECOLOGY
Broader Terms: ACTINIDE ISOTOPES; ACTINIDE NUCLEI; ALPHA DECAY RADIOISOTOPES; ANIMALS; AQUATIC ORGANISMS; ECOLOGICAL CONCENTRATION; ECOLOGY; EVEN-EVEN NUCLEI; EVEN-ODD NUCLEI; HEAVY NUCLEI; ISLANDS; ISOTOPES; MARSHALL ISLANDS; NUCLEI; PLUTONIUM ISOTOPES; RADIOISOTOPES; SURFACE WATERS; VERTEBRATES; YEARS LIVING RADIOISOTOPES
Subject Categories: 520302* -- Environment, Aquatic -- Radioactive Materials Monitoring & Transport -- Aquatic Ecosystems & Food Chains -- (-1987)
INIS Subject Categories: B32* -- Water

10/5/987 (Item 687 from file: 103)
00182968 AIX-07-262902; EDB-77-020486
Title: Twenty-year-clinical history of victims of radioactive fallout in Bikini
Author(s): Kumatori, T. (National Inst. of Radiological Sciences, Chiba (Japan))
Source: Iden (Japan) v 29:12. Coden: IDENB
Publication Date: Dec 1975 p 39-43
Document Type: Journal Article
Language: Japanese
Journal Announcement: EDB7610
Subfile: AIX (non-US Atomindex input).
Country of Origin: Japan
Abstract: A study was made on clinical course over a 20 years period in a former crew of the 5th Fukuryumaru who had been exposed to radioactive fallout in Bikini in 1954. The estimate of exposure dosage and general clinical findings, such as skin damage, blood dyscrasia, abnormal chromosome, the physical improvement and so forth were described.;
Major Descriptors: *FALLOUT -- RADIATION HAZARDS; *HUMAN POPULATIONS -- DELAYED RADIATION EFFECTS
Descriptors: BIKINI; BLOOD FORMATION; GENETIC RADIATION EFFECTS; NUCLEAR WEAPONS; RADIATION DOSES; RADIODERMATITIS
Broader Terms: BIOLOGICAL EFFECTS; BIOLOGICAL RADIATION EFFECTS; DERMATITIS ; DISEASES; DOSES; GENETIC EFFECTS; HAZARDS; HEALTH HAZARDS; INJURIES; ISLANDS; LOCAL RADIATION EFFECTS; MARSHALL ISLANDS; POPULATIONS; RADIATION EFFECTS; RADIATION INJURIES; SKIN DISEASES; WEAPONS
Subject Categories: 560151* -- Radiation Effects on Animals -- Man
INIS Subject Categories: C15* -- Effects of External Radiation on Man

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10/5/988 (Item 688 from file: 103)
00176782 ERA-02-011168; INS-77-001383; EDB-77-014233
Author(s): Levy, Y.; Miller, D.S.; Friedman, G.M.
Title: Fission- and alpha-track study of biogeochemistry of plutonium and uranium in carbonates of Bikini and Enewetak atolls. Progress report, January 1, 1976--December 31, 1976
Corporate Source: Rensselaer Polytechnic Inst., Troy, N.Y. (USA). Dept. of Geology
Publication Date: Sep 1976 p 32
Report Number(s): COO-3462-13
Contract Number (DOE): EY-76-S-02-3462
Document Type: Report
Language: English
Journal Announcement: EDB7701
Availability: Dep. NTIS $4.00.
Subfile: INS (US Atomindex input); ERA (Energy Research Abstracts); TIC (Technical Information Center).
Country of Origin: United States
Country of Publication: United States
Abstract: Alpha emitters have been detected with a resolution of a few tens of micrometers using a solid state track detector (cellulose nitrate) to map the activity in a coral sample from Bikini. Calibration methods used include: a Pu source of 0.15 ..mu..Ci in conjunction with polycarbonate and CaCO/sub 3/ absorbers of different thicknesses (2 to 30 micrometers), and a powdered coral sample which had been analyzed previously for alpha emitters by chemical methods in conjunction with an alpha spectrometer. 0.04 mm/sup 3/ can be measured routinely; smaller concentrations can be determined but with a lower resolution. CaCO/sub 3/ of the coral Favites virens from Bikini lagoon was analyzed by placing the detector directly on the sample for thirty days. Sections and thin sections cut perpendicular to one another, but parallel to the direction of coral growth, give very different concentrations and distributions of alpha emitters. Maximum concentrations of 800 pCi/g were measured in a volume of 0.004 mm/sup 3/ in void-filling cement separated from the coral and in an area in which coral skeleton and cement could not be distinguished. Areas of high alpha emitter concentrations coincide with areas of coral growth interruption where non coral material exists that is composed of a mixture of encrusting bryozoan like carbonate material and skeletal debris.;
Major Descriptors: *BIKINI -- BIOGEOCHEMISTRY; *ENIWETOK -- BIOGEOCHEMISTRY ; *PLUTONIUM -- BIOGEOCHEMISTRY; *URANIUM -- BIOGEOCHEMISTRY
Descriptors: ALPHA PARTICLES; CALCIUM CARBONATES; CORALS; FISSION TRACKS; GROWTH
Broader Terms: ACTINIDES; ALKALINE EARTH METAL COMPOUNDS; ANIMALS; CALCIUM COMPOUNDS; CARBON COMPOUNDS; CARBONATES; CHARGED PARTICLES; CHEMISTRY; CNIDARIA; ELEMENTS; GEOCHEMISTRY; INVERTEBRATES; ISLANDS; MARSHALL ISLANDS; METALS; OXYGEN COMPOUNDS; PARTICLE TRACKS; TRANSURANIUM ELEMENTS
Subject Categories: 510300* -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- (-1989)
580400 -- Geochemistry -- (-1989)
INIS Subject Categories: B31* -- Land

10/5/989 (Item 689 from file: 103)
00155198 ERA-02-003869; INS-76-021294; EDB-76-093509
Author(s): Schell, W.R.
Title: Biogeochemistry of radionuclides in aquatic environments. Annual progress report, 1975--1976 (Retention of /sup 239/Pu, /sup 240/Pu, and /sup 241/Am in Bikini Lagoon 17-years following nuclear explosions)
Corporate Source: Washington Univ., Seattle (USA). Lab. of Radiation Ecology
Publication Date: 15 Jan 1976 p 54
Report Number(s): RLO-2225-T18-18
Contract Number (DOE): E(45-1)-2225-T18
Document Type: Report

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Language: English
Journal Announcement: EDB7611
Availability: Dep. NTIS $4.50.
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 present work is a combination of studies on natural radionuclides /sup 210/Po and /sup 210/Pb in aquatic environments and on the biogeochemistry of the transuranium elements /sup 239/Pu, /sup 240/Pu, and /sup 241/Am, in the Bikini Lagoon. The objectives of the biogeochemical studies are to evaluate the cycling of the radionuclides in the aquatic environment from their sources, their distribution within ecosystems, their uptake by biota, and their sinks. Detailed studies of the conditions which now exist some 17 years since the last nuclear detonations at Bikini should give a basis for predicting the effects of large-scale or low-level continuous releases of nuclear waste products in the marine environment.;
Major Descriptors: *AMERICIUM 241 -- RADIOECOLOGICAL CONCENTRATION; *BIKINI -- ENVIRONMENT; *BIKINI -- RADIATION MONITORING; *PLUTONIUM 239 -- RADIOECOLOGICAL CONCENTRATION; *PLUTONIUM 240 -- RADIOECOLOGICAL CONCENTRATION
Descriptors: AQUATIC ECOSYSTEMS; COASTAL WATERS; FALLOUT; LEAD 210; NATURAL RADIOACTIVITY; NUCLEAR EXPLOSIONS; POLONIUM 210; RADIONUCLIDE KINETICS; RADIONUCLIDE MIGRATION; SEAWATER; SEAWEEDS; SEDIMENTS; TIME DEPENDENCE
Broader Terms: ACTINIDE ISOTOPES; ACTINIDE NUCLEI; ALPHA DECAY RADIOISOTOPES; AMERICIUM ISOTOPES; BETA DECAY RADIOISOTOPES; BETA-MINUS DECAY RADIOISOTOPES; DAYS LIVING RADIOISOTOPES; ECOLOGICAL CONCENTRATION; ECOSYSTEMS; ENVIRONMENTAL TRANSPORT; EVEN-EVEN NUCLEI; EVEN-ODD NUCLEI; EXPLOSIONS; HEAVY NUCLEI; HYDROGEN COMPOUNDS; ISLANDS; ISOTOPES; LEAD ISOTOPES; MARSHALL ISLANDS; MASS TRANSFER; MONITORING; NUCLEI; ODD-EVEN NUCLEI; OXYGEN COMPOUNDS; PLUTONIUM ISOTOPES; POLONIUM ISOTOPES; RADIOACTIVITY; RADIOISOTOPES; SURFACE WATERS; WATER; YEARS LIVING RADIOISOTOPES
Subject Categories: 520300* -- Environment, Aquatic -- Radioactive Materials Monitoring & Transport -- (1989)
520302 -- Environment, Aquatic -- Radioactive Materials Monitoring & Transport -- Aquatic Ecosystems & Food Chains -- (-1987)
INIS Subject Categories: B32* -- Water
C22 -- Radionuclide Ecology

10/5/990 (Item 690 from file: 103)
00149988 ERA-02-001547; EDB-76-088137
Title: Nitrogen fixation on a coral reef
Author(s): Mague, T.H.; Holm-Hansen, O.
Affiliation: Univ. of California, San Diego
Source: Phycologia (United Kingdom) v 14:2. Coden: PYCOA
Publication Date: Jun 1975 p 87-92
Document Type: Journal Article
Language: English
Journal Announcement: EDB7610
Subfile: ERA (Energy Research Abstracts); TIC (Technical Information Center).
Country of Origin: United States
Abstract: Benthic, heterocystous blue-green algae (genera Calothrix, Hormothamnion and Nostoc) from Eniwetok Atoll were found to reduce acetylene at rapid rates. Slight acetylene reduction was associated with samples of Rhizoclonium (Chlorophyceae) and Oscillatoria (a cyanophyte lacking heterocysts), but this may have been due to contamination by epiphytes. There was virtually no acetylene reduction by phytoplankton, and nutrient enrichment experiments failed to selectively increase the numbers or activity of N/sub 2/-fixing algae in surface water samples. The Nostoc required light for acetylene reduction. Nitrogen fixation by this species could have supplied up to 11 ..mu..g N/cm/sup 2//day to the ecosystem. (auth);
Major Descriptors: *ALGAE -- NITROGEN FIXATION; *NITROGEN FIXATION

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Descriptors: ACETYLENE; BIOSYNTHESIS; CORALS; ENIWETOK; METABOLISM; NITROGEN; NITROGEN COMPOUNDS; NUTRIENTS; PLANKTON; PRODUCTIVITY
Broader Terms: ALKYNES; ANIMALS; AQUATIC ORGANISMS; BIOMASS; CNIDARIA; CRYOGENIC FLUIDS; ELEMENTS; ENERGY SOURCES; FLUIDS; HYDROCARBONS; INVERTEBRATES; ISLANDS; MARSHALL ISLANDS; NONMETALS; ORGANIC COMPOUNDS; PLANTS; RENEWABLE ENERGY SOURCES; SYNTHESIS
Subject Categories: 520200* -- Environment, Aquatic -- Chemicals Monitoring & Transport -- (-1989)
550500 -- Metabolism
550700 -- Microbiology

10/5/991 (Item 691 from file: 103)
00138685 ERA-01-026481; EDB-76-076543
Author(s): Gold, K.
Title: Accumulation and transport of minerals by marine protozoa. Progress report, September 1, 1975--August 31, 1976
Corporate Source: New York Aquarium, Brooklyn (USA). Osborn Labs. of Marine Sciences
Publication Date: May 1976 p 9
Report Number(s): COO-3390-27
Contract Number (DOE): E(11-1)-3390
Document Type: Report
Language: English
Journal Announcement: EDB7610
Availability: Dep. NTIS $3.50.
Subfile: ERA (Energy Research Abstracts); TIC (Technical Information Center).
Country of Origin: United States
Country of Publication: United States
Abstract: The agglutinated Tintinnida have the unique ability among ciliates to incorporate particles into their loricae that are in the same size range as silts. The ecological significance of this form of mineral accumulation lies in biological concentration and cycling of radionuclides, metals, or other toxic substances from the sediments or water to the biota. Loricae have been characterized on the basis of the particulate matter accumulated: predominantly non-biogenic origin; predominantly biogenic origin, especially coccoliths; a combination of non-biogenic and biogenic materials, the latter including a variety of materials, e.g., fragments of protozoan shells, coccoliths, and diatom frustules; hyaline or clear mineral-free structures, generally without adhering particles. Electron probe analysis was used to identify the chemical constituents of the principal non-biogenic grains on specimens from the eastern coast of the U. S. The predominant mineral constituent was silicon, probably in the form of quartz. The particles utilized by a benthic foraminiferan, an amoeba from the same region, were also the same type and in the same size range. In contrast to the accumulation of Si-containing particles, the principal mineral found in the irregularly-shaped grains on specimens from Eniwetok Atoll was calcium probably as calcium carbonate.;
Major Descriptors: *CALCIUM -- BIOLOGICAL ACCUMULATION; *CALCIUM -- DISTRIBUTION; *MINERALS -- BIOLOGICAL ACCUMULATION; *MINERALS -- DISTRIBUTION; *PROTOZOA -- SHELLS; *SHELLS -- CHEMICAL COMPOSITION; *SILICON -- BIOLOGICAL ACCUMULATION; *SILICON -- DISTRIBUTION
Descriptors: BENTHOS; ELECTRON PROBES; SILT
Broader Terms: ALKALINE EARTH METALS; ANIMALS; AQUATIC ORGANISMS; ELEMENTS; INVERTEBRATES; METALS; MICROORGANISMS; PROBES; SEMIMETALS
Subject Categories: 520100* -- Environment, Aquatic -- Basic Studies -- (-1989)

10/5/992 (Item 692 from file: 103)
00129900 INS-04-017188; ERA-01-024725; EDB-76-067479
Author(s): Gudiksen, P.H.; Crites, T.R.; Robison, W.L.
Title: External dose estimates for future Bikini Atoll inhabitants (Gamma Radiation)
Corporate Source: California Univ., Livermore (USA). Lawrence Livermore Lab.

Publication Date: 3 Mar 1976 p 37
Report Number(s): UCRL-51879(Rev.1)
Contract Number (DOE): W-7405-ENG-48
Document Type: Report
Language: English
Journal Announcement: EDB7608
Availability: Dep. NTIS $4.00.
Subfile: ERA (Energy Research Abstracts); INS (US Atomindex input); TIC (Technical Information Center).
Country of Origin: United States
Country of Publication: United States
Abstract: To evaluate the potential radiation doses that may be received by the returning Bikinians, we surveyed the residual radioactivity on Bikini and Eneu Islands in June of 1975. An integral part of the survey included measurements of gamma-ray exposure rates which are used to estimate external gamma-ray doses. The survey showed that on Bikini Island the rates are highly variable: values near the shores are generally of the order of 10 to 20 ..mu..R/h, while those within the interior average about 40 ..mu..R/h with a range of roughly 30 to 100 ..mu..R/h. Eneu Island, however, is characterized by more or less uniformly distributed gamma radiation levels of less than 10 ..mu..R/h over the entire island. These data, in conjunction with population statistics and expected life styles, allowed us to estimate the potential external gamma-ray doses associated with proposed housing locations along the lagoon road and within the interior portions of Bikini Island as well as along the lagoon side of Eneu Island. As expected, living on Eneu Island results in the lowest doses: 0.12 rem during the first year and 2.9 rem during 30 years. The highest values, 0.28 rem during the first year and 5.9 rem over 30 years, may potentially be received by inhabitants living within the interior of Bikini Island. Other options under consideration produce intermediate values.;
Major Descriptors: *BIKINI -- HUMAN POPULATIONS; *HUMAN POPULATIONS -- RADIATION DOSES
Descriptors: BIOLOGICAL RADIATION EFFECTS; DATA; DOSIMETRY; GAMMA RADIATION ; NUCLEAR EXPLOSIONS
Broader Terms: BIOLOGICAL EFFECTS; DOSES; ELECTROMAGNETIC RADIATION; EXPLOSIONS; INFORMATION; IONIZING RADIATIONS; ISLANDS; MARSHALL ISLANDS ; POPULATIONS; RADIATION EFFECTS; RADIATIONS
Subject Categories: 560151* -- Radiation Effects on Animals -- Man
510300 -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- (-1989)
520300 -- Environment, Aquatic -- Radioactive Materials Monitoring & Transport -- (1989)
INIS Subject Categories: C15* -- Effects of External Radiation on Man
B31 -- Land
B32 -- Water

10/5/993 (Item 693 from file: 103)
00123993 ERA-01-021130; EDB-76-061437
Title: High genetic variability in a population of Tridacna maxima from the Great Barrier Reef
Author(s): Campbell, C.A.; Valentine, J.W.; Ayala, F.J.
Affiliation: Univ. of California, Davis
Source: Mar. Biol. (Germany, Federal Republic of) v 33:4. Coden: MBIOA
Publication Date: 19 Dec 1975 p 341-345
Document Type: Journal Article
Language: English
Journal Announcement: EDB7608
Subfile: ERA (Energy Research Abstracts); TIC (Technical Information Center).
Country of Origin: United States
Abstract: A population of the bivalve mollusk, Tridacna maxima (Roeding), from Heron Island, (Great Barrier Reef), Australia, was studied by gel electrophoresis, and proved to be highly variable genetically, with an average heterozygosity of about 22 percent. This compares closely with

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a population of T. maxima from Enewetak (Eniwetok) Atoll, with an average heterozygosity of about 20 percent, very high for marine organisms. Enewetak Atoll was the site of a series of nuclear tests. The Heron Island study verifies that the high variability is natural, and supports the hypothesis that species from trophically stable environments tend to be highly variable genetically.;
Major Descriptors: *MOLLUSCS -- GENETIC VARIABILITY
Descriptors: AQUATIC ECOSYSTEMS; AUSTRALIA; ENIWETOK
Broader Terms: ANIMALS; AQUATIC ORGANISMS; AUSTRALASIA; BIOLOGICAL VARIABILITY; ECOSYSTEMS; INVERTEBRATES; ISLANDS; MARSHALL ISLANDS
Subject Categories: 550400* -- Genetics

10/5/994 (Item 694 from file: 103)
00123926 INS-76-014987; ERA-01-020999; EDB-76-061370
Author(s): Noshkin, V.E.; Wong, K.M.; Eagle, R.J.; Brown, G.
Title: Preliminary evaluation of the radiological quality of the water on Bikini and Eneu Islands
Corporate Source: California Univ., Livermore (USA). Lawrence Livermore Lab.
Publication Date: 3 Dec 1975 p 21
Report Number(s): UCRL-51971
Contract Number (DOE): W-7405-ENG-48
Document Type: Report
Language: English
Journal Announcement: EDB7607
Availability: Dep. NTIS $4.00.
Subfile: ERA (Energy Research Abstracts); INS (US Atomindex input); TIC (Technical Information Center).
Country of Origin: United States
Country of Publication: United States
Abstract: In June of 1975 a survey was conducted to determine the residual radioactivity in the terrestrial environment on the two main islands (Eneu and Bikini) of Bikini Atoll. The objective was to evaluate the potential radiation doses that could be received by the Bikinians scheduled to return to their atoll. This report describes the radiological quality of the groundwater during June 1975 (from data obtained from water samples collected at old and new well sites on both islets) and the cistern water on Bikini island. Based on the analyses of these samples, the cistern water from Bikini Island is both chemically and radiologically acceptable as drinking water in accordance with standard limits established by the U. S. Public Health Service. On both islands the quality of the ground water varies from one site to another. At some wells both chemical and radiological quality are acceptable; at others one or both is unacceptable according to U. S. Public Health Standards. (auth);
Major Descriptors: *BIKINI -- RADIATION MONITORING; *DRINKING WATER -- RADIOACTIVITY
Descriptors: CHEMICAL COMPOSITION; ENVIRONMENT; GROUND WATER; HEALTH HAZARDS; HUMAN POPULATIONS; RAIN WATER; SAMPLING
Broader Terms: HAZARDS; HYDROGEN COMPOUNDS; ISLANDS; MARSHALL ISLANDS; MONITORING; OXYGEN COMPOUNDS; POPULATIONS; WATER
Subject Categories: 510300* -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- (-1989)
500300 -- Environment, Atmospheric -- Radioactive Materials Monitoring & Transport -- (-1989)
INIS Subject Categories: B30* -- Earth Sciences
B33 -- Atmosphere

10/5/995 (Item 695 from file: 103)
00118391 EDB-76-055766
Title: Studies of radiation hazards
Author(s): Kumatori, T. (National Inst. of Radiological Sciences, Chiba (Japan))
Source: Karada No Kagaku (Japan) v 9. Coden: KARKA
Publication Date: Jan 1975 p 61-66
Document Type: Journal Article

5004088

Language: Japanese
Journal Announcement: EDB7605
Subfile: AIX (non-US Atomindex input).
Country of Origin: Japan
Abstract: The author reviews studies about radiation hazards in Japan, particularly the exposure to radiation in Nagasaki, Hiroshima, and Bikini. The report by Dr. Masao Tsuzuki on the effect of radiation is summarized in the item concerning radiation hazards attributed to atomic bombs. It describes research studies of delayed radiation induced hazards, such as intrauterine exposure, cataract and malignancy from the reports of investigations conducted by ABCC (Atomic Bomb Casualty Commission) and from other reports. In addition, exposure dose and residual radioactivity are discussed, as well as the outline and process of hazards relative to the exposure at Bikini.;
Major Descriptors: *A-BOMB SURVIVORS -- DELAYED RADIATION EFFECTS
Descriptors: BIKINI; CARCINOMAS; EARLY RADIATION EFFECTS; HIROSHIMA; LEUKEMIA; NAGASAKI; PATHOLOGICAL CHANGES; PATIENTS; RADIATION DOSES; RADIATION INJURIES
Broader Terms: ASIA; BIOLOGICAL EFFECTS; BIOLOGICAL RADIATION EFFECTS; DISEASES; DOSES; HEMIC DISEASES; INJURIES; ISLANDS; JAPAN; MARSHALL ISLANDS; NEOPLASMS; RADIATION EFFECTS
Subject Categories: 560151* -- Radiation Effects on Animals -- Man
INIS Subject Categories: C51* -- Actual Radiation Accidents

10/5/996 (Item 696 from file: 103)
00112925 INS-76-015141; EDB-76-050142
Title: Ionizing radiation and wild birds: a review
Author(s): Mellinger, P.J. (NUS Corp., Rockville, MD); Schultz, V.
Source: CRC Crit. Rev. Environ. Control (United States) v 5:3. Coden: CCECA
Publication Date: May 1975 p 397-421
Document Type: Journal Article
Language: English
Journal Announcement: EDB7607
Subfile: INS (US Atomindex input); TIC (Technical Information Center).
Country of Origin: United States
Abstract: Since the first atomic explosion, 16 July 1945 at the Trinity Site in south-central New Mexico, the impact of ionizing radiation on bird populations has been of concern to a few individuals. The proliferation of nuclear power plants has increased public concern as to possible deleterious effects of nuclear power plant operation on resident and migratory bird populations. Literature involving wild birds and ionizing radiation is not readily available, and only a few studies have been anywhere near comprehensive, with most effort directed towards monitoring radionuclide concentration in birds. The objective of the paper is to document the literature on wild birds and ionizing radiation including a brief description of pertinent papers.;
Major Descriptors: *BIRDS -- BIOLOGICAL RADIATION EFFECTS; *FALLOUT -- ENVIRONMENTAL EFFECTS
Descriptors: BEHAVIOR; ENIWETOK; IONIZING RADIATIONS; NEVADA TEST SITE; NUCLEAR WEAPONS; PHYSIOLOGY; PLOWSHARE PROJECT; RADIOACTIVITY; RADIOISOTOPES; WASTE DISPOSAL
Broader Terms: ANIMALS; BIOLOGICAL EFFECTS; ISLANDS; ISOTOPES; MANAGEMENT; MARSHALL ISLANDS; RADIATION EFFECTS; RADIATIONS; VERTEBRATES; WASTE MANAGEMENT; WEAPONS
Subject Categories: 560152* -- Radiation Effects on Animals -- Animals
INIS Subject Categories: C14* -- Effects of External Radiation on Animals

10/5/997 (Item 697 from file: 103)
00112582 ERA-01-017361; INS-76-014991; EDB-76-049792
Title: Transuranics and other radionuclides in Bikini Lagoon: concentration data retrieved from aged coral sections
Author(s): Noshkin, V.E.; Wong, K.M.; Eagle, R.J.; Gatrousis, C.
Affiliation: Univ. of California, Livermore
Source: Limnol. Oceanogr. (United States) v 20:5. Coden: LIOCA
Publication Date: Sep 1975 p 729-742

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Document Type: Journal Article
Language: English
Journal Announcement: EDB7607
Subfile: INS (US Atomindex input); ERA (Energy Research Abstracts); TIC (Technical Information Center).
Country of Origin: United States
Abstract: X radiography and autoradiography of thin vertical sections were used to estimate the growth rate of a specimen of Favites virens from Bikini Lagoon. Discrete bands of radioactivity were identifiable with specific nuclear test series. The coral growth rate of 8.0 mm year/sup -1/ determined by autoradiography is in good agreement with the rate of 8.1 +- 2.2 mm year/sup -1/ derived from the ''seasonal'' alternating light and dark bands on x radiographs. With these bands as growth rate indicators, the coral was sectioned into yearly increments and analyzed by low-level, nondestructive gamma spectrometry, radiochemical techniques, and mass spectrometry to reconstruct the variations in the concentration of transuranics and other radionuclides in the marine environment at Bikini since 1954. From the concentration data retained in this indicator species, the exchange rate of radionuclides between the lagoon and the open ocean is computed to be longer than exchange rates based on physical circulation data. There is no constant ratio of plutonium isotopes in the coral growth sections, suggesting that the redistributions of the several plutonium isotopes in the environment may be governed by different biogeochemical processes. Increased levels of /sup 210/Po (/sup 210/Pb) were found in test-year growth sections, contradicting previous arguments that no /sup 210/Pb has resulted from weapons testing. (auth);
Major Descriptors: *CORALS -- ANIMAL GROWTH
Descriptors: AUTORADIOGRAPHY; BIKINI; BIOLOGICAL INDICATORS; LEAD 210; NUCLEAR EXPLOSIONS; PLUTONIUM ISOTOPES; POLONIUM 210; QUANTITY RATIO; RADIOISOTOPES; SEAS; TRANSURANIUM ELEMENTS; X-RAY RADIOGRAPHY
Broader Terms: ACTINIDE ISOTOPES; ALPHA DECAY RADIOISOTOPES; ANIMALS; BETA DECAY RADIOISOTOPES; BETA-MINUS DECAY RADIOISOTOPES; CNIDARIA; DAYS LIVING RADIOISOTOPES; ELEMENTS; EVEN-EVEN NUCLEI; EXPLOSIONS; GROWTH; HEAVY NUCLEI; INDUSTRIAL RADIOGRAPHY; INVERTEBRATES; ISLANDS; ISOTOPES; LEAD ISOTOPES; MARSHALL ISLANDS; MATERIALS TESTING; NONDESTRUCTIVE TESTING; NUCLEI; POLONIUM ISOTOPES; RADIOISOTOPES; SURFACE WATERS; TESTING; YEARS LIVING RADIOISOTOPES
Subject Categories: 520100* -- Environment, Aquatic -- Basic Studies -- (-1989)
560172 -- Radiation Effects -- Nuclide Kinetics & Toxicology -- Animals -- (-1987)
INIS Subject Categories: B30* -- Earth Sciences
C21 -- Tissue Distribution, Metabolism, Toxicology & Removal of Radionuclides

10/5/998 (Item 698 from file: 103)
00106419 EDB-76-043474
Title: Distribution of the Hawaiian ghost crab, Ocypode laevis Dana
Author(s): Fellows, D.P.
Affiliation: Univ. of Hawaii, Honolulu
Source: Pac. Sci. (United States) v 29:3. Coden: PASCA
Publication Date: 1975 p 257-258
Document Type: Journal Article
Language: English
Journal Announcement: EDB7607
Subfile: TIC (Technical Information Center).
Country of Origin: United States
Abstract: The presence of a small breeding population of Ocypode laevis at Enewetak Atoll, Marshall Islands, is reported, and morphological and behavioral comparisons are made with the Hawaiian O. laevis. Previous distribution records for the species are discussed and corrected.;
Major Descriptors: *CRUSTACEANS -- GENETIC VARIABILITY; *ENIWETOK -- ECOLOGY
Descriptors: MARSHALL ISLANDS; POPULATION DYNAMICS; RANGE; REPRODUCTION
Broader Terms: ANIMALS; AQUATIC ORGANISMS; ARTHROPODS; BIOLOGICAL

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VARIABILITY; INVERTEBRATES; ISLANDS; MARSHALL ISLANDS
Subject Categories: 520100* -- Environment, Aquatic -- Basic Studies -- (-1989)

10/5/999 (Item 699 from file: 103)
00069719 NSA-32-27940
Title: Radioactivity levels in Eniwetok soil
Author(s): Gudiksen, P.H.; Lynch, O.D.T. Jr.
Affiliation: Univ. of California, Livermore
Source: Health Phys. (United Kingdom) v 29:1. Coden: HLTPA
Publication Date: Jul 1975 p 17-25
Document Type: Journal Article
Language: English
Journal Announcement: ERA7701
Subfile: ERA (Energy Research Abstracts); NSA (Nuclear Science Abstracts); GB (United Kingdom (sent to DOE from)).
Country of Origin: United States
Abstract: None;
Major Descriptors: *CESIUM 137 -- RADIATION MONITORING; *COBALT 60 -- RADIATION MONITORING; *ENIWETOK -- RADIOACTIVITY; *PLUTONIUM 239 -- RADIATION MONITORING; *SOILS -- RADIOACTIVITY; *STRONTIUM 90 -- RADIATION MONITORING
Descriptors: CONTAMINATION; DEPTH; SPATIAL DISTRIBUTION
Broader Terms: ACTINIDE ISOTOPES; ACTINIDE NUCLEI; ALKALI METAL ISOTOPES; ALKALINE EARTH ISOTOPES; ALPHA DECAY RADIOISOTOPES; BETA DECAY RADIOISOTOPES; BETA-MINUS DECAY RADIOISOTOPES; CESIUM ISOTOPES; COBALT ISOTOPES; DIMENSIONS; DISTRIBUTION; EVEN-EVEN NUCLEI; EVEN-ODD NUCLEI; HEAVY NUCLEI; INTERMEDIATE MASS NUCLEI; INTERNAL CONVERSION RADIOISOTOPES; ISLANDS; ISOMERIC TRANSITION ISOTOPES; ISOTOPES; MARSHALL ISLANDS; MINUTES LIVING RADIOISOTOPES; MONITORING; NUCLEI; ODD-EVEN NUCLEI; ODD-ODD NUCLEI; PLUTONIUM ISOTOPES; RADIOISOTOPES; STRONTIUM ISOTOPES; YEARS LIVING RADIOISOTOPES
Subject Categories: 510301* -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- Soil -- (-1987)

10/5/1000 (Item 700 from file: 103)
00069716 NSA-33-00626
Author(s): Noshkin, V.E.; Wong, K.M.; Marsh, K.; Eagle, R.; Holladay, G.: Buddemeier, R.W.
Title: Plutonium radionuclides in the ground waters at Enewetak Atoll (/sup 239/Pu, /sup 240/Pu, /sup 137/Cs)
Corporate Source: California Univ., Livermore (USA). Lawrence Livermore Lab.
Conference Title: IAEA international symposium on transuranium nuclides in the environment
Conference Location: San Francisco, CA, USA Conference Date: 17 Nov 1975
Publication Date: 20 Oct 1975 p 35
Report Number(s): UCRL-76725; CONF-751105-5; SM-199/33
Document Type: Report; Conference literature
Language: English
Journal Announcement: ERA7701
Availability: Dep. NTIS $5.00.
Subfile: ERA (Energy Research Abstracts); NSA (Nuclear Science Abstracts); TIC (Technical Information Center).
Country of Origin: United States
Country of Publication: United States
Abstract: None;
Major Descriptors: *CESIUM 137 -- RADIATION MONITORING; *ENIWETOK -- GEOCHEMISTRY; *ENIWETOK -- WATER QUALITY; *GROUND WATER -- RADIATION MONITORING; *GROUND WATER -- RADIONUCLIDE MIGRATION; *PLUTONIUM 239 -- RADIATION MONITORING; *PLUTONIUM 240 -- RADIATION MONITORING; *SOILS -- RADIATION MONITORING; *SOILS -- RADIONUCLIDE MIGRATION
Broader Terms: ACTINIDE ISOTOPES; ACTINIDE NUCLEI; ALKALI METAL ISOTOPES; ALPHA DECAY RADIOISOTOPES; BETA DECAY RADIOISOTOPES; BETA-MINUS DECAY RADIOISOTOPES; CESIUM ISOTOPES; CHEMISTRY; ENVIRONMENTAL TRANSPORT; EVEN-EVEN NUCLEI; EVEN-ODD NUCLEI; HEAVY NUCLEI; HYDROGEN COMPOUNDS;

500400 1

ISLANDS; ISOTOPES; MARSHALL ISLANDS; MASS TRANSFER; MONITORING; NUCLEI; ODD-EVEN NUCLEI; OXYGEN COMPOUNDS; PLUTONIUM ISOTOPES; RADIOISOTOPES; WATER; YEARS LIVING RADIOISOTOPES
Subject Categories: 510300* -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- (-1989)

10/5/1001 (Item 701 from file: 103)
00044397
Title: Enewetak (Eniwetok) Atoll: aspects of the nitrogen cycle on a coral reef
Author(s): Webb, K.L. (Virginia Inst. of Marine Science, Gloucester Point); DuPaul, W.D.; Wiebe, W.; Sottile, W.; Johannes, R.E.
Source: Limnol. Oceanogr. (United States) v 20:2. Coden: LIOCA
Publication Date: Mar 1975 p 198-210
Document Type: Journal Article
Language: English
Journal Announcement: ERA7612
Subfile: ERA (Energy Research Abstracts); TIC (Technical Information Center).
Country of Origin: United States
Abstract: None;
Major Descriptors: *ENIWETOK -- ECOLOGY; *NITROGEN CYCLE
Descriptors: ALGAE; COMMUNITIES; CORALS; DIFFUSION; NITRATES; NITROGEN; NITROGEN FIXATION; SEAWATER
Broader Terms: ANIMALS; BIOMASS; CNIDARIA; CRYOGENIC FLUIDS; ELEMENTS; ENERGY SOURCES; FLUIDS; HYDROGEN COMPOUNDS; INVERTEBRATES; ISLANDS; MARSHALL ISLANDS; NITROGEN COMPOUNDS; NONMETALS; OXYGEN COMPOUNDS; PLANTS; RENEWABLE ENERGY SOURCES; WATER
Subject Categories: 520100* -- Environment, Aquatic -- Basic Studies -- (-1989)

10/5/1002 (Item 702 from file: 103)
00028546
Title: Geothermal measurements on Eniwetok and Bikini Atolls
Author(s): Swartz, J.H.
Title: US Geological Survey - Professional Paper 260-U
Publisher: US Geol. Surv.,Washington, DC
Publication Date: 1958 p 711-41
Document Type: Analytic of a Book
Language: English
Journal Announcement: EDB7612
Subfile: TIC (Technical Information Center).
Country of Publication: United States
Abstract: None;
Major Descriptors: *BIKINI -- GEOPHYSICAL SURVEYS; *BOREHOLES -- TEMPERATURE DISTRIBUTION; *ENIWETOK -- GEOPHYSICAL SURVEYS
Descriptors: DEPTH; ISLANDS
Broader Terms: CAVITIES; DIMENSIONS; ISLANDS; MARSHALL ISLANDS
Subject Categories: 150303* -- Geothermal Exploration & Exploration Technology -- Exploratory Drilling & Well Logging
150202 -- Geology & Hydrology of Geothermal Systems -- Non-USA -- (-1989)
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$491.40 702 Type(s) in Format 5
$491.40 702 Types
$660.60 Estimated cost File103
OneSearch, 2 files, 2.433 Hrs FileOS
$27.74 TYMNET
$948.11 Estimated cost this search
$948.62 Estimated total session cost 2.439 Hrs.

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Printer device:	POLLUX
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Finished:	4-APR-1994 11:09
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