

*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
²⁴¹Am and ²³⁹⁺²⁴⁰Pu 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 NH₄ citrate at pH 3.5 from both samples showed strong radioactivity, probably due to the presence of ⁶⁵Zn. Distinct radioactivity was also detected in the NH₄ citrate eluate at pH 4.1 from the liver, but not from the stomach; this eluted element emitted no .gamma.-rays and differed from ⁶⁵Zn. 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. ⁹⁵Zr and ⁹⁵Nb 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 ⁵⁹Fe, suggesting the presence of radioactive element with longer half-life. Comparison of the absorption coefficient of Al, Ag, and Au for x rays from ⁵⁵Fe, ⁶³Ni and the isolated element indicated that the element was ⁵⁵Fe.;

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 summarized from a medical survey carried out in March 1958 on inhabitants of the Rongelap Islands exposed to accidental fall-out radiation during Operation Castle in 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

5003984

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

5003985

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: Radion 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

5003986

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 products 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 ^{113m}Cd previously deposited to the atolls
during the testing of nuclear devices at the Pacific Proving Grounds.
^{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_{1/2} = 14.6

5003988

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

5003992

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): Atribat, 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

10/5/849 (Item 549 from file: 103)

00703723 EDB-81-011973

Title: Radiochemical analysis of Bikini ashes fallen on board the No. 5

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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 ⁹⁰Sr deposited in fallout following nuclear explosions are reviewed. Strontium/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 ⁹⁰Sr in the adult skeleton is calculated to be 1.μ.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 10⁻¹⁰ 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

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

5003067

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: ^{45}Ca , ^{89}Sr , ^{91}Y , ^{95}Zr , ^{103}Ru , ^{144}Pr , and ^{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 ^{89}Sr , ^{95}Zr , and ^{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 ^{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 ^{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 ^{90}Sr and ^{137}Cs , produced from uranium, plutonium and thorium fissions. Also, only a small fraction of the 113 chain yield decays to ^{113m}Cd . Salter estimated that the $^{113m}\text{Cd}/^{90}\text{Sr}$ 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 ^{109}Cd . This, to our knowledge, was the first report of the detection of fission-produced ^{113m}Cd in the environment. Salter also calculated that 0.062 MCi of ^{113m}Cd and 0.25 MCi of ^{109}Cd were produced by activation during the atmospheric detonation of the

5003998

1.4-megaton Starfish device on 9 July 1962 over Johnston Atoll. As both ^{109}Cd and $^{113\text{m}}\text{Cd}$ are produced during neutron activation of stable cadmium, and ^{109}Cd is not a fission product, the last part of Salter's statement is significant. The absence of ^{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 $^{113\text{m}}\text{Cd}$ only as a fission product. It is therefore important to recognize that $^{113\text{m}}\text{Cd}$ could be present in other environments contaminated with fission product wastes discharged to the aquatic environment from other nuclear facilities. $^{113\text{m}}\text{Cd}$ has a half life of 14.6 ± 0.1 y and decays predominantly by beta-particle emission. We present here a preliminary report of $^{113\text{m}}\text{Cd}$ 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.;

5003999

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 ^{90}Sr - ^{90}Y and to total-body from ingested ^{137}Cs - ^{137}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

0004005

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 ^{239}Pu plus ^{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

5004001

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 $^{239+240}\text{Pu}$ 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 $^{239+240}\text{Pu}$ 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 $^{239+240}\text{Pu}$ 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 $^{239+240}\text{Pu}$ among all fish, which include bottom feeding and grazing herbivores, bottom feeding carnivores, and pelagic carnivores from different atoll locations. The average concentration of $^{239+240}\text{Pu}$ 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

5004003

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 appear 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

5004005

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

5004005

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

9004005

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, Sandstone 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.

5004008

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 topics 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}Ce , ^{144}Ce obtained by separation from
ashes on the ship, i.e., ^{91}Y , $^{141,144}\text{Ce}$, Pr^{144} , ^{45}Ca , ^{89}Sr , ^{90}Sr , ^{103}Ru , ^{106}Ru , ^{106}Rh , ^{95}Zr , ^{95}Nb , ^{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

5004009

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: ¹⁴⁴Ce, and ¹⁴⁴Pr in the bone (I) (20 x 10⁻¹² counts/g. fresh wt.). Liver (II), and Kidneys (III); ⁹⁵Zr and ⁹⁵Nb in II and III; ¹⁰⁶Rh, ^{129m}Te, and ¹²⁹Te in I, III, and muscles; and ⁸⁹Sr, ⁹⁰Sr, and ⁹⁰Y 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 $t/\text{sup } -1/ \text{ /sup } 2/$; pr 240 r. in 24
hours or 440 r. in 13 days when calculated according to $t/\text{sup } -1/ \text{ /sup } 4/$,
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 accidentally 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)

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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% ammonium 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% ammonium 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 ammonium 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

5004013

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 hippurus* 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 ⁶⁵Zn among the radioactive substances. ⁹⁰Sr 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

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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 washed, treated with Dowex 50, and eluted with
various solvents. A fraction obtained with 0.5% oxalic acid and
ammonium citrate (pH 4.18) contained ⁶⁵Zn.;
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: JUMCA
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

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.

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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 ocular 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

10/5/892 (Item 592 from file: 103)

00651729 EDB-80-091254

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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 ²³⁵U fission is divided into 3 major groups by ion-exchange methods and then subdivided by paper chromatography. In the first group, TeO₄, SO₄, PO₄³⁻, and I⁻, as well as two ¹⁰⁶Ru spots, are resolved in filter paper by iso-AmOH. ¹³⁷Cs and ¹⁴⁴Ce from the second and ⁹⁰Y and ⁹⁰Sr 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 oceanography 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)

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

5004022

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 --

500402b

(-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

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

5004028

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, & Magnetospheric 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;

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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 $\mu\text{g m}^{-3}$ and sea spray of 34 $\mu\text{g m}^{-3}$ were the background throughout the Bikini Island except within 50 m of the windward beach. Background concentrations of ^{239}Pu were 60 aCi m^{-3} in the coconut grove and 264 aCi m^{-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 $\text{pCi m}^{-2} \text{ year}^{-1}$ 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 μm , which decreased to 2.0 μm 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 $\mu\text{g m}^{-3}$ 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^{-1} to 12 aCi h^{-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

5004031

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

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

5004033

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, & Magnetospheric 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 ¹³¹I, ⁹⁰Sr, ⁸⁹Sr, ¹³⁷Cs and ¹⁴C 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

5004034

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, & Magnetospheric 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 encountered 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 atmospheric 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 ¹³⁷Cs 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 ¹³⁷Cs

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body burden for the population was 2.3 μ .Ci in April 1978. Several individuals, however, exceeded the maximum permissible body burden of 3 μ .Ci, and some approached 6 μ .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 ¹³⁷Cs 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 Eniwetok. (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

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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

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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 $^{239+240}\text{Pu}$ and ^{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 $^{239+240}\text{Pu}$ and ^{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 $^{241}\text{Pu}/^{239+240}\text{Pu}$ at time zero was calculated to be 26 ± 3 , and this ratio was almost the same as in the Mike thermonuclear debris. The $^{239+240}\text{Pu}$ and ^{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 $\mu\text{R/hr}$ respectively. The exposure rate on Eneu Island is uniform, whereas those on Bikini and Nam range from 7.0 to 80. $\mu\text{R/hr}$. 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 $\mu\text{R/hr}$ 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 Bikiñi 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

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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

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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

5004045

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

5004046

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

10/5/939 (Item 639 from file: 103)

00496131 INS-79-007170; ERA-04-031413; EDB-79-070231

5004047

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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5004005

Results of the radiometric analyses of the samples are presented. Results of these analyses indicate that ⁹⁰Sr and ¹³⁷Cs are predominant in the terrestrial environment and, in addition, ²⁴¹Am and ²³⁹/²⁴⁰Pu are also important in the soil from Rongelap and Bikini Atolls. Naturally occurring ⁴⁰K is the predominant radionuclide in marine organisms, while ⁶⁰Co 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 Atoll 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)
00470511 INS-79-007169; ERA-04-027871; EDB-79-044610
Author(s): Nelson, V.A.

5004049

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 ⁹⁰Sr of ²³⁹/₂₄₀Pu. Results of the analyses indicate that naturally occurring ⁴⁰K 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 ⁹⁰Sr, ¹³⁷Cs, ²³⁸U, and ²³⁹Pu, while soil from Truk, Palau, and Ponape also contained isotopes of radium and thorium. Soil from Guam also contained ²¹⁰Pb and ²³⁵U in addition to the above radionuclides. Considering only the fallout radionuclides, the values for ⁹⁰Sr, ¹³⁷Cs, and ²³⁹/₂₄₀Pu 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)

5004051

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)

504053

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;

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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)

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

550504005

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 ¹³⁷Cs 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 ⁶⁰Co, ¹⁵²⁻¹⁵⁵Eu, ²⁰⁷Pb, and ²⁴¹Am are complexed in the finely divided organic matter or humus where ¹³⁷Cs and ⁴⁰K predominate. Our data suggest that there is a circulating pool of rapidly cycling ¹³⁷Cs 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) 9
560173 -- Radiation Effects -- Nuclide Kinetics & Toxicology -- Plants 5
-- (-1987) 5

INIS Subject Categories: B31* -- Land

C21 -- Tissue Distribution, Metabolism, Toxicology & Removal of Radionuclides

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_3 matrices by solid-state track detection in cellulose nitrate was developed. 0.4pCi/g in an area of 4 mm² can be measured routinely; smaller concentrations can be determined but with a lower resolution. Calibration methods used were a Pu source of 0.15 μCi in conjunction with polycarbonate and CaCO_3 absorbers of different thickness, 2-30 μm , and a powdered coral sample from Enewetak Atoll which had been radiochemically analyzed for plutonium radionuclides, ^{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, & Magnetospheric 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 representatives 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)

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5004005

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*

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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 correlating 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)

0901005

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 μ .Ci in conjunction with polycarbonate and CaCO₃ 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/³ can be measured routinely; lower concentrations can be determined but with less resolution. The alpha emitter concentration in CaCO₃ 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.;

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)

5004063

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
2/0/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
B31 -- Land
B11 -- Chemical & Isotopic Analysis

5004064

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
Document Type: Report
Language: English

5004065

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 ^{90}Sr and ^{137}Cs are dominant in the terrestrial environment and, in addition, ^{241}Am and $^{239,240}\text{Pu}$ are also important in the soil from Bikini and Rongelap atolls. Cobalt-60 and ^{55}Fe are predominant in the marine environment together with naturally occurring ^{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

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 $^{239,240}\text{Pu}$ values vary from 0.5 to 360 pCi/g
and ^{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 $^{239,240}\text{Pu}$ and their
distribution at Bikini are not likely to change significantly, whereas
 ^{241}Am concentrations will increase by ^{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

5004067

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 ¹³⁷Cs are found to correlate with water freshness, but those of ^{239,240}Pu show no such relationship. The mechanisms moving ^{239,240}Pu through the groundwater reservoirs are independent of the processes controlling the cycling of ¹³⁷Cs and fresh water. A reasonable linear correlation is found between mean surface-water concentrations and soil burdens. The quantities of ^{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 Nagasaki 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

5004069

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

0104005

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); Jokiell,
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)

1104005

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 praelata* 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 on 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

5004072

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 ⁹⁰Sr, ¹³⁷Cs, ²³⁹Pu, ²⁴⁰Pu, and ²⁴¹Am 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)

5004074

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 ²⁴¹Am. 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 ^{90}Sr , ^{137}Cs , and ^{239}Pu . In general, the concentration factors for ^{137}Cs in terrestrial vegetation are greater than those for ^{90}Sr and the concentration factors for both these nuclides exceed those for ^{239}Pu by ten to one hundred-fold. Uptake of ^{90}Sr and ^{239}Pu by fruit is less than that by mature leaves; however, the opposite is true for ^{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 2.52×10^{-5} for aerated water and 2.54×10^{-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 1.10×10^4 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 7×10^3 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 ²¹⁰Po, ²⁰⁷Bi, ¹⁵⁵Eu and ²⁴¹Am on 0.3- μ m Millipore filters and a single sorption bed of 200-mesh aluminum oxide, 6-mm thick. However, a quantitative evaluation of the retention of ²³⁹Pu, ²⁴⁰Pu and ⁶⁰Co required the measurements of radionuclides sorbed on successive aluminum oxide beds: for a two-bed series the sorption efficiency was 40% for ²³⁹Pu, ²⁴⁰Pu and 50% for ⁶⁰Co. Field experiments at Bikini Atoll with 2000 to 4000 l water samples indicated quantitative retention of "soluble" ¹⁵⁵Eu, ²⁰⁷Bi and ²⁴¹Am of sizes smaller than 0.3- μ m on a single aluminum oxide bed. For ²³⁹Pu, ²⁴⁰Pu the sorption efficiency calculated from two beds was not constant and ranged from 15 to 96%; the sorption efficiency for ²¹⁰Pb 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: ¹³⁷Cs and ⁶⁰Co 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

5004079

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 ¹³⁷Cs and ⁶⁰Co 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 ¹³⁷Cs and ⁶⁰Co. 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 ¹³⁷Cs and ⁶⁰Co 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 accidentally 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 ¹³¹I, 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, ²¹⁰Pb, ²¹⁰Bi and ²¹⁰Po, 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

1804005

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; SPERMATOOZOA; 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

5004082

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

5004083

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 μCi in conjunction with polycarbonate and CaCO_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 $\mu\text{Ci/g}$ can be measured routinely; smaller concentrations can be determined but with a lower resolution. CaCO_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^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 ^{239}Pu , ^{240}Pu , and ^{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

5004084

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; SEAWEEDES; 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

5004085

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.

9804005

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 $\mu\text{R/h}$, while those within the interior average about 40 $\mu\text{R/h}$ with a range of roughly 30 to 100 $\mu\text{R/h}$. Eneu Island, however, is characterized by more or less uniformly distributed gamma radiation levels of less than 10 $\mu\text{R/h}$ 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

1804005

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 0004088
Publication Date: Jan 1975 p 61-66
Document Type: Journal Article

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

5004089

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

5004090

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;

1604005

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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