OSTI printing services system

400374

EROS::WILLIAMSL

JOB 2886

LARRY

Owner UIC: [OSTIUSERS,WILLIAMSL]
Account:

Priority: 100
Submit queue: POLLUX
Submitted: 4-APR-1994 10:48
Printer queue: POLLUX
Printer device: POLLUX
Started: 4-APR-1994 10:51

Digital Equipment Corporation **PrintServer 40 POLLUX**

VAX/VMS Version V5.5-2 DECprint Printing Services V4.1

5003506

-1315:01-010-
please log in: dialog

DIALOG: call connected

DIALOG INFORMATION SERVICES
PLEASE LOGON:
?[redacted]
ENTER PASSWORD:
?[redacted]
Welcome to DIALOG
Dialog level 33.03.10D

Last logoff: 30mar94 15:14:16
Logon file405 31mar94 15:01:38
ANNOUNCEMENT **** ANNOUNCEMENT **** ANNOUNCEMENT

** AEROSPACE DATABASE (File 108) Available Worldwide **

** Register now for the Dialog Update User Conference,
April 6-8, Washington, D.C. See Homebase announcements
for details. **

Removed 3/1: CHILD ABUSE, NEGLECT, & FAMILY VIOLENCE (File 64)
For availability on other sources, contact: The
National Clearinghouse on Child Neglect & Abuse,
P.O. Box 1182, Washington, DC 22013 (800-FYI-3366)
SMOKING & HEALTH (File 160)
CAREER PLACEMENT REGISTRY (File 162)

****The Data-Star connection is NOW AVAILABLE****

>>> Enter BEGIN HOMEBASE for Dialog Announcements <<<
>>> of new databases, price changes, etc. <<<
>>> Announcements last updated for 14mar94 <<<
SYSTEM:HOME
Menu System II: D2 version 1.6.5 term=ASCII
*** DIALOG HOMEBASE(SM) Main Menu ***

Information:
1. Announcements (new files, free connect time, price changes, etc.)
2. Database, Rates, & Command Descriptions
3. Help in Choosing Databases for Your Topic
4. Customer Services (telephone assistance, training, seminars, etc.)
5. Product Descriptions

Connections:
6. DIALOG Menus(SM)
7. DIALOG Business Connection(R), Headlines(SM), Medical Connection(SM)
8. DIALOG SourceOne(SM) Document Delivery
9. Data-Star
10. Other Online Menu Services & Files (MoneyCenter(R), OAG, TNT, etc.)

/H = Help /L = Logoff /NOMENU = Command Mode

Enter an option number to view information or to connect to an online service. Enter a BEGIN command plus a file number to search a database (e.g., B1 for ERIC).
?b109,103
>>Invalid Menu Command
*** DIALOG HOMEBASE(SM) Main Menu ***

Information:

1. Announcements (new files, free connect time, price changes, etc.)
2. Database, Rates, & Command Descriptions
3. Help in Choosing Databases for Your Topic
4. Customer Services (telephone assistance, training, seminars, etc.)
5. Product Descriptions

Connections:
6. DIALOG Menus(SM)
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8. DIALOG SourceOne(SM) Document Delivery
9. Data-Star
10. Other Online Menu Services & Files (MoneyCenter(R), OAG, TNT, etc.)

/H = Help /L = Logoff /NOMENU = Command Mode

Enter an option number to view information or to connect to an online service. Enter a BEGIN command plus a file number to search a database (e.g., B1 for ERIC).
?s marshall()islands
>>Invalid Menu Command
*** DIALOG HOMEBASE(SM) Main Menu ***

Information:
1. Announcements (new files, free connect time, price changes, etc.)
2. Database, Rates, & Command Descriptions
3. Help in Choosing Databases for Your Topic
4. Customer Services (telephone assistance, training, seminars, etc.)
5. Product Descriptions

Connections:
6. DIALOG Menus(SM)
7. DIALOG Business Connection(R), Headlines(SM), Medical Connection(SM)
8. DIALOG SourceOne(SM) Document Delivery
9. Data-Star
10. Other Online Menu Services & Files (MoneyCenter(R), OAG, TNT, etc.)

/H = Help /L = Logoff /NOMENU = Command Mode

Enter an option number to view information or to connect to an online service. Enter a BEGIN command plus a file number to search a database (e.g., B1 for ERIC).
?bsit
>>Invalid Menu Command
*** DIALOG HOMEBASE(SM) Main Menu ***

Information:
1. Announcements (new files, free connect time, price changes, etc.)
2. Database, Rates, & Command Descriptions
3. Help in Choosing Databasles for Your Topic
4. Customer Services (telephone assistance, training, seminars, etc.)
5. Product Descriptions

Connections:
6. DIALOG Menus(SM)
7. DIALOG Business Connection(R), Headlines(SM), Medical Connection(SM)
8. DIALOG SourceOne(SM) Document Delivery
9. Data-Star
10. Other Online Menu Services & Files (MoneyCenter(R), OAG, TNT, etc.)

/H = Help /L = Logoff /NOMENU = Command Mode

Enter an option number to view information or to connect to an online service. Enter a BEGIN command plus a file number to search a database (e.g., B1 for ERIC).
?ds
>>Invalid Menu Command

```
                    *** DIALOG HOMEBASE(SM) Main Menu ***

Information:
 1.  Announcements (new files, free connect time, price changes, etc.)
 2.  Database, Rates, & Command Descriptions
 3.  Help in Choosing Databases for Your Topic
 4.  Customer Services (telephone assistance, training, seminars, etc.)
 5.  Product Descriptions

Connections:
 6.  DIALOG Menus(SM)
 7.  DIALOG Business Connection(R), Headlines(SM), Medical Connection(SM)
 8.  DIALOG SourceOne(SM) Document Delivery
 9.  Data-Star
10.  Other Online Menu Services & Files (MoneyCenter(R), OAG, TNT, etc.)

     /H = Help            /L = Logoff          /NOMENU = Command Mode

Enter an option number to view information or to connect to an online
service.  Enter a BEGIN command plus a file number to search a database
(e.g., B1 for ERIC).
?ds
>>Invalid Menu Command
                    *** DIALOG HOMEBASE(SM) Main Menu ***

Information:
 1.  Announcements (new files, free connect time, price changes, etc.)
 2.  Database, Rates, & Command Descriptions
 3.  Help in Choosing Databases for Your Topic
 4.  Customer Services (telephone assistance, training, seminars, etc.)
 5.  Product Descriptions

Connections:
 6.  DIALOG Menus(SM)
 7.  DIALOG Business Connection(R), Headlines(SM), Medical Connection(SM)
 8.  DIALOG SourceOne(SM) Document Delivery
 9.  Data-Star
10.  Other Online Menu Services & Files (MoneyCenter(R), OAG, TNT, etc.)

     /H = Help            /L = Logoff          /NOMENU = Command Mode

Enter an option number to view information or to connect to an online
service.  Enter a BEGIN command plus a file number to search a database
(e.g., B1 for ERIC).
?b109,103

       31mar94 15:03:07 User217542 Session D156.1
            $0.50    0.033 Hrs FileHomeBase
     $0.50  Estimated cost FileHomeBase
     $0.38  TYMNET
     $0.88  Estimated cost this search
     $0.88  Estimated total session cost   0.033 Hrs.

SYSTEM:OS  - DIALOG OneSearch
  File 109:Nuclear Sci. Abs.  1948-1976
         (c) format only 1994 Dialog Info.Svcs.
 *File 109: For access restrictions, see HELP RESTRIC1.
  File 103:Energy SciTec  1974-1994/Mar B1
         (c) format only 1994 Dialog Info. Svcs.
*File 103:  For access restrictions, see HELP RESTRICT

      Set  Items  Description
      ---  -----  -----------
?s marshall()islands
           1168  MARSHALL        5003509
          12754  ISLANDS
```

```
      S1      592  MARSHALL()ISLANDS
?s bikini or eniwetok or rongelap or rongerik or utirik
             367  BIKINI
             343  ENIWETOK
              80  RONGELAP
              13  RONGERIK
              28  UTIRIK
      S2      696  BIKINI OR ENIWETOK OR RONGELAP OR RONGERIK OR UTIRIK
?s castle project/de
      S3       45  CASTLE PROJECT/DE
?s crossroads/project/de
      S4       29  CROSSROADS PROJECT/DE
?s greenhouse/project/de
      S5       49  GREENHOUSE PROJECT/DE
?s sandstone porject/de
      S6        0  SANDSTONE PORJECT/DE
?s sandstone project/de
      S7       15  SANDSTONE PROJECT/DE
?s hardtack
      S8      108  HARDTACK
?s hardtack project/de
      S9       34  HARDTACK PROJECT/DE
?s ivy project/de
s midget fly p      S10       26  IVY PROJECT/DE
?roject/de
s redwing project/d      S11        0  MIDGET FLY PROJECT/DE
?e
s willow operation       S12       25  REDWING PROJECT/DE
?
     S13        0  WILLOW OPERATION
?s willow operation/de
     S14        0  WILLOW OPERATION/DE
?ds

Set      Items    Description
S1         592    MARSHALL()ISLANDS
S2         696    BIKINI OR ENIWETOK OR RONGELAP OR RONGERIK OR UTIRIK
S3          45    CASTLE PROJECT/DE
S4          29    CROSSROADS PROJECT/DE
S5          49    GREENHOUSE PROJECT/DE
S6           0    SANDSTONE PORJECT/DE
S7          15    SANDSTONE PROJECT/DE
S8         108    HARDTACK
S9          34    HARDTACK PROJECT/DE
S10         26    IVY PROJECT/DE
S11          0    MIDGET FLY PROJECT/DE
S12         25    REDWING PROJECT/DE
S13          0    WILLOW OPERATION
S14          0    WILLOW OPERATION/DE
?s willowrpoject/de
     S15        0  WILLOW PROJECT/DE
?c 1 or 2 or 3 or 4 or 5 or 7 or 9 or 10 or 12
             592  1
             696  2
              45  3
              29  4
              49  5
              15  7
              34  9
              26  10
              25  12
     S16     1002  1 OR 2 OR 3 OR 4 OR 5 OR 7 OR 9 OR 10 OR 12
?rates 103
Rates for File103 -- Energy SciTec_1974-1994/Mar B1

Cost per minute:                    $1.50
```

5003510

ALERT (default) $15.00
ALERT (Biweekly) $15.00

Format	Types	Prints
1	$0.00	$0.10
2	$0.70	$0.70
3	$0.70	$0.70
4	$0.70	$0.70
5	$0.70	$0.70
6	$0.00	$0.10
7	$0.70	$0.70
8	$0.00	$0.10
9	$0.70	$0.70
KWIC95	$0.00	$0.10
KWIC96	$0.00	$0.10

?log

Set	Items	Description
S1	592	MARSHALL()ISLANDS
S2	696	BIKINI OR ENIWETOK OR RONGELAP OR RONGERIK OR UTIRIK
S3	45	CASTLE PROJECT/DE
S4	29	CROSSROADS PROJECT/DE
S5	49	GREENHOUSE PROJECT/DE
S6	0	SANDSTONE PORJECT/DE
S7	15	SANDSTONE PROJECT/DE
S8	108	HARDTACK
S9	34	HARDTACK PROJECT/DE
S10	26	IVY PROJECT/DE
S11	0	MIDGET FLY PROJECT/DE
S12	25	REDWING PROJECT/DE
S13	0	WILLOW OPERATION
S14	0	WILLOW OPERATION/DE
S15	0	WILLOW PROJECT/DE
S16	1002	1 OR 2 OR 3 OR 4 OR 5 OR 7 OR 9 OR 10 OR 12

?logout
31mar94 15:14:31 User217542 Session D156.2
$7.38 0.082 Hrs File109
$7.38 Estimated cost File109
$10.53 0.117 Hrs File103
$10.53 Estimated cost File103
OneSearch, 2 files, 0.200 Hrs FileOS
$2.28 TYMNET
$20.19 Estimated cost this search
$21.07 Estimated total session cost 0.233 Hrs.
Logoff: level 33.03.10 D 15:14:31

TYMNET: call cleared by request

please log in: dialog

DIALOG: call connected

DIALOG INFORMATION SERVICES
PLEASE LOGON:
?[redacted]
ENTER PASSWORD:
?[redacted]
Password incorrect

DIALOG INFORMATION SERVICES
PLEASE LOGON:
?[redacted]
KATHY Invalid account number

5003511

```
DIALOG INFORMATION SERVICES
PLEASE LOGON:
?[redacted]
3000123 Invalid account number

DIALOG INFORMATION SERVICES
PLEASE LOGON:
?[redacted]
ENTER PASSWORD:
?[redacted]
Welcome to DIALOG
Dialog level 33.03.10D

Last logoff:  18mar94 11:11:18
Logon file103 31mar94 15:15:33
ANNOUNCEMENT    ****    ANNOUNCEMENT    ****    ANNOUNCEMENT

  **    AEROSPACE DATABASE (File 108) Available Worldwide          **

  **    Register now for the Dialog Update User Conference,
         April 6-8, Washington, D.C.  See Homebase announcements
         for details.                                               **

Removed 3/1:  CHILD ABUSE, NEGLECT, & FAMILY VIOLENCE (File 64)
               For availability on other sources, contact: The
               National Clearinghouse on Child Neglect & Abuse,
               P.O. Box 1182, Washington, DC 22013 (800-FYI-3366)
              SMOKING & HEALTH (File 160)
              CAREER PLACEMENT REGISTRY (File 162)

****The Data-Star connection is NOW AVAILABLE****

     >>> Enter BEGIN HOMEBASE for Dialog Announcements <<<
     >>>    of new databases, price changes, etc.      <<<
     >>>    Announcements last updated for 14mar94     <<<

File 103:Energy SciTec  1974-1994/Mar B1
       (c) format only 1994 Dialog Info. Svcs.
*File 103:  For access restrictions, see HELP RESTRICT

      Set  Items  Description
      ---  -----  -----------
?b109,103
       31mar94 15:15:54 User300123 Session D704.1
            $0.45    0.005 Hrs File103
     $0.45  Estimated cost File103
     $0.06  TYMNET
     $0.51  Estimated cost this search
     $0.51  Estimated total session cost   0.005 Hrs.

SYSTEM:OS  - DIALOG OneSearch
  File 109:Nuclear Sci. Abs.  1948-1976
        (c) format only 1994 Dialog Info.Svcs.
 *File 109: For access restrictions, see HELP RESTRIC1.
  File 103:Energy SciTec  1974-1994/Mar B1
        (c) format only 1994 Dialog Info. Svcs.
*File 103:  For access restrictions, see HELP RESTRICT

      Set  Items  Description
      ---  -----  -----------
?s marshall()islands
           1168  MARSHALL
          12754  ISLANDS
      S1    592  MARSHALL()ISLANDS
?s bikini or eniwetok or rongelap or rongerik or utirik
            367  BIKINI
```

```
             343  ENIWETOK
              80  RONGELAP
              13  RONGERIK
              28  UTIRIK
      S2     696  BIKINI OR ENIWETOK OR RONGELAP OR RONGERIK OR UTIRIK
?s castle project/de
      S3      45  CASTLE PROJECT/DE
?s crossroads project/de
      S4      29  CROSSROADS PROJECT/DE
?s greenhouse project/de
      S5      49  GREENHOUSE PROJECT/DE
?s sandstone project/de
      S6      15  SANDSTONE PROJECT/DE
?s hardtack project/de
      S7      34  HARDTACK PROJECT/DE
?s ivy project/de
      S8      26  IVY PROJECT/DE
?s redwing project/de
      S9      25  REDWING PROJECT/DE
?ds

Set     Items   Description
S1        592   MARSHALL()ISLANDS
S2        696   BIKINI OR ENIWETOK OR RONGELAP OR RONGERIK OR UTIRIK
S3         45   CASTLE PROJECT/DE
S4         29   CROSSROADS PROJECT/DE
S5         49   GREENHOUSE PROJECT/DE
S6         15   SANDSTONE PROJECT/DE
S7         34   HARDTACK PROJECT/DE
S8         26   IVY PROJECT/DE
S9         25   REDWING PROJECT/DE
?c 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9
             592  1
             696  2
              45  3
              29  4
              49  5
              15  6
              34  7
              26  8
              25  9
     S10    1002  1 OR 2 OR 3 OR 4 OR 5 OR 6 OR 7 OR 8 OR 9
?t 10/5/1-1002

 10/5/1     (Item 1 from file: 109)
1122149   NSA-33-023517
  Medical studies
  Annual report, 1974
  Publication Date: Sep 1975    47-60 p.
  Country of Publication: Japan
  Primary Report No.: NIRS--14
  Report No., Pages: NIRS--14  PP. 47-60
  Journal Announcement: NSA33
  Document Type: Progress Report
  Language: English
  Subfile: NSA  (Nuclear Science Abstracts)
  Work Location: Japan
  Descriptor Groups (Splits):   COMPARATIVE EVALUATIONS--DIAGNOSTIC
TECHNIQUES--ERYTHROCYTES--MAMMARY GLANDS--NEOPLASMS--PATIENTS--RADIONUCLIDE
KINETICS--RUBIDIUM 86--UPTAKE

  BLADDER--DELAYED RADIATION EFFECTS--LARGE INTESTINE--NEOPLASMS--PATIENTS
--RADIOTHERAPY--RECTUM--SIDE EFFECTS--UTERUS--WOMEN

  ANOXIA--BIOLOGICAL RADIATION EFFECTS--BIOLOGICAL REPAIR--DOSE-RESPONSE
RELATIONSHIPS--IN VIVO--IRRADIATION--OXYGEN--RADIOSENSITIVITY EFFECTS--
```

5003513

SURVIVAL CURVES--TUMOR CELLS--X RADIATION
CADMIUM 109--CRITICAL ORGANS--INTESTINAL ABSORPTION--IODINE 131--KIDNEYS --LIVER--MERCURY 203--MICE--RADIONUCLIDE KINETICS--SKELETON--STRONTIUM 85-- THYROID--UPTAKE

BLEOMYCIN--CHEMOTHERAPY--DOSE-RESPONSE RELATIONSHIPS--PLANNING--SURVIVAL TIME

BIOMEDICAL RADIOGRAPHY--COMPUTER CODES--CONGENITAL MALFORMATIONS-- DIAGNOSIS--INFANTS--OPTIMIZATION

OPTIMIZATION--PLANNING--RADIATION DOSE DISTRIBUTIONS--RADIATION QUALITY-- RADIOTHERAPY

CAMERAS--DENSITOMETERS--DIAGNOSTIC TECHNIQUES--PERFORMANCE--SCINTILLATION COUNTERS--TELEVISION--X-RAY SOURCES

COMPARATIVE EVALUATIONS--DATA PROCESSING--FEMALES--MALES--PATIENTS-- RADIOTHERAPY--SURVIVAL CURVES

BRAIN--DIAGNOSIS--ISOMERIC NUCLEI--NEOPLASMS--PATIENTS--PERTECHNETATES-- SCINTISCANNING--TECHNETIUM 99--TOMOGRAPHY
BIOLOGICAL RADIATION EFFECTS--IRRADIATION--RADIOTHERAPY--TUMOR CELLS--X RADIATION

BIOLOGICAL RADIATION EFFECTS--BRAIN--CESIUM 137--GAMMA RADIATION-- HEMORRHAGE--LETHAL IRRADIATION--RADIOINDUCTION--RATS

BIKINI--CHROMOSOMAL ABERRATIONS--DELAYED RADIATION EFFECTS--FALLOUT--MAN --RADIOINDUCTION
Subject Codes (NSA): N48520* Life Sciences--Radiation Effects on Animals --Vertebrates
Subject Codes (EDB): 560152* Biomedical Sciences, Applied Studies-- Radiation Effects--Radiation Effects on Animals--Vertebrates

10/5/2 (Item 2 from file: 109)
1121307 NSA-33-022675
Providing an authorization for an ex gratia payment to the people of Bikini Atoll, in the Marshall Islands of the Trust Territory of the Pacific Islands. Senate, Ninety-Fourth Congress, First Session, June 2, 1975
Publication Date: 1975 3 p.
Country of Publication: United States
Publ: Committee on Interior and Insular Affairs, Washington, DC
Journal Announcement: NSA33
Availability: GPO
Document Type: Book
Language: English
Subfile: NSA (Nuclear Science Abstracts)
Work Location: United States
Proposed legislation for payment of $3 million ex gratia to the people of Bikini Atoll due to their relocation resulting from nuclear-weapons testing and successive contamination of their homeland is presented. The Committee on Interior and Insular Affairs recommends passage. (PCS)
Descriptors: *BIKINI--*CONTAMINATION; *CONTAMINATION--*LEGAL ASPECTS; * ENIWETOK--*CONTAMINATION; ATMOSPHERIC EXPLOSIONS; FALLOUT; HUMAN POPULATIONS; NUCLEAR EXPLOSIONS
Subject Codes (NSA): N80400* Law; N42500 Engineering--Nuclear Explosions ; N44300 Environmental & Earth Sciences--Radioactivity Monitoring & Transport
Subject Codes (EDB): 990400* General & Miscellaneous--Law

10/5/3 (Item 3 from file: 109)
1116134 NSA-33-017474
Marshall Islands radiological followup (Health hazards to populations following repopulation)
Greenhouse, N.A.; McCraw, T.F.

Brookhaven National Lab., Upton, N.Y. (USA)
Corp. Source Code: 0936000
Publication Date: [nd] 6 p.
Conference title: 9. topical symposium on operational health physics
Conference location: Denver, Colorado, USA
Conference date: 9 Feb 1976
Country of Publication: United States
Primary Report No.: BNL--20767
Secondary Report No.: CONF-760202--24
Journal Announcement: NSA33
Availability: Dep. NTIS $3.50.
Document Type: Conference paper
Language: English
Subfile: NSA (Nuclear Science Abstracts); ERA (Energy Research Abstracts)
Work Location: United States

In August, 1968, President Johnson announced that the people of Bikini Atoll would be able to return to their homeland. Thereafter, similar approval was given for the return of the peoples of Enewetak. These two regions, which comprised the Pacific Nuclear Testing Areas from 1946 to 1958, will probably be repopulated by the original inhabitants and their families within the next year. As part of its continuing responsibility to insure the public health and safety in connection with the nuclear programs under its sponsorship, ERDA (formerly AEC) has contracted Brookhaven National Laboratory to establish radiological safety and environmental monitoring programs for the returning Bikini and Enewetak peoples. These programs are described in the following paper. They are designed to define the external radiation environment, assess radiation doses from internal emitters in the human food chain, make long range predictions of total doses and dose commitments to individuals and to each population group, and to suggest actions which will minimize doses via the more significant pathways. (auth)

Descriptors: *BIKINI--*RADIONUCLIDE MIGRATION; *ENIWETOK--*RADIONUCLIDE MIGRATION; *FOOD CHAINS--*RADIOACTIVITY; *HUMAN POPULATIONS--*HEALTH HAZARDS; DOSE COMMITMENTS; ENVIRONMENT; EXTERNAL IRRADIATION; INTERNAL IRRADIATION; RADIATION DOSES; RADIATION MONITORING; RADIATION PROTECTION; RADIONUCLIDE KINETICS
Subject Codes (NSA): N48610* Life Sciences--Radionuclide Effects (Internal Source)--Man; N48510 Life Sciences--Radiation Effects on Animals --Man; N44340 Environmental & Earth Sciences--Radioactivity Monitoring & Transport--Ecosystems & Food Cycles
Subject Codes (EDB): 570000* Health & Safety

10/5/4 (Item 4 from file: 109)
1108193 NSA-33-009494
External dose estimates for future inhabitants of Eniwetok Atoll
Gudiksen, P.H. ; Jones, D.E.; Beck, H.L.
Univ. of California, Livermore
Nature (London), v. 257, no. 5524, pp. 284-287
Publication Date: 25 Sep 1975
Coden: NATUA
Country of Publication: United Kingdom
Journal Announcement: NSA33
Document Type: Journal Article
Language: English
Subfile: NSA (Nuclear Science Abstracts)
Work Location: United States
Descriptors: *ENIWETOK--*RADIATION MONITORING; *HUMAN POPULATIONS--* RADIATION DOSES; EXTERNAL IRRADIATION; GAMMA RADIATION
Subject Codes (NSA): N48510* Life Sciences--Radiation Effects on Animals --Man; N44340 Environmental & Earth Sciences--Radioactivity Monitoring & Transport--Ecosystems & Food Cycles
Subject Codes (EDB): 560151* Biomedical Sciences, Applied Studies--Radiation Effects--Radiation Effects on Animals--Man

10/5/5 (Item 5 from file: 109)

1108051 NSA-33-009352
Comparison of gamma-ray exposure rate measurements at Bikini Atoll
Gudiksen, P.H.; Crites, T.R.
California Univ., Livermore (USA). Lawrence Livermore Lab.
Corp. Source Code: 9500007
Publication Date: 21 Nov 1975 4 p.
Conference title: 9. topical symposium on operational health physics
Conference location: Denver, Colorado, USA
Conference date: 9 Feb 1976
Country of Publication: United States
Primary Report No.: UCRL--77532
Secondary Report No.: CONF-760202--18
Journal Announcement: NSA33
Availability: Dep. NTIS $4.50.
Document Type: Conference paper
Language: English
Subfile: NSA (Nuclear Science Abstracts); ERA (Energy Research Abstracts)
Work Location: United States
Contract No.: W-7405-ENG-48

A radiological survey of Bikini and Eneu Islands of the Bikini Atoll was conducted during June 1975 to assess the potential radiation doses that may be received by the returning Bikinians. Bikini Atoll was one of the U.S. nuclear weapons testing sites in the Pacific. An integral part of the survey included measurements of the gamma-ray exposure rates at 1 m above the ground with portable NaI instruments at nearly 2700 locations on the two islands. For comparison purposes, similar measurements were made with a pressurized ion chamber at approximately 200 locations, and with LiF and CaF$sub 2$:Dy thermoluminescent dosimeters (TLDs) at 80 locations. The results indicate that the NaI scintillators overresponded because of their nonlinear energy characteristics. The responses of the LiF dosimeters and the pressurized ion chamber agreed to within 13 percent. Attenuation studies with LiF TLDs indicated that roughly 25 percent of the total free air exposure rate at 1 m was due to beta radiation. (auth)

Descriptors: *BIKINI--*RADIATION MONITORING; *GAMMA DOSIMETRY--*THERMOLUMINESCENT DOSEMETERS; *IONIZATION CHAMBERS--*PERFORMANCE; *THERMOLUMINESCENT DOSEMETERS--*PERFORMANCE; COMPARATIVE EVALUATIONS; ENVIRONMENT; RADIOACTIVITY; SENSITIVITY
Subject Codes (NSA): N46120* Instrumentation--Radiation Detection Instruments--Radiation Dosimeters; N44300 Environmental & Earth Sciences--Radioactivity Monitoring & Transport
Subject Codes (EDB): 440102* Instrumentation--Radiation Instrumentation --Radiation Dosemeters

10/5/6 (Item 6 from file: 109)
1107987 NSA-33-009288
Evaluation of plutonium at Eniwetok Atoll
Wilson, D.W.; Ng, Y.C.; Robinson, W.L.
Univ. of California, Livermore
Health Phys., v. 29, no. 4, pp. 599-611
Publication Date: Oct 1975
Coden: HLTPA
Conference title: Proceedings of the second Los Alamos life sciences symposium
Conference location: Los Alamos, NM, USA
Conference date: 22 May 1974
Country of Publication: United Kingdom
Journal Announcement: NSA33
Document Type: Conference paper
Language: English
Subfile: NSA (Nuclear Science Abstracts); ERA (Energy Research Abstracts)
Work Location: United States

An extensive survey was carried out in 1972 to assess the current radiological status of Eniwetok Atoll. The radionuclides detected in the Atoll environment were studied for their potential contributions to the

dose commitment of the returning population according to several pathways of exposure. Plutonium was detected in air and in the terrestrial and aquatic environment at concentrations that varied from background levels due to world-wide fallout to levels several orders-of-magnitude above. The dose commitments from plutonium via the terrestrial food chain and inhalation vary according to the postulated living pattern. The dosages via marine foods can be expected to be insensitive to living pattern and to exceed those via terrestrial foods. Plutonium would contribute nearly all of the dosage via inhalation, but this pathway ranks low in overall importance compared with the food-chain and external-dose pathways. Although the potential dose from plutonium via all pathways is low relative to that from $sup 60$Co, $sup 90$Sr and $sup 137$Cs, plutonium will still remain in the Atoll environment after the other major isotopes have decayed away. (auth)

Descriptors: *AQUATIC ECOSYSTEMS--*RADIOECOLOGICAL CONCENTRATION; * HUMAN POPULATIONS--*DOSE COMMITMENTS; *PLUTONIUM--*RADIONUCLIDE MIGRATION; *TERRESTRIAL ECOSYSTEMS--*RADIOECOLOGICAL CONCENTRATION; ENIWETOK; FOOD CHAINS; INHALATION; RADIATION DOSES; SURFACE AIR

Subject Codes (NSA): N44340* Environmental & Earth Sciences--Radioactivity Monitoring & Transport--Ecosystems & Food Cycles; N44310 Environmental & Earth Sciences--Radioactivity Monitoring & Transport --Atmosphere

Subject Codes (EDB): 510302* Environmental Sciences, Terrestrial--Radioactive Materials Monitoring & Transport--Terrestrial Ecosystems & Food Chains

10/5/7 (Item 7 from file: 109)
1107986 NSA-33-009287

Plutonium in aqueous systems

Schell, W.R. ; Watters, R.L.
Univ. of Washington, Seattle

Health Phys., v. 29, no. 4, pp. 589-597
Publication Date: Oct 1975
Coden: HLTPA
Conference title: Proceedings of the second Los Alamos life sciences symposium
Conference location: Los Alamos, NM, USA
Conference date: 22 May 1974
Country of Publication: United Kingdom
Journal Announcement: NSA33
Document Type: Conference paper
Language: English
Subfile: NSA (Nuclear Science Abstracts); ERA (Energy Research Abstracts)
Work Location: United States

A review has been made of the available information concerning plutonium in the aquatic environment. The levels are low and the data on the environmental concentrations in the lake and marine environment are very limited. Of particular relevance to biological accumulation processes is the physical-chemical state of plutonium. Limited information is available in natural environmental waters. Indications are that the plankton has the highest concentration factors and that the concentration factors decrease with increasing complexity of the organisms. Recent studies of plutonium in water, sediment, and biota at Bikini and Eniwetok Atolls are given. The water samples measured indicate that plutonium exists in the particulate, soluble, and colloidal physical-chemical states. The plutonium is being injected into the water column from the sediments and has not been removed from the biogeochemical cycle after 16 yr. Concentrations of plutonium in vertebrates and invertebrates measured at Eniwetok were low and ranged from 0.001 to 0.2 pCi/g wet in fish muscle. Additional data are required to better evaluate the potential hazards to man of plutonium in the aquatic environment. (auth)

Descriptors: *AQUATIC ECOSYSTEMS--*RADIOECOLOGICAL CONCENTRATION; * PLUTONIUM--*RADIONUCLIDE MIGRATION; ANIMALS; BIKINI; COLLOIDS; ENIWETOK; PARTICLES; PLANKTON; SEDIMENTS; SURFACE WATERS

Subject Codes (NSA): N44340* Environmental & Earth Sciences--

Radioactivity Monitoring & Transport--Ecosystems & Food Cycles
Subject Codes (EDB): 520302* Environmental Sciences, Aquatic--Radioactive Materials Monitoring & Transport--Aquatic Ecosystems & Food Chains

10/5/8 (Item 8 from file: 109)
1106174 NSA-33-007474
Twenty-year review of medical findings in a Marshallese population accidentally exposed to radioactive fallout
Conard, R.A.
Brookhaven National Lab., Upton, N.Y. (USA)
Corp. Source Code: 0936000
Publication Date: 1975 154 p.
Country of Publication: United States
Primary Report No.: BNL--50424
Journal Announcement: NSA33
Availability: Dep. NTIS $6.25.
Document Type: Report
Language: English
Subfile: NSA (Nuclear Science Abstracts); ERA (Energy Research Abstracts)
Work Location: United States
Contract No.: AT(30-1)-16
A summary is presented of results of medical examinations of inhabitants of the Marshall Islands during the 20-year period following the exposure of Rongelap people to radioactive fallout in 1954. The initial effect observed was $beta$ burns of the skin of some individuals. Few significant findings were observed during the subsequent 9-year period, although an increase in miscarriages and stillbirths among the exposed women was noted. In 1963 some thyroid abnormalities and growth retardation of some children were noted. (177 references). (CH)
Descriptors: *FALLOUT--*BIOLOGICAL RADIATION EFFECTS; *HUMAN POPULATIONS--*INTERNAL IRRADIATION; *MARSHALL ISLANDS--*HUMAN POPULATIONS; ACUTE IRRADIATION; BETA SOURCES; CHILDREN; ENVIRONMENT; GROWTH; RADIATION BURNS; RADIATION INJURIES; RADIODERMATITIS; RADIONUCLIDE KINETICS; RADIONUCLIDE MIGRATION; REPRODUCTION; SKIN; THYROID
Subject Codes (NSA): N48510* Life Sciences--Radiation Effects on Animals --Man; N48610 Life Sciences--Radionuclide Effects (Internal Source)--Man
Subject Codes (EDB): 560151* Biomedical Sciences, Applied Studies--Radiation Effects--Radiation Effects on Animals--Man

10/5/9 (Item 9 from file: 109)
1106001 NSA-33-007300
Radiological and chemical studies of the ground water at Enewetak Atoll. 1. Sampling, field measurements, and analytical methods
Marsh, K.V.; Wong, K.M.; Holladay, G.; Noshkin, V.E.; Buddemeier, R.
California Univ., Livermore (USA). Lawrence Livermore Lab.; Hawaii Univ., Honolulu (USA)
Corp. Source Code: 9500007; 2952000
Publication Date: 26 Sep 1975 28 p.
Country of Publication: United States
Primary Report No.: UCRL--51913(Pt.1)
Journal Announcement: NSA33
Availability: Dep. NTIS $4.00.
Document Type: Report
Language: English
Subfile: NSA (Nuclear Science Abstracts); ERA (Energy Research Abstracts)
Work Location: United States
Contract No.: W-7405-ENG-48
A research program to study the ground water on several of the islets in the Enewetak Atoll is being conducted jointly by Lawrence Livermore Laboratory and the University of Hawaii under the sponsorship of ERDA Division of Biology and Environmental Research. The purpose is to provide data characterizing the ground water for possible use by returning Marshallese and to investigate the hydrology and recycling of radionuclides

in an atoll environment. This first of a series of reports describes the sampling locations, field operations, and methods of analysis. (auth)
Descriptors: *ENIWETOK--*RADIATION MONITORING; *GROUND WATER--*RADIOACTIVITY; HYDROLOGY; MEASURING METHODS; RADIOISOTOPES; RADIONUCLIDE MIGRATION; SAMPLING
Subject Codes (NSA): N44330* Environmental & Earth Sciences--Radioactivity Monitoring & Transport--Water
Subject Codes (EDB): 520301* Environmental Sciences, Aquatic--Radioactive Materials Monitoring & Transport--Water

10/5/10 (Item 10 from file: 109)
1105977 NSA-33-007276
Fission-track study of the uranium bio-geochemistry in carbonates of Bikini and Enewetak Atolls. Progress report, July 1, 1974--December 31, 1975
Levy, Y.; Miller, D.S.; Friedman, G.M.; Goter, E.R.
Rensselaer Polytechnic Inst., Troy, N.Y. (USA). Dept. of Geology
Corp. Source Code: 5468000
Publication Date: Sep 1975 35 p.
Country of Publication: United States
Primary Report No.: COO--3462-12
Journal Announcement: NSA33
Availability: Dep. NTIS $5.00.
Document Type: Progress Report
Language: English
Subfile: NSA (Nuclear Science Abstracts); ERA (Energy Research Abstracts)
Work Location: United States
Contract No.: E(11-1)-3462
Major contributions during this contract period have been in developing an analytical procedure for Pu measurement, and in applying the developed procedures to determining the plutonium concentration and distribution in coral from the Bikini Atoll. In conjunction with these contributions, measurements using the fission-track method have been made of the uranium distribution and concentrations in several carbonate samples from drill cores obtained from the Runit Island Enewetak Atoll. Petrographic studies on these drill core samples have been made to correlate the uranium data with the mineralogical data. (auth)
Descriptors: *BIKINI--*GEOCHEMISTRY; *ENIWETOK--*GEOCHEMISTRY; *PLUTONIUM--*DISTRIBUTION; *URANIUM--*DISTRIBUTION; ALPHA SPECTROSCOPY; CORALS; DRILL CORES; FISSION TRACKS; NUCLEAR REACTION ANALYSIS
Subject Codes (NSA): N44100* Environmental & Earth Sciences--Minerals & Ores; N44420 Environmental & Earth Sciences--Radiometric Techniques--Soil
Subject Codes (EDB): 050100* Nuclear Fuels--Reserves

10/5/11 (Item 11 from file: 109)
1099437 NSA-33-000626
Plutonium radionuclides in the ground waters at Eniwetok Atoll ($sup 239$Pu, $sup 240$Pu, $sup 137$Cs)
Noshkin, V.E.; Wong, K.M.; Marsh, K.; Eagle, R.; Holladay, G.:.B.R.W.
California Univ., Livermore (USA). Lawrence Livermore Lab.
Corp. Source Code: 9500007
Publication Date: 20 Oct 1975 35 p.
Conference title: IAEA international symposium on transuranium nuclides in the environment
Conference location: San Francisco, California, USA
Conference date: 17 Nov 1975
Country of Publication: United States
Primary Report No.: UCRL--76725
Secondary Report No.: CONF-751105--5; SM--199/33
Journal Announcement: NSA33
Availability: Dep. NTIS $5.00.
Document Type: Conference paper
Language: English
Subfile: NSA (Nuclear Science Abstracts); ERA (Energy Research Abstracts); EDB (Energy Database)

5003519

Work Location: United States
In 1974 a groundwater program was initiated at Eniwetok Atoll to study systematically the hydrology and the ground water 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 the 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 percent of the maximal recommended concentration for drinking water. Concentrations of $sup 137$Cs are found to correlate with water freshness, but those of $sup 239$,$sup 240$Pu show no such relationship. The mechanisms moving $sup 239$,$sup 240$Pu through the ground water reservoirs are independent of the processes controlling the cycling of $sup 137$Cs and fresh water. A reasonable linear correlation is found between mean surface-water concentrations and soil burdens. This indicates that the quantities of $sup 239$,$sup 240$Pu migrating to the groundwater surface layers are, to a first approximation, independent of the physical, chemical or biological characteristics of the islands. (auth)
Descriptors: *CESIUM 137--*RADIATION MONITORING; *ENIWETOK--*WATER QUALITY; *GROUND WATER--*RADIONUCLIDE MIGRATION; *PLUTONIUM 239--*RADIATION MONITORING; *PLUTONIUM 240--*RADIATION MONITORING; *SOILS--*RADIONUCLIDE MIGRATION;
Subject Codes (NSA): N44300* Environmental & Earth Sciences--Radioactivity Monitoring & Transport
Subject Codes (EDB): 510300* Environmental Sciences, Terrestrial--Radioactive Materials Monitoring & Transport

10/5/12 (Item 12 from file: 109)
1096297 NSA-32-027940
Radioactivity levels in Eniwetok soil
Gudiksen, P.H.; Lynch, O.D.T. Jr.
Univ. of California, Livermore
Health Phys., v. 29, no. 1, pp. 17-25
Publication Date: Jul 1975
Coden: HLTPA
Country of Publication: Gabon
Journal Announcement: NSA32
Document Type: Journal Article
Language: English
Subfile: NSA (Nuclear Science Abstracts); ERA (Energy Research Abstracts); EDB (Energy Database)
Work Location: United States
Descriptors: *CESIUM 137--*RADIATION MONITORING; *COBALT 60--*RADIATION MONITORING; *ENIWETOK--*RADIOACTIVITY; *PLUTONIUM 239--*RADIATION MONITORING; *SOILS--*RADIOACTIVITY; *STRONTIUM 90--*RADIATION MONITORING; CONTAMINATION; DEPTH; SPATIAL DISTRIBUTION
Subject Codes (NSA): N44320* Environmental & Earth Sciences--Radioactivity Monitoring & Transport--Soil
Subject Codes (EDB): 510301* Environmental Sciences, Terrestrial--Radioactive Materials Monitoring & Transport--Soil

10/5/13 (Item 13 from file: 109)
1085854 NSA-32-017199
$sup 210$Po and $sup 239$Pu, $sup 240$Pu in biological and water samples from the Bikini and Eniwetok atolls
Nevissi, A.; Schell, W.R.
Univ. of Washington, Seattle
Nature (London), v. 255, no. 5506, pp. 321-323
Publication Date: 22 May 1975
Coden: NATUA
Country of Publication: United Kingdom

Journal Announcement: NSA32
Document Type: Journal Article
Language: English
Subfile: NSA (Nuclear Science Abstracts)
Work Location: United States
Descriptors: *BIKINI--*RADIATION MONITORING; *BIOLOGICAL MATERIALS--* RADIATION MONITORING; *ENIWETOK--*RADIATION MONITORING; *PLUTONIUM 239--* RADIOECOLOGICAL CONCENTRATION; *PLUTONIUM 240--*RADIOECOLOGICAL CONCENTRATION; *POLONIUM 210--*RADIOECOLOGICAL CONCENTRATION; *SEAWATER--* RADIATION MONITORING; ALGAE; AQUATIC ECOSYSTEMS; FISHES; INVERTEBRATES; PLANKTON; RADIOACTIVITY
Subject Codes (NSA): N44340* Environmental & Earth Sciences--Radioactivity Monitoring & Transport--Ecosystems & Food Cycles

10/5/14 (Item 14 from file: 109)
1085342 NSA-32-016686
Providing an authorization for an ex gratia payment to the people of Bikini Atoll, in the Marshall Islands of the Trust Territory of the Pacific Island. House of Representatives, Ninety-Fourth Congress, First Session, May 1 1975
Committee on Interior and Insular Affairs (U.S. Senate), Washington, D.C.
Corp. Source Code: 9500482
Publication Date: 1975 4 p.
Country of Publication: United States
Publ: Committee on Interior and Insular Affairs, Washington, DC
Journal Announcement: NSA32
Availability: GPO
Document Type: Book
Language: English
Subfile: NSA (Nuclear Science Abstracts)
Work Location: United States
Descriptors: *BIKINI--*LEGISLATION; ALLOCATIONS; COST; PERSONNEL
Subject Codes (NSA): N80400* Law

10/5/15 (Item 15 from file: 109)
1080572 NSA-32-011740
Acute myelogenous leukemia following fallout radiation exposure
Conard, R.A.
Brookhaven National Lab., Upton, NY
J. Am. Med. Assoc., v. 232, no. 13, pp. 1356-1357
Publication Date: 30 Jun 1975
Coden: JAMAA
Country of Publication: United States
Journal Announcement: NSA32
Document Type: Journal Article
Language: English
Subfile: NSA (Nuclear Science Abstracts)
Work Location: United States
Descriptors: *LEUKEMIA--*RADIOINDUCTION; *MAN--*DELAYED RADIATION EFFECTS; FALLOUT; MARSHALL ISLANDS; NUCLEAR EXPLOSIONS
Subject Codes (NSA): N48510* Life Sciences--Radiation Effects on Animals --Man

10/5/16 (Item 16 from file: 109)
1080377 NSA-32-011545
Distribution of plutonium and americium in Bikini Atoll
Nevissi, A.; Schell, W.R.
Univ. of Washington, Seattle
Health Phys., v. 28, no. 5, pp. 539-547
Publication Date: May 1975
Coden: HLTPA
Country of Publication: United Kingdom
Journal Announcement: NSA32
Document Type: Journal Article
Language: English
Subfile: NSA (Nuclear Science Abstracts)

5003521

Work Location: United States
Descriptors: *AMERICIUM 241--*DIFFUSION; *BIKINI--*RADIOACTIVITY; * PLUTONIUM 239--*DIFFUSION; *PLUTONIUM 240--*DIFFUSION; *SEAWATER--* RADIONUCLIDE MIGRATION; *SEDIMENTS--*RADIONUCLIDE MIGRATION; COASTAL WATERS; PARTICLE SIZE; SPATIAL DISTRIBUTION; TIME DEPENDENCE
Subject Codes (NSA): N44330* Environmental & Earth Sciences-- Radioactivity Monitoring & Transport--Water

10/5/17 (Item 17 from file: 109)
1075453 NSA-32-006458
Radiological resurvey of food, soil, air, and groundwater at Bikini Atoll, 1972.
Lynch, O.D.T. Jr.; McCraw, T.F.; Nelson, V.A.; Moore, W.E.
USAEC Nevada Operations Office, Las Vegas; USAEC, Washington, D.C.; Washington Univ., Seattle (USA). Lab. of Radiation Ecology; National Environmental Research Center, Las Vegas, Nev. (USA)
Corp. Source Code: 6602000; 6549500; 6816000; 9500144
Publication Date: Feb 1975 33 p.
Country of Publication: United States
Primary Report No.: ERDA--34
Journal Announcement: NSA32
Availability: Dep. NTIS $4.00.
Document Type: Report
Language: English
Subfile: NSA (Nuclear Science Abstracts)
Work Location: United States
Descriptors: *AMERICIUM 241--*RADIATION MONITORING; *ANTIMONY 125--* RADIATION MONITORING; *BIKINI--*RADIATION MONITORING; *BISMUTH 207--* RADIATION MONITORING; *CESIUM 137--*RADIATION MONITORING; *COBALT 60--* RADIATION MONITORING; *EUROPIUM 155--*RADIATION MONITORING; *FOOD--* RADIATION MONITORING; *GROUND WATER--*RADIATION MONITORING; *IRON 55--* RADIATION MONITORING; *PLUTONIUM 238--*RADIATION MONITORING; *PLUTONIUM 239 --*RADIATION MONITORING; *PLUTONIUM 240--*RADIATION MONITORING; *SOILS--* RADIATION MONITORING; *STRONTIUM 90--*RADIATION MONITORING; *SURFACE AIR--* RADIATION MONITORING; BIRDS; CRUSTACEANS; DAILY VARIATIONS; ENVIRONMENT; FISHES; PLANTS; RADIONUCLIDE KINETICS; RADIONUCLIDE MIGRATION; SAMPLING; SEAFOOD; SEAWATER; SEDIMENTS; TIDE
Subject Codes (NSA): N44500* Environmental & Earth Sciences--Site Surveys; N44300 Environmental & Earth Sciences--Radioactivity Monitoring & Transport

10/5/18 (Item 18 from file: 109)
1075439 NSA-32-006444
Enewetak Marine Biological Laboratory 1973--1974 annual report. Final report (Ecology of Enewetak)
Hawaii Univ., Honolulu (USA)
Corp. Source Code: 2952000
Publication Date: 1974 61 p.
Country of Publication: United States
Primary Report No.: UH--226X10
Journal Announcement: NSA32
Availability: Dep. NTIS $6.25.
Document Type: Progress Report
Language: English
Subfile: NSA (Nuclear Science Abstracts)
Work Location: United States
Contract No.: AT(29-2)-226
Descriptors: *ALGAE--*ECOLOGY; *ANIMALS--*ECOLOGY; *BIRDS--*ECOLOGY; * CORALS--*CHEMICAL COMPOSITION; *ENIWETOK--*ECOLOGY; *FISHES--*ECOLOGY; * INVERTEBRATES--*ECOLOGY; *STRONTIUM 90--*RADIATION MONITORING; AQUATIC ECOSYSTEMS; COASTAL WATERS; COMMUNITIES; CRUSTACEANS; FOOD; FOOD CHAINS; MOLLUSCS; POPULATION DYNAMICS; RETENTION; SEAS; SHORES; SKELETON; TERRESTRIAL ECOSYSTEMS; TROPICAL REGIONS
Subject Codes (NSA): N44340* Environmental & Earth Sciences-- Radioactivity Monitoring & Transport--Ecosystems & Food Cycles; N44500 Environmental & Earth Sciences--Site Surveys

10/5/19 (Item 19 from file: 109)
1072586 NSA-32-003496
Laboratory experiments on the transfer dynamics of plutonium from marine sediments to sea water and to marine organisms (Donax denticulatus, Lucina pectinata)
Mo, T.; Lowman, F.G.
Puerto Rico Nuclear Center, Mayaguez
Corp. Source Code: 5337000
Publication Date: 1975 35 p.
Conference title: 4. national symposium on radioecology
Conference location: Corvallis, Oregon, USA
Conference date: 12 May 1975
Country of Publication: United States
Primary Report No.: CONF-750503--5
Journal Announcement: NSA32
Availability: Dep. NTIS $4.75.
Document Type: Report
Language: English
Subfile: NSA (Nuclear Science Abstracts)
Work Location: Puerto Rico
Descriptors: *ALGAE--*RADIONUCLIDE KINETICS; *MOLLUSCS--*RADIONUCLIDE KINETICS; *PLUTONIUM 239--*RADIOECOLOGICAL CONCENTRATION; *PLUTONIUM 240--*RADIOECOLOGICAL CONCENTRATION; *SEAWATER--*RADIONUCLIDE MIGRATION; *SEDIMENTS--*RADIONUCLIDE MIGRATION; BIKINI; OXYGEN; UPTAKE
Subject Codes (NSA): N44340* Environmental & Earth Sciences--Radioactivity Monitoring & Transport--Ecosystems & Food Cycles

10/5/20 (Item 20 from file: 109)
1066776 NSA-31-033142
Methods for monitoring radioactivity in aquatic biota
Proceedings of seminar on methodology for monitoring the marine environment (Uses at Bikini and Eniwetok Atolls and in Columbia River flow path along Washington Coast)
Nelson, V.A.; Schell, W.R.; Seymour, A.H.
Univ. of Washington, Seattle
Verner, S.S. (ed.)
Environmental Protection Agency, Washington, D.C. (USA)
Corp. Source Code: 9500215
Publication Date: Oct 1974 242-258 p.
Conference title: Seminar on methodology for monitoring the marine environment
Conference location: Seattle, Washington, USA
Conference date: Oct 1973
Country of Publication: United States
Primary Report No.: EPA--600/4-74-004
Secondary Report No.: CONF-7310106--
Report No., Pages: EPA--600/4-74-004 PP. 242-258
Journal Announcement: NSA31
Document Type: Conference paper
Language: English
Subfile: NSA (Nuclear Science Abstracts)
Work Location: United States
Descriptors: *AQUATIC ECOSYSTEMS--*RADIATION MONITORING; *BIKINI--*RADIATION MONITORING; *ENIWETOK--*RADIATION MONITORING; *PACIFIC OCEAN--*RADIATION MONITORING; *RADIOISOTOPES--*RADIATION MONITORING; ANIMALS; COASTAL WATERS; COLUMBIA RIVER; ENVIRONMENT; ESTUARIES; FOOD CHAINS; OCEANOGRAPHY; PLANTS; RADIOECOLOGICAL CONCENTRATIONS; RADIONUCLIDE KINETICS; RADIONUCLIDE MIGRATION; SAMPLING; SEAS; SEAWATER; SEDIMENTS; SHORES; SURFACE AIR; TERRESTRIAL ECOSYSTEMS; WASHINGTON
Subject Codes (NSA): N44340* Environmental & Earth Sciences--Radioactivity Monitoring & Transport--Ecosystems & Food Cycles

10/5/21 (Item 21 from file: 109) 5003523
1066774 NSA-31-033140
Marine sciences

Pacific Northwest Laboratory annual report for 1974 to the USAEC Division of Biomedical and Environmental Research. Part 2. Ecological sciences (Characteristics of Sequim Bay site of HAPO marine research laboratoy;research programs proposed;effects of chemical and thermal pollutants on marine ecosystems)
Vaughan, B.E.
Battelle Pacific Northwest Labs., Richland, Wash. (USA)
Corp. Source Code: 9500022
Publication Date: Dec 1974 107-152 p.
Country of Publication: United States
Primary Report No.: BNWL--1950(Pt.2)
Report No., Pages: BNWL--1950(Pt.2 PP. 107-152
Journal Announcement: NSA31
Document Type: Progress Report
Language: English
Subfile: NSA (Nuclear Science Abstracts)
Work Location: United States
Descriptor Groups (Splits): AQUATIC ECOSYSTEMS--BIOLOGICAL EFFECTS--COPPER--QUANTITY RATIO--SEAWATER
CHEMICAL ANALYSIS--SEAWATER--SELENIUM

AQUATIC ECOSYSTEMS--DIFFUSION--IRON 55--SEAS--SEDIMENTS--TRACE AMOUNTS

ANNELIDS--AQUATIC ECOSYSTEMS--ARTHROPODS--BIOLOGICAL EFFECTS--COASTAL WATERS--COMMUNITIES--CRUSTACEANS--GROWTH--MARINE DISPOSAL--MOLLUSCS--NUCLEAR POWER PLANTS--SURVIVAL TIME--TEMPERATURE DEPENDENCE--THERMAL EFFLUENTS

ANIMALS--BIOLOGICAL EFFECTS--COASTAL WATERS--HYDROCARBONS--METABOLISM--NONRADIOACTIVE WASTE DISPOSAL--PETROLEUM PRODUCTS--PLANKTON--PLANTS--UPTAKE--WATER POLLUTION

BERYLLIUM 7--DIFFUSION--FALLOUT--FISSION PRODUCTS--MIXING--PACIFIC OCEAN--PLUTONIUM ISOTOPES--RADIATION MONITORING--SURFACE WATERS

AMERICIUM 241--ANIMALS--AQUATIC ECOSYSTEMS--CONTAMINATION--DIFFUSION--ENIWETOK--GREENLAND--ISOTOPE RATIO--PLANKTON--PLANTS--PLUTONIUM 239--RADIATION MONITORING--SAMPLING--SEAWATER--SEDIMENTS--TIME DEPENDENCE

ANIMALS--AQUATIC ECOSYSTEMS--COASTAL WATERS--COMMUNITIES--ECOLOGY--PLANTS--SEQUIM BAY
ATLANTIC OCEAN--CHEMICAL ANALYSIS--COBALT--DEPTH--DISTRIBUTION--GEOGRAPHY--MERCURY--MIXING--PACIFIC OCEAN--SAMPLING--SEAWATER--SILVER--TRACE AMOUNTS
Subject Codes (NSA): N44340* Environmental & Earth Sciences--Radioactivity Monitoring & Transport--Ecosystems & Food Cycles; N44630 Environmental & Earth Sciences--Thermal Effluents--Water; N44700 Environmental & Earth Sciences--Chemical Effluents; N48720 Life Sciences--Nuclide Kinetics & Toxicology--Animals; N48730 Life Sciences--Nuclide Kinetics & Toxicology--Plants

10/5/22 (Item 22 from file: 109)
1060141 NSA-31-026112
Possible radiation-induced aging as measured by immunohematological changes in a Marshallese population exposed by radioactive fallout
Advances in radiation research. Biology and medicine. Vol. III
Conard, R.A.
Brookhaven National Lab., Upton, NY
Duplan, J.F. (ed.)
Publication Date: 1973 1395-1403 p.
Conference title: 4. international congress of radiation research
Conference location: Evian, France
Conference date: 29 Jun 1970
Country of Publication: United States
Publ: Gordon and Breach, Science Publishers, Inc., New York
Note: See CONF-700610--P3(B and M)
Journal Announcement: NSA31

Document Type: Conference paper
Language: English
Subfile: NSA (Nuclear Science Abstracts)
Work Location: United States
Descriptors: *HUMAN POPULATIONS--*IMMUNE REACTIONS; *IMMUNE REACTIONS --*DELAYED RADIATION EFFECTS; AGE GROUPS; ELECTROPHORESIS; FALLOUT; GLOBULINS; IMMUNOGLOBULINS; MARSHALL ISLANDS
Subject Codes (NSA): N48510* Life Sciences--Radiation Effects on Animals --Man

10/5/23 (Item 23 from file: 109)
1056793 NSA-31-022632
Plutonium in aqueous systems (Content of $sup 239$Pu, $sup 240$Pu, and $sup 241$Am in Water, Sediments, and Biota at Bikini and Eniwetok Atolls)
Schell, W.R.; Watters, R.L.
Washington Univ., Seattle (USA). Lab. of Radiation Ecology; USAEC Division of Biomedical and Environmental Research, Washington, D.C.
Corp. Source Code: 6816000; 9500233
Publication Date: 17 May 1974 26 p.
Country of Publication: United States
Primary Report No.: RLO--2225-T18-11
Journal Announcement: NSA31
Availability: Dep. NTIS $4.50.
Document Type: Report
Language: English
Subfile: NSA (Nuclear Science Abstracts)
Work Location: United States
Contract No.: AT(45-1)-2225
Descriptors: *AMERICIUM 241--*RADIATION MONITORING; *BIKINI--*RADIATION MONITORING; *ENIWETOK--*RADIATION MONITORING; *PLUTONIUM 239--*RADIATION MONITORING; *PLUTONIUM 240--*RADIATION MONITORING; AQUATIC ECOSYSTEMS; COASTAL WATERS; DIFFUSION; INVERTEBRATES; PLANKTON; RADIOECOLOGICAL CONCENTRATION; RADIONUCLIDE KINETICS; RADIONUCLIDE MIGRATION; SEDIMENTS; VERTEBRATES
Subject Codes (NSA): N44330* Environmental & Earth Sciences--Radioactivity Monitoring & Transport--Water; N44500 Environmental & Earth Sciences--Site Surveys

10/5/24 (Item 24 from file: 109)
1056792 NSA-31-022631
Distribution of plutonium and americium in Bikini lagoon ($sup 239$Pu, $sup 240$Pu, and $sup 241$Am)
Nevissi, A.; Schell, W.R.
Washington Univ., Seattle (USA). Lab. of Radiation Ecology
Corp. Source Code: 6816000
Publication Date: 5 Mar 1974 32 p.
Country of Publication: United States
Primary Report No.: RLO--2225-T18-7
Journal Announcement: NSA31
Availability: Dep. NTIS $4.75.
Document Type: Report
Language: English
Subfile: NSA (Nuclear Science Abstracts)
Work Location: United States
Contract No.: AT(45-1)-2225
Descriptors: *AMERICIUM 241--*RADIATION MONITORING; *BIKINI--*RADIATION MONITORING; *COASTAL WATERS--*RADIONUCLIDE MIGRATION; *PLUTONIUM 239--* RADIATION MONITORING; *PLUTONIUM 240--*RADIATION MONITORING; FLOW RATE; PARTICLE SIZE; PLANKTON; RADIOECOLOGICAL CONCENTRATION; RADIONUCLIDE KINETICS; SEAWATER; SEDIMENTS; VARIATIONS
Subject Codes (NSA): N44330* Environmental & Earth Sciences--Radioactivity Monitoring & Transport--Water; N44500 Environmental & Earth Sciences--Site Surveys

10/5/25 (Item 25 from file: 109)
1056075 NSA-31-021897

Clean up, rehabilitation, resettlement of Eniwetok Atoll, Marshall Islands. Volume III. Draft environmental impact statement
Holmes and Narver, Inc., Anaheim, Calif. (USA)
Corp. Source Code: 9500335
Publication Date: Sep 1974 52 p.
Country of Publication: United States
Primary Report No.: AD--784306
Journal Announcement: NSA31
Availability: NTIS $5.75.
Document Type: Report
Language: English
Subfile: NSA (Nuclear Science Abstracts)
Work Location: United States
Contract No.: DNA001-73-C-0155
Descriptors: *HUMAN POPULATIONS--*RADIATION HAZARDS; AGRICULTURE; ECONOMICS; ENIWETOK; ENVIRONMENTAL IMPACT STATEMENTS; MANAGEMENT; RADIATION MONITORING; WASTE DISPOSAL
Subject Codes (NSA): N80500* Management

10/5/26 (Item 26 from file: 109)
1056074 NSA-31-021896
Clean up, rehabilitation, resettlement of Eniwetok Atoll, Marshall Islands. Volume II. Draft environmental impact statement
Holmes and Narver, Inc., Anaheim, Calif. (USA)
Corp. Source Code: 9500335
Publication Date: Sep 1974 428 p.
Country of Publication: United States
Primary Report No.: AD--784305
Journal Announcement: NSA31
Availability: NTIS $24.50.
Document Type: Report
Language: English
Subfile: NSA (Nuclear Science Abstracts)
Work Location: United States
Contract No.: DNA001-73-C-0155
Descriptors: *HUMAN POPULATIONS--*RADIATION HAZARDS; AGRICULTURE; ECONOMICS; ENIWETOK; ENVIRONMENTAL IMPACT STATEMENTS; MANAGEMENT; NUCLEAR EXPLOSIONS; NUCLEAR WEAPONS; RADIATION MONITORING; TESTING; WASTE DISPOSAL
Subject Codes (NSA): N80500* Management

10/5/27 (Item 27 from file: 109)
1056073 NSA-31-021895
Clean up, rehabilitation, resettlement of Eniwetok Atoll, Marshall Islands. Volume I. Draft environmental impact statement
Holmes and Narver, Inc., Anaheim, Calif. (USA)
Corp. Source Code: 9500335
Publication Date: Sep 1974 312 p.
Country of Publication: United States
Primary Report No.: AD--784304
Journal Announcement: NSA31
Availability: NTIS $18.75.
Document Type: Report
Language: English
Subfile: NSA (Nuclear Science Abstracts)
Work Location: United States
Contract No.: DNA001-73-C-0155
Descriptors: *HUMAN POPULATIONS--*RADIATION HAZARDS; *NUCLEAR WEAPONS --*TESTING; ENIWETOK; ENVIRONMENTAL IMPACT STATEMENTS; MANAGEMENT; NUCLEAR EXPLOSIONS; WASTE DISPOSAL
Subject Codes (NSA): N80500* Management

10/5/28 (Item 28 from file: 109)
1054017 NSA-31-019676
Evaluation of plutonium at Enewetak Atoll (Dose commitment to human populations)
Wilson, D.W.; Ng, Y.C.; Robison, W.L.

California Univ., Livermore (USA). Lawrence Livermore Lab.
Corp. Source Code: 9500007
Publication Date: Jan 1975 39 p.
Conference title: 2. annual life sciences symposium on plutonium - health implications for man
Conference location: Los Alamos, New Mexico, USA
Conference date: 22 May 1974
Country of Publication: United States
Primary Report No.: UCRL--76436
Secondary Report No.: CONF-740550--4
Journal Announcement: NSA31
Availability: Dep. NTIS $5.00.
Document Type: Conference paper
Language: English
Subfile: NSA (Nuclear Science Abstracts)
Work Location: United States
Descriptors: *CESIUM 137--*RADIATION MONITORING; *COBALT 60--*RADIATION MONITORING; *ENIWETOK--*RADIATION MONITORING; *HUMAN POPULATIONS--* RADIATION DOSES; *PLUTONIUM 239--*RADIATION MONITORING; *PLUTONIUM 240--* RADIATION MONITORING; *STRONTIUM 91--*RADIATION MONITORING; DOSE COMMITMENTS; ECOSYSTEMS; ENVIRONMENT; FOOD CHAINS; RADIONUCLIDE KINETICS; RADIONUCLIDE MIGRATION; SAMPLING; SEAFOOD; SOILS; TIME DEPENDENCE
Subject Codes (NSA): N44500* Environmental & Earth Sciences--Site Surveys; N44340 Environmental & Earth Sciences--Radioactivity Monitoring & Transport--Ecosystems & Food Cycles; N44610 Environmental & Earth Sciences --Thermal Effluents--Atmosphere

10/5/29 (Item 29 from file: 109)
1054015 NSA-31-019674
Studies of concentrations of unreported long-lived radionuclides in biota and ocean sediments at Bikini and Eniwetok Atolls. Annual progress report, 1973--1974 (Monitoring of bomb-produced $sup 241$Am, $sup 259$Pu, $sup 240$Pu in sediments and marine biota)
Washington Univ., Seattle (USA). Lab. of Radiation Ecology
Corp. Source Code: 6816000
Publication Date: 1974 10 p.
Country of Publication: United States
Primary Report No.: RLO--2225-T18-14
Journal Announcement: NSA31
Availability: Dep. NTIS $4.00.
Document Type: Progress Report
Language: English
Subfile: NSA (Nuclear Science Abstracts)
Work Location: United States
Descriptors: *ALUMINIUM 26--*RADIATION MONITORING; *AMERICIUM 241--* RADIATION MONITORING; *BIKINI--*RADIATION MONITORING; *ENIWETOK--*RADIATION MONITORING; *PLUTONIUM 239--*RADIATION MONITORING; *PLUTONIUM 240--* RADIATION MONITORING; *POLONIUM 210--*RADIATION MONITORING; AQUATIC ECOSYSTEMS; ENVIRONMENT; FISHES; INVERTEBRATES; RADIOACTIVITY; RADIONUCLIDE KINETICS; RADIONUCLIDE MIGRATION; SAMPLING; SEAWATER; SEAWEEDS; SEDIMENTS
Subject Codes (NSA): N44500* Environmental & Earth Sciences--Site Surveys; N44340 Environmental & Earth Sciences--Radioactivity Monitoring & Transport--Ecosystems & Food Cycles

10/5/30 (Item 30 from file: 109)
1054014 NSA-31-019673
Distribution of alpha emitting radionuclides in sediments of Bikini Atoll lagoon (Distribution of nuclear weapon parent fissile materials in environment 16 years post-explosion)
Marshall, R.P.; Schell, W.R.
Washington Univ., Seattle (USA). Lab. of Radiation Ecology
Corp. Source Code: 6816000
Publication Date: 26 Jun 1974 53 p.
Country of Publication: United States
Primary Report No.: RLO--2225-T18-12 and App.
Journal Announcement: NSA31

Availability: Dep. NTIS $5.75.
Document Type: Report
Language: English
Subfile: NSA (Nuclear Science Abstracts)
Work Location: United States
Contract No.: AT(45-1)-2225
Descriptors: *AMERICIUM 241--*RADIATION MONITORING; *BIKINI--*RADIATION MONITORING; *PLUTONIUM 238--*RADIATION MONITORING; *PLUTONIUM 239--*RADIATION MONITORING; *PLUTONIUM 240--*RADIATION MONITORING; *SEDIMENTS--*RADIOACTIVITY; *SOILS--*RADIOACTIVITY; BOREHOLES; COASTAL WATERS; CRATERS; ENVIRONMENT; ISOTOPE RATIO; NUCLEAR EXPLOSIONS; NUCLEAR WEAPONS; SAMPLING; SURFACE CONTAMINATION; TESTING; TIME DEPENDENCE
Subject Codes (NSA): N44500* Environmental & Earth Sciences--Site Surveys; N44420 Environmental & Earth Sciences--Radiometric Techniques--Soil; N44430 Environmental & Earth Sciences--Radiometric Techniques--Water; N42500 Engineering--Nuclear Explosions

10/5/31 (Item 31 from file: 109)
1054013 NSA-31-019672
Concentrations and physical-chemical states of radionuclides in Bikini Atoll Lagoon water
Schell, W.R.
Washington Univ., Seattle (USA). Lab. of Radiation Ecology
Corp. Source Code: 6816000
Publication Date: Jun 1974 50 p.
Country of Publication: United States
Primary Report No.: RLO--2225-T18-10
Journal Announcement: NSA31
Availability: Dep. NTIS $5.50.
Document Type: Report
Language: English
Subfile: NSA (Nuclear Science Abstracts)
Work Location: United States
Contract No.: AT(45-1)-2225
Descriptors: *AMERICIUM 241--*RADIATION MONITORING; *BIKINI--*RADIATION MONITORING; *BISMUTH 207--*RADIATION MONITORING; *COBALT 60--*RADIATION MONITORING; *ENIWETOK--*RADIATION MONITORING; *EUROPIUM 155--*RADIATION MONITORING; *IRON 55--*RADIATION MONITORING; *PLUTONIUM 239--*RADIATION MONITORING; *PLUTONIUM 240--*RADIATION MONITORING; *SEAWATER--*RADIATION MONITORING; *URANIUM 238--*RADIATION MONITORING; AQUATIC ECOSYSTEMS; ENVIRONMENT; RADIOACTIVITY; RADIOMETRIC ANALYSIS; SAMPLE PREPARATION; SAMPLING; SEDIMENTS
Subject Codes (NSA): N44500* Environmental & Earth Sciences--Site Surveys; N44430 Environmental & Earth Sciences--Radiometric Techniques--Water; N44340 Environmental & Earth Sciences--Radioactivity Monitoring & Transport--Ecosystems & Food Cycles

10/5/32 (Item 32 from file: 109)
1054012 NSA-31-019671
Polonium-210 and plutonium-239, 240 in biological samples of Bikini and Eniwetok Atoll waters
Nevissi, A.; Schell, W.R.
Washington Univ., Seattle (USA). Lab. of Radiation Ecology
Corp. Source Code: 6816000
Publication Date: Jun 1974 21 p.
Country of Publication: United States
Primary Report No.: RLO--2225-T18-8
Journal Announcement: NSA31
Availability: Dep. NTIS $4.25.
Document Type: Report
Language: English
Subfile: NSA (Nuclear Science Abstracts)
Work Location: United States
Contract No.: AT(45-1)-2225
Descriptors: *BIKINI--*RADIATION MONITORING; *ENIWETOK--*RADIATION MONITORING; *PLUTONIUM 239--*RADIATION MONITORING; *PLUTONIUM 240--*

RADIATION MONITORING; *POLONIUM 210--*RADIATION MONITORING; AQUATIC ECOSYSTEMS; ENVIRONMENT; FISHES; INVERTEBRATES; RADIOACTIVITY; RADIOMETRIC ANALYSIS; RADIONUCLIDE KINETICS; RADIONUCLIDE MIGRATION; SAMPLE PREPARATION ; SAMPLING; SEAWATER; SEAWEEDS
Subject Codes (NSA): N44500* Environmental & Earth Sciences--Site Surveys; N44340 Environmental & Earth Sciences--Radioactivity Monitoring & Transport--Ecosystems & Food Cycles; N44430 Environmental & Earth Sciences --Radiometric Techniques--Water

10/5/33 (Item 33 from file: 109)
1053559 NSA-31-019218
Rapid measurements of total alpha radioactivity in sediments of Bikini Atoll lagoon
Marshall, R.P.; Schell, W.R.
Washington Univ., Seattle (USA). Lab. of Radiation Ecology
Corp. Source Code: 6816000
Publication Date: 3 Jul 1974 25 p.
Country of Publication: United States
Primary Report No.: RLO--2225-T18-13
Journal Announcement: NSA31
Availability: Dep. NTIS $4.25.
Document Type: Report
Language: English
Subfile: NSA (Nuclear Science Abstracts)
Work Location: United States
Contract No.: AT(45-1)-2225
Descriptors: *ALPHA SOURCES--*RADIOMETRIC ANALYSIS; *SEDIMENTS--* RADIOMETRIC ANALYSIS; BIKINI; CHEMICAL ANALYSIS
Subject Codes (NSA): N40130* Chemistry--Analytical & Separations Chemistry--Radiometric & Radiochemical Procedures

10/5/34 (Item 34 from file: 109)
1037920 NSA-31-003412
Levels of environmental radioactivity in Bikini Atoll (Survey 1967 through 1972)
McCraw, T.F.
USAEC, Washington, D.C.
Corp. Source Code: 6549500
Publication Date: [nd] 13 p.
Primary Report No.: WASH--1289
Journal Announcement: NSA31
Availability: Dep. NTIS $4.00.
Document Type: Report
Language: English
Subfile: NSA (Nuclear Science Abstracts)
Work Location: United States
Descriptors: *BIKINI--*RADIATION MONITORING; *CESIUM 137--*RADIATION MONITORING; *COBALT 60--*RADIATION MONITORING; *HUMAN POPULATIONS--* RADIATION HAZARDS; DOSE RATES; ENVIRONMENT; RADIATION DOSES; RADIOACTIVITY; VARIATIONS
Subject Codes (NSA): N44500* Environmental & Earth Sciences--Site Surveys

10/5/35 (Item 35 from file: 109)
1037891 NSA-31-003383
Transuranics at Pacific Atolls. I. Concentrations in the waters at Eniwetak and Bikini
Noshkin, V.E.; Wong, K.M.; Eagle, R.J.; Gatrousis, C.
California Univ., Livermore (USA). Lawrence Livermore Lab.
Corp. Source Code: 9500007
Publication Date: 26 Jun 1974 32 p.
Primary Report No.: UCRL--51612
Journal Announcement: NSA31
Availability: Dep. NTIS $4.00.
Document Type: Report
Language: English

5003529

Subfile: NSA (Nuclear Science Abstracts)
Work Location: United States
Contract No.: W-7405-ENG-48
Descriptors: *AMERICIUM 241--*RADIATION MONITORING; *BIKINI--*RADIATION MONITORING; *CESIUM 137--*RADIATION MONITORING; *COASTAL WATERS--*RADIONUCLIDE MIGRATION; *ENIWETOK--*RADIATION MONITORING; *NEPTUNIUM 237--*RADIATION MONITORING; *PLUTONIUM 238--*RADIATION MONITORING; *PLUTONIUM 239--*RADIATION MONITORING; *PLUTONIUM 240--*RADIATION MONITORING; *PLUTONIUM 241--*RADIATION MONITORING; *STRONTIUM 90--*RADIATION MONITORING; AQUATIC ECOSYSTEMS; CHEMICAL STATE
Subject Codes (NSA): N44330* Environmental & Earth Sciences--Radioactivity Monitoring & Transport--Water

10/5/36 (Item 36 from file: 109)
1029401 NSA-30-029452
Results and data analysis: resuspension element status report
Dynamics of plutonium in desert environments. Nevada Applied Ecology Group progress report as of January 1974 (Resuspension of $sup 239$Pu, $sup 240$Pu, and $sup 241$Am particles at Nevada Test Site;prediction of air concentrations of Pu due to resuspension at Eniwetok Atoll)
Anspaugh, L.R.; Phelps, P.L.
Univ. of California, Livermore
Dunaway, P.B.; White, M.G. (eds.)
USAEC Nevada Operations Office, Las Vegas
Corp. Source Code: 6602000
Publication Date: Jul 1974 265-297 p.
Primary Report No.: NVO-AEIC--74-1
Report No., Pages: NVO-AEIC--74-1 PP. 265-297
Journal Announcement: NSA30
Document Type: Progress Report
Language: English
Subfile: NSA (Nuclear Science Abstracts)
Work Location: United States
Descriptor Groups (Splits): AERODYNAMICS--AIR SAMPLERS--AMERICIUM 241--CASCADE IMPACTORS--DIFFUSION--ENVIRONMENT--METEOROLOGY--NEVADA TEST SITE--PARTICLE SIZE--PLUTONIUM 239--PLUTONIUM 240--RADIATION MONITORING--RADIOACTIVE AEROSOLS--SAMPLING--SOILS--SURFACE AIR--SURFACE CONTAMINATION

AERODYNAMICS--ENIWETOK--ENVIRONMENT--HUMAN POPULATIONS--INGESTION--INHALATION--MAN--PLUTONIUM 239--PLUTONIUM 240--RADIATION HAZARDS--RADIATION MONITORING--RADIOACTIVE AEROSOLS--RADIOACTIVITY--SOILS--SURFACE AIR--SURFACE CONTAMINATION
Subject Codes (NSA): N44500* Environmental & Earth Sciences--Site Surveys; N44310 Environmental & Earth Sciences--Radioactivity Monitoring & Transport--Atmosphere; N48510 Life Sciences--Radiation Effects on Animals--Man; N48610 Life Sciences--Radionuclide Effects (Internal Source)--Man

10/5/37 (Item 37 from file: 109)
1024322 NSA-30-024367
Study of the physiological function and histological changes of thyroids irradiated with radioactive iodine. Progress report, October 1, 1973--September 30, 1974 ($sup 131$I)
Dobyns, B.M.
Case Western Reserve Univ., Cleveland, Ohio (USA)
Corp. Source Code: 1229000
Publication Date: 30 Jun 1974 18 p.
Primary Report No.: COO--1784-30
Journal Announcement: NSA30
Availability: Dep. NTIS $4.00.
Document Type: Progress Report
Language: English
Subfile: NSA (Nuclear Science Abstracts)
Work Location: United States
Contract No.: AT(11-1)-1784
Descriptors: *HYPERTHYROIDISM--*RADIOTHERAPY; *IODINE 131--*BIOLOGICAL RADIATION EFFECTS; *NEOPLASMS--*RADIOINDUCTION; *THYROID--*BIOLOGICAL

RADIATION EFFECTS; ANIMAL CELLS; CHILDREN; FALLOUT; GENETIC RADIATION EFFECTS; HISTOLOGY; KINETICS; LIFE SPAN; MAN; MARSHALL ISLANDS; PHYSIOLOGY; RATS; UTAH
Subject Codes (NSA): N48610* Life Sciences--Radionuclide Effects (Internal Source)--Man; N48620 Life Sciences--Radionuclide Effects (Internal Source)--Animals

10/5/38 (Item 38 from file: 109)
1023964 NSA-30-024009
Enewetak radiological survey (Radioactivity from $sup 239$Pu, $sup 137$Cs, $sup 60$Co, and $sup 90$Sr at various locations and soil depths)
USAEC Nevada Operations Office, Las Vegas
Corp. Source Code: 6602000
Publication Date: Oct 1973 687 p.
Primary Report No.: NVO--140(Vol.3)
Journal Announcement: NSA30
Availability: Nevada Operations Office.
Document Type: Report
Language: English
Subfile: NSA (Nuclear Science Abstracts)
Work Location: United States
Descriptors: *CESIUM 137--*RADIATION MONITORING; *COBALT 60--*RADIATION MONITORING; *ENIWETOK--*RADIATION MONITORING; *PLUTONIUM 239--*RADIATION MONITORING; *STRONTIUM 90--*RADIATION MONITORING; AERIAL MONITORING; ANIMALS; COLOR; DATA COMPILATION; DEPTH; ENVIRONMENT; ISLANDS; PHOTOGRAPHY; PLANTS; RADIOACTIVITY; SAMPLING; SOILS
Subject Codes (NSA): N44500* Environmental & Earth Sciences--Site Surveys; N44300 Environmental & Earth Sciences--Radioactivity Monitoring & Transport

10/5/39 (Item 39 from file: 109)
1023963 NSA-30-024008
Enewetak radiological survey (Radioactivity from $sup 239$Pu, $sup 90$Sr, $sup 137$Cs, and $sup 60$Co at various locations and soil depths)
USAEC Nevada Operations Office, Las Vegas
Corp. Source Code: 6602000
Publication Date: Oct 1973 617 p.
Primary Report No.: NVO--140(Vol.2)
Journal Announcement: NSA30
Availability: Nevada Operations Office.
Document Type: Report
Language: English
Subfile: NSA (Nuclear Science Abstracts)
Work Location: United States
Descriptors: *CESIUM 137--*RADIATION MONITORING; *COBALT 60--*RADIATION MONITORING; *ENIWETOK--*RADIATION MONITORING; *PLUTONIUM 239--*RADIATION MONITORING; *STRONTIUM 90--*RADIATION MONITORING; AERIAL MONITORING; COLOR; DATA COMPILATION; DEPTH; ENVIRONMENT; ISLANDS; PHOTOGRAPHY; RADIOACTIVITY; SAMPLING; SOILS
Subject Codes (NSA): N44500* Environmental & Earth Sciences--Site Surveys; N44300 Environmental & Earth Sciences--Radioactivity Monitoring & Transport

10/5/40 (Item 40 from file: 109)
1023962 NSA-30-024007
Enewetak radiological survey (Ecology and human diet in relation to reinhabitation health hazards)
USAEC Nevada Operations Office, Las Vegas
Corp. Source Code: 6602000
Publication Date: Oct 1973 747 p.
Primary Report No.: NVO--140(Vol.1)
Journal Announcement: NSA30
Availability: Nevada Operations Office.
Document Type: Report
Language: English
Subfile: NSA (Nuclear Science Abstracts)

5003531

Work Location: United States
Descriptors: *CESIUM 137--*RADIATION MONITORING; *COBALT 60--*RADIATION MONITORING; *ENIWETOK--*RADIATION MONITORING; *FALLOUT DEPOSITS--* VARIATIONS; *HUMAN POPULATIONS--*RADIATION DOSES; *PLUTONIUM 239--* RADIATION MONITORING; *STRONTIUM 90--*RADIATION MONITORING; AERIAL MONITORING; ANIMALS; BODY; ENVIRONMENT; EXTERNAL IRRADIATION; FOOD CHAINS; GAMMA SOURCES; HEALTH HAZARDS; INGESTION; INHALATION; INTERNAL IRRADIATION; ISLANDS; PLANTS; RADIOACTIVITY; RADIONUCLIDE KINETICS; RADIONUCLIDE MIGRATION; SAMPLING; SKELETON; SOILS; TERRESTRIAL ECOSYSTEMS; TIME DEPENDENCE
Subject Codes (NSA): N44500* Environmental & Earth Sciences--Site Surveys; N44340 Environmental & Earth Sciences--Radioactivity Monitoring & Transport--Ecosystems & Food Cycles

10/5/41 (Item 41 from file: 109)
1003603 NSA-30-003608
14 deaths among 165 serious radiation cases since 1945
(Perspective on radiation accidents)
Majborn, B.
Danish Atomic Energy Commission, Risoe
Ingenioer-nytt, v. 10, no. 6, pp. 3-5
Publication Date: 8 Feb 1974
Coden: IGNTB
Journal Announcement: NSA30
Document Type: Journal Article
Language: Norwegian
Subfile: NSA (Nuclear Science Abstracts)
Work Location: Norway
Descriptors: *RADIATION ACCIDENTS--*RADIATION INJURIES; *REACTOR ACCIDENTS--*RADIATION INJURIES; CRITICALITY; DEATH; FALLOUT; KLYSTRONS; MARSHALL ISLANDS; SEALED SOURCES; SL-1 REACTOR; X RADIATION
Subject Codes (NSA): N48510* Life Sciences--Radiation Effects on Animals --Man

10/5/42 (Item 42 from file: 109)
884470 NSA-18-017491
RADIATION AND CAUSE OF SICKNESS
Meyer, L.M.
South Nassau Communities Hospital, Oceanside, N.Y.
American Journal of Public Health, Supplement (U.S.) v 54.
Publication Date: Jan. 1964 51-6 p.
Coden: AJHSA
Journal Announcement: NSA18
Document Type: Journal Article
Language: English
The health status of a group of people exposed to accidental Eallout in March, 1954, following the detonation of an experimental nuclear device at the Bikini testing site in the Marshall Islands, is reported. In addition to the 23 Japanese fishermen, the largest fallout exposure was sustained by 64 inhabitants on the Island of Rongelap, 105 miles from the detonation site. This gave an estimated dose of 175 r of whole-body gamma radiation, contamination of skin sufficient to result in BETA -ray burns, and slight internal absorption of radioactive materials through inhalation and ingestion. Medical examinatio- n of these subjects nine yr after exposure showed slight reductions of all blood cell counts below control levels, but well within the normal range; retardation of growth of male children, especially those exposed at ages 12 to 18 months; complete healing of skin burns, with occasional areas of depigmentation and isolated instances of benign pigmented nevi; complete regrowth of hair in persons sulfering epilation; and no instances of leukemia, malignancy, suggestion of increase in the aging process, or decrease in the fertility rate. Whole-body courts of exposed and control subjects were made in 1958 and 1961. Body burdens of various fission products are presented. (BBB)
Descriptors: ABSORPTION; ACCIDENTS; AGE; BETA PARTICLES; BIKINI; BLOOD CELLS; BODY; BURNS; CARCINOGENESIS; CONTAMINATION; CONTROL; DEPOSITS; DISEASES; FALLOUT; FISSION PRODUCTS; GAMMA RADIATION; HAIR;

INTESTINE; LEUKEMIA; LUNGS; MAN; MARSHALL ISLANDS; MEDICINE; NUCLEAR EXPLOSIONS; PIGMENTS; POPULATIONS; PREGNANCY; QUANTITY RATIO; RADIATION DOSES; RADIATION EFFECTS; RADIATION INJURIES; RADIATION SICKNESS; RADIOACTIVITY; RADIOISOTOPES; RADIOSENSITIVITY; RECOVERY; REGENERATION; REPRODUCTION; SKIN; STANDARDS; THERMAL RADIATION; VARIATIONS

Subject Codes (NSA): BIOLOGY AND MEDICINE

10/5/43 (Item 43 from file: 109)
882823 NSA-18-015843

LONG-TERM INTRAORAL FINDINGS IN HUMANS AFTER EXPOSURE TO TOTAL-BODY IRRADIATION FROM SUDDEN RADIOACTIVE FALLOUT. I. FIVE-YEAR POSTDETONATION STUDIES

Lyon, H.W.; Conard, R.A.; Glassford, K.F.
Naval Medical Research Inst., Bethesda, Md.
J. Am. Dental Assoc. v 68.
Publication Date: Jan. 1964 31-8 p.
Secondary Report No.: BNL-6983
Note: BNL-6983
Journal Announcement: NSA18
Document Type: Journal Article
Language: English

The intraoral clinical findings obtained in March 1959 on Marshallese natives 5 yr after exposure to total-body irradiation from sudden, significant quantities of radioactive fallout are described. This fallout was precipitated on Rongerik atoll, Rongelap atoll, Ailingnae, and Uterik in the Marshall Islands after detonation of a 15-Mt thermonuclear test device at the Bikini Proving Grounds in February 1954. As a result, 239 Marshallese were accidentally exposed to total-body irradiation ranging from 14 to 175 r. Examinations disclosed similar degrees of caries activity in irradiated and nonirradiated children. Although the prevalence of periodontal disease was practically identical in both the irradiated and nonirradiated groups, the extent of periodontal destruction was greater in the irradiated Rongelapese. This difference may or may not be related to factors such as leukopenia and lower tissue resistance and the presence of preexisting periodontal disease. Children born of irradiated parents, including those children in utero at the time of initial exposure, and irradiated children 6 to 18 yr old, showed no evidence of any morphologic effects on oral tissues from total-body irradiation when compared with the nonirradiated control groups. No evidence of intraoral neoplasm was noted; however, one 42-yr-old irradiated Rongelap man had a small leukoplakic-like lesion on the gingiva. No clear relation of radintion exposure in the Rongelap people to the higher levels of periodontal destruction in this group is suggested. Because of the generally substandard levels of oral hygiene among the Marshallese, it is likely that the disease was prevalent at the time of their radiation exposure. However, the period of leukopenia after this group's exposure might have enhanced the progress of periodontal disease, although they showed no evidence of increased infection, oral or otherwise, or bleeding tendency during the period of leukopenia and thrombocytopenia. (BBB)

Descriptors: AGE; BLOOD CELLS; CANCER; FALLOUT; HEMORRHAGE; INFECTIONS; LEUCOCYTES; MAN; MEDICINE; NUCLEAR EXPLOSIONS; PACIFIC OCEAN; PLATELETS; POPULATIONS; PREGNANCY; QUANTITY RATIO; RADIATION DOSES; RADIATION INJURIES; TEETH; TISSUES

Subject Codes (NSA): BIOLOGY AND MEDICINE

10/5/44 (Item 44 from file: 109)
872465 NSA-18-005482

RADIOACTIVITY IN THE BIOTA AT ISLANDS OF THE CENTRAL PACIFIC, 1954-1958

Palumbo, R.F.
Washington. Univ., Seattle. Lab. of Radiation Biology
Publication Date: Feb. 15, 1962 65 p.
Primary Report No.: UWFL-79
Journal Announcement: NSA18
Document Type: Report
Language: English

Contract No.: AT(45-1)-1385
Results are summarized from measurements of radioactivity in the biota at the Eniwetok Proving Grounds and Islands adjacent to the test site during and after Operation Castle in 1954, Operation Redwing in 1956, and Operation Hardtack in 1958. Measurements were also made of radioactivity in tuna from the western Pacific and Indian Oceans during and after Operation Hardtack. Off-site collection areas included locations in the Marshall, Caroline, and Gilbert Islands. (C.H.)
Descriptors: ENIWETOK; INDIAN OCEAN; MARSHALL ISLANDS; MEASURED VALUES; NUCLEAR EXPLOSIONS; PROJECT CASTLE; PROJECT HARDTACK; PROJECT REDWING; RADIOACTIVITY; SEA
Subject Codes (NSA): GEOLOGY AND MINERALOGY

10/5/45 (Item 45 from file: 109)
868874 NSA-18-001888
THE EFFECTS OF ATOMIC WEAPONS ON GLAZING AND WINDOW CONSTRUCTION. ANNEX 3.5 OF SCIENTIFIC DIRECTOR'S REPORT OF ATOMIC WEAPON TESTS AT ENIWETOK. 1951. OPERATION GREENHOUSE
Clark, W.C.
Public Buildings Service, Washington, D.C.
Publication Date: Aug. 1951 79 p.
Primary Report No.: WT-7
Journal Announcement: NSA18
Document Type: Report
Language: English
BS>Various types of wood, steel, and aluminum window construction, glazed with plastic and different kinds of glass, were installed on four sides of a test structure during the greenhouse tests in order to determine their relative resistance to an atomic blast. The degree of protection from flying glass provided by mounting Venetian blinds, insect screens, and 1/4-in. mesh wire netting on the inside of window openings was also determined. The best results seem to indicate that the resistances of different types of glass to an atomic blast are approximately proportional to their strength in supporting static loads. Glass mounted in a rigid frame is less likely to be broken than if mounted in a flexible frame which may be distorted by the blast. Fragments from wire or safety glass are less dangerous to personnel than fragments from other types of glass, and plastic is less likely to break than glass, Commercial types of Venetian blinds and insect screens afforded littie or no protection against flying glass fragments at the distance at which tested; however, a blind with some of the parts reinforced and properly anchored to the window opening would. probably give some protection at a distance of 3 miles from the explosion or if closed, would probably give tull protection against heat waves at 2 miles. Wire netting with 1/4-in. mesh installed on the inside of window openings proved effective in stopping all except very small glass fragments. Lightweight, double-hung, wooden windows with sashes glazed with small panes supported by narrow muntins offer little resistance to an atomic blast. Although much valuable data were obtained, it was concluded that additional investigations are needed. (auth)
Descriptors: ACCIDENTS; ALUMINUM; DEFORMATION; FAILURES; GLASS; MAN; MECHANICAL STRUCTURES; NUCLEAR EXPLOSIONS; POLYMERS; SAFETY; SHOCK WAVES; TESTING; WEIGHT; WINDOWS; WIRES; WOOD
Subject Codes (NSA): ENGINEERING

10/5/46 (Item 46 from file: 109)
868434 NSA-18-001448
THE TREATMENT OF RADIATION INJURY
National Research Council. Committee on Pathologic Effects of Atomic Radiation
Publication Date: 1963 23 p.
Primary Report No.: NAS-NRC-Pub-1134
Journal Announcement: NSA18
Document Type: Report
Language: English
The symptoms andd treatment of acute radiation injuries in man are discussed. It is pointed out that the acute radiation syndrome following

whole-body irradiation varies in both nature and severity, depending upon the dose, dose rate, dose distribution, and individual susceptibility. Signs and symptoms of central nervous system involvement appear immediately after high doses of penetrating radiation. Lower doses are followed by a latent period of apparent well-being, that lssts until pathological changes, initiated at the time of exposure, are sufficiently advanced to be manifest by clinical disturbances of the gastrointestinal tract, hemopoietic system, or both. Early symptomology is a useful guide to management and the treatment must be determined by the type and extent of injury. Fluid balance and daily weight should be measured and prophylactic doses of andtibiotics given if indicated. Tranquilizers and sedation may be used to relieve the apprehension of the patient. Blood transfusions are of no value except in the case of severe anemia or rapid blood loss andd blood platelets should be given only when there is a lifethreatening hemorrhagic diathesis. Measures should be taken to reduce physical stresses, and judicious medical care given. External contanminants should be removed as promptly as possible. The administration of chelating agents in the case of the ingestion of large quantities of radioactive nuclides and of Lugol's solution to reduce I/sup 131/ uptake by the thyroid are discussed. Data are appended on the treatment of persons exposed in the Marshall Islandds accident in 1954, the Y-12 accident in 1958, andd the Lockport accident in 1980. (C.H.)

Descriptors: ANEMIA ANTIBIOTICS BLOOD BLOOD CELLS BLOOD FORMATION BODY BRAIN DISTRIBUTION DRUGS HEMORRHAGE INTESTINE LIQUIDS MAN MEDICINE PLATELETS RADIATION DOSES RADIATION INJURIES RADIOSENSITIVITY STOMACH TRANQUILLIZERS TRANSFUSIONS TRANSPLANTS VARIATIONS WEIGHT; ACCIDENTS CHELATES CONTAMINATION INTESTINE IODINE IODINE 131 MAN MARSHALL ISLANDS MEDICINE METABOLISM ORNL QUANTITY RATIO RADIOISOTOPES REACTORS SOLUTIONS THYROID VARIATIONS Y-12

Subject Codes (NSA): BIOLOGY AND MEDICINE

10/5/47 (Item 47 from file: 109)
868429 NSA-18-001443

PATHOGENESIS AND REGENERATION OF RADIATION INDUCED BONE MARROW INJURY, AND THERAPEUTIC IMPLICATIONS

Fliedner, T.M.; Cronkite, E.P.; Bond, V.P.

Brookhaven National Lab., Upton, N.Y.

Strahlentherapie, Sonderbaende v 51.

Publication Date: 1962 263-78 p.

Journal Announcement: NSA18

Document Type: Journal Article

Language: English

The hematological data of patients of 4 radiation accidents (Rongelap 1954, Oak Ridge 1958, Vinca 1958, Lockport 1960) are reviewed and compared. The blood cell curves appear to show three phases. These are an initial phase (about 8 to 10 days), a phase of transient or abortive regenerations, and a phase of final effective recovery. These phases in the blood are preceded and caused by particular events in the bone marrow. Evidence was brought forward that transient rises in leukocytes and reticulocytes associated with a delayed platelet disappearance curve are associated with a marrow capable of spontaneous recovery. In patients with inhomogenous totalbody irradiation, the transient rise may lead directly of effective recovery. Immediate decline of all blood cell elements without evidence of further, even abortive attempts of marrow regeneration must be considered as evidence for a lethal bone marrow dose andd extremely serious complications may be expected. The clinical implications of these analyses are outlined and the diagnostic possibilities described. (auth)

Descriptors: ACCIDENTS; BLOOD CELLS; BODY; BONE MARROW; DIAGNOSIS; DIAGRAMS; DISTRIBUTION; ERYTHROCYTES; LETHAL DOSE; LEUCOCYTES; MAN; PLATELETS; QUANTITY RATIO; RADIATION DOSES; RADIATION INJURIES; RECOVERY; REGENERATION; RETICULOCYTES; VARIATIONS

Subject Codes (NSA): BIOLOGY AND MEDICINE

10/5/48 (Item 48 from file: 109) 5003535
859870 NSA-29-024481

Annual report for National Institute of Radiological Sciences, for fiscal

1971
National Inst. of Radiological Sciences, Chiba (Japan)
Corp. Source Code: 4485000
Publication Date: 1 Oct 1972 130 p.
Primary Report No.: NIRS-AR--14
Journal Announcement: NSA29
Availability: NTIS (US Sales Only).
Document Type: Report
Language: Japanese
Subfile: NSA (Nuclear Science Abstracts)
Work Location: Japan

The annual report described the research for survey, technical cooperation, training, medical examination, management of the Tokai branch, and library service in 1971. As special studies from last year, the implantation of hematopoietic organs in the radio-medical field and the medical usage of neutron beams were studied. Cyclotron equipment for utilizing neutron rays is scheduled to be completed at the end of 1973. In this year the study was done by Van de Graaff accelerator. The subjects in this year were collection and management of gamma camera data and intestinal bacterial flora to insert into SPF mice. In the annual studies, there were 71 subjects including 7 new subjects in this year, and these subjects were studied independently with a long-term plan in 12 sections. Studies on survey in the sea, centering at the marine laboratory, were concerned with concentration of radionuclides in flsh, shell-flsh, and seaweeds by radioisotope tracer and quantitative analysis of stable isotope, development of monitoring method for radioactivity in the marine organisms, and estimation of radiation exposure dose in human body accompanied with radiation pollution at the coast. The research on the actual condition were done on survey of Bikini victims, survey of the working environment using uranium fuel, and national dose for medical radiation. (JA)

Descriptors: *FISHES--*RADIATION MONITORING; *RADIOBIOLOGY--*RESEARCH PROGRAMS; BUDGETS; GAMMA CAMERAS; INTESTINES; JAPAN; MANAGEMENT; MICE; NEUTRON BEAMS; NUCLEAR MEDICINE; PERSONNEL; RADIOACTIVITY; TRACER TECHNIQUES

Subject Codes (NSA): N48510* Life Sciences--Radiation Effects on Animals --Man; N44340 Environmental & Earth Sciences--Radioactivity Monitoring & Transport--Ecosystems & Food Cycles; N48830 Life Sciences--New Tracer Techniques--Other

10/5/49 (Item 49 from file: 109)
848478 NSA-29-013015
Effect of ionizing radiation on populations (radiation-genetic aspects)
Radioecology
Dubinin, N.P.; Shevchenko, V.A.; Pomerantseva, M.D.
Klechkovskii, V.M. (ed.)
Publication Date: 1973 157-196 p.
Publ: John Wiley and Sons, Inc., New York
Journal Announcement: NSA29
Document Type: Book Analytic
Language: English
Subfile: NSA (Nuclear Science Abstracts)
Work Location: SU

The genetic effects of ionizing radiation on populations are reviewed. A discussion is presented of factors affecting radiosensitivity of organisms such as number of chromosomes, ploidy, and molecular weight of nucleic acids. ln a discussion of radioresistance it is pointed out that the resistance of cells and organisms to radiation varies with the sensitivity of genetic material in the cellular and ontogenetic cycles. Effects of short-term irradiation on populations including studies on fruit flies, algae, and Bikini Island populations are reviewed. Genetic load dynanaics in long-term irradiation of populations are also reviewed. Other topics considered are effects of ionizing radiation on populations of laboratory mammals and genetic adaptation of populations to long-tearm irradiation. (HLW)

Descriptors: *ALGAE--*GENETIC RADIATION EFFECTS; *ANIMAL CELLS--*

RADIOSENSITIVITY; *DROSOPHILA--*GENETIC RADIATION EFFECTS; *GENETIC RADIATION EFFECTS--*REVIEWS; *PLANT CELLS--*RADIOSENSITIVITY; *POPULATIONS --*GENETIC RADIATION EFFECTS; BIOLOGICAL RADIATION EFFECTS; CHROMOSOMES; CHRONIC IRRADIATION; GENETICS; HUMAN POPULATIONS; IONIZING RADIATIONS; MOLECULAR WEIGHT; NUCLEIC ACIDS; PLOIDY
Subject Codes (NSA): N48510* Life Sciences--Radiation Effects on Animals --Man; N48520 Life Sciences--Radiation Effects on Animals--Vertebrates; N48410 Life Sciences--Radiation Effects on Plants--Basic Studies; N48530 Life Sciences--Radiation Effects on Animals--Invertebrates

10/5/50 (Item 50 from file: 109)
848468 NSA-29-013005
Exposure rate reduction on Bikini Island due to concrete dwellings
McCraw, T.F.; Lynch, O.D.T. Jr.
USAEC Nevada Operations Office, Las Vegas. Radiological Operations Div.
Corp. Source Code: 9500450
Publication Date: Jun 1973 8 p.
Primary Report No.: WASH--1273
Journal Announcement: NSA29
Availability: NTIS $4.00.
Document Type: Report
Language: English
Subfile: NSA (Nuclear Science Abstracts)
Work Location: United States
During the May 1972 AEC sponsored resurvey of Bikini Atoll Measurements were made to determine the reduction of gamma exposure rates at dwelling sites due to the shielding effect of the concrete structures being erected for occupancy by the returning Bikini people. Exposure rates were measured at several points around and within each dwelling. Results showed that exposure rates present from radioactivity remaining post nuclear testing are reduced within the concrete dwellings by a significant amount. Upon completion of the housing construction effont, an exposure reduction factor of about 50% may apply. This is about what was expected provided materials of construction contained low levels of radioactivity. Even greater reduction can be expected when the housing area is covered with one to two inches of coral gravel as has been recommended. Depending on the occupancy time for residents of these houses, total exposure to external radiation can be expected to be reduced accordingly. External exposure rates measured ranged from 7 to 55 mu R/hr, with an arithmetic mean value of 20 mu R/hr. (CH)
Descriptors: *BIKINI--*RADIATION DOSES; *BUILDING MATERIALS--*RADIATION PROTECTION; *HUMAN POPULATIONS--*RADIATION DOSES; BUILDINGS; CONCRETES; DOSE RATES; EARTH CRUST; ENVIRONMENT; EXTERNAL IRRADIATION; FALLOUT DEPOSITS; GAMMA SOURCES; NUCLEAR EXPLOSIONS; RADIOACTIVITY; SHIELDING MATERIALS; TIME DEPENDENCE
Subject Codes (NSA): N48510* Life Sciences--Radiation Effects on Animals --Man; N72400 Physics (Radiation & Shielding)--Shielding Calculations & Experiments

10/5/51 (Item 51 from file: 109)
843548 NSA-29-008069
Cancer induction in man from internal radioactivity
Mays, C.W.
Univ. of Utah, Salt Lake City
Health Phys., v. 25, no. 6, pp. 585-592
Publication Date: Dec 1973
Coden: HLTPA
Journal Announcement: NSA29
Document Type: Journal Article
Language: English
Subfile: NSA (Nuclear Science Abstracts)
Work Location: United States
The indicated malignancies have been induced in exposed persons by the following radionuclides and their decay products- /sup 222/Rnuranium miners -- lung carcinomas; /sup 226/Ra-- dial painters --bone sarcomas and sinus carcinomas; /sup 232/Th-- thorotrast cases -- liver cancers; /sup 224/Ra-

German patients-- bone sarcomas; /sup 32/P -- polycythemia patients -leukemia; and /sup 131/I- Marshall Islanders- thyroid tumors. Each of these examples is discussed in turn. (auth)
Descriptors: INTERNAL IRRADIATION; MAN; RADIATION SOURCES
Descriptor Groups (Splits): LEUKEMIA--PATIENTS--PHOSPHORUS 32--POLYCYTHEMIA
CARCINOMAS--MINERS--RADON 222--URANIUM

DIAL PAINTERS--OSTEOSARCOMAS--RADIUM 226

GERMAN FEDERAL REPUBLIC--OSTEOSARCOMAS--PATIENTS--RADIUM 224

HEPATOMAS--THORIUM 232--THOROTRAST

IODINE 131--MARSHALL ISLANDS--THYROID
Subject Codes (NSA): N48610* Life Sciences--Radionuclide Effects (Internal Source)--Man

10/5/52 (Item 52 from file: 109)
843544 NSA-29-008065
Cancer induction in man from internal radioactivity
Research in radiobiology
Mays, C.W.
Univ. of Utah, Salt Lake City
Utah Univ., Salt Lake City (USA). Coll. of Medicine
Corp. Source Code: 6636000
Publication Date: 31 Mar 1973 378-400 p.
Primary Report No.: COO--119-248
Report No., Pages: COO--119-248 PP. 378-400
Journal Announcement: NSA29
Document Type: Report Analytic
Language: English
Subfile: NSA (Nuclear Science Abstracts)
Work Location: United States
In research in radiobiology. The indicated malignancies have been induced in exposed persons by the following radionuclides and their decay products: /sup 22/Rn--uranium miners --lung carcinomas; /sup 226/Ra--dial painters -bone sarcomas and sinus carcinomas; /sup 232/Th --thorotrast cases-liver cancers- /sup 224/Ra -- German patients -bone sarcomas- /sup 32/P -polycythemia patients --leukemia- and /sup 131/I --Marshall islanders --thyroid tumors. Each of these examples is discussed in turn. (auth)
Descriptors: INTERNAL IRRADIATION
Descriptor Groups (Splits): RADIOINDUCTION

CARCINOMAS--DIAL PAINTERS--RADIUM 226--SARCOMAS--SKELETON

LIVER--NEOPLASMS--PATIENTS--THORIUM 232

IODINE 131--MAN--MARSHALL ISLANDS--NEOPLASMS--THYROID

LEUKEMIA--PATIENTS--PHOSPHORUS 32

PATIENTS--RADIUM 224--SARCOMAS--SKELETON

CARCINOMAS--LUNGS--MINERS--RADON 222
Subject Codes (NSA): N48610* Life Sciences--Radionuclide Effects (Internal Source)--Man; N48710 Life Sciences--Nuclide Kinetics & Toxicology --Man

10/5/53 (Item 53 from file: 109)
840596 NSA-29-005113
Aerial radiological survey of Eniwetok Atoll
Stuart, T.P. ; Hendricks, T.J.; Gudiksen, P.H.; Jones, D.E.; Lynch, O.D.T.
EG and G, Inc., Las Vegas, NV
Trans. Amer. Nucl. Soc., v. 17, p. 540

Publication Date: Nov 1973
Coden: TANSA
Conference title: Joint meeting of the American Nuclear Society and the Atomic Industrial Forum and Nuclear Energy Exhibition
Conference location: San Francisco, California, USA
Conference date: 11 Nov 1973
Note: See CONF-731101--
Journal Announcement: NSA29
Document Type: Journal Article
Language: English
Subfile: NSA (Nuclear Science Abstracts)
Work Location: United States
From joint meeting of the American Nuclear Society and the Atomic Industrial Forum and Nuclear Energy Exhibition; San Francisco, California, USA (11 Nov 1973). See CONF-731101-.
Descriptors: *ENIWETOK--*AERIAL MONITORING; CESIUM 137; COBALT 60; RADIATION MONITORING
Subject Codes (NSA): N44300* Environmental & Earth Sciences--Radioactivity Monitoring & Transport

10/5/54 (Item 54 from file: 109)
833546 NSA-28-030258
Inhalation of radioiodine from fallout: hazards and countermeasures. Final report (Studies on Marshall Island children)
Cole, R.
Publication Date: Aug 1972 308 p.
Primary Report No.: AD--761638
Secondary Report No.: ESA-TR--72-1
Journal Announcement: NSA28
Availability: NTIS.
Document Type: Report
Language: English
Subfile: NSA (Nuclear Science Abstracts)
Work Location: USA
Contract No.: DAHC20-70-C-0381
Descriptors: *IODINE 131--*UPTAKE; *LOCAL FALLOUT--*BIOLOGICAL RADIATION EFFECTS; *THYROID--*RADIATION INJURIES; CASTLE PROJECT; CHILDREN; INHALATION; IODIDES; MARSHALL ISLANDS; NUCLEAR EXPLOSIONS; RADIATION PROTECTION; RADIONUCLIDE KINETICS; RADIONUCLIDE MIGRATION
Subject Codes (NSA): N48610* Life Sciences--Radionuclide Effects (Internal Source)--Man; N44300 Environmental & Earth Sciences--Radioactivity Monitoring & Transport

10/5/55 (Item 55 from file: 109)
832904 NSA-28-029616
Long-lived radionuclides produced at Bikini and Eniwetok Atolls (I)
Schell, W.R.; Yang, A.I.C.
Washington Univ., Seattle (USA). Lab. of Radiation Ecology
Corp. Source Code: 6816000
Publication Date: 30 Apr 1973 29 p.
Primary Report No.: RLO--2225-T-18-3
Journal Announcement: NSA28
Availability: Dep. NTIS $3.50.
Document Type: Report
Language: English
Subfile: NSA (Nuclear Science Abstracts)
Work Location: USA
Descriptors: *ALUMINIUM 26--*RADIOMETRIC ANALYSIS; *AMERICIUM 241--*RADIOMETRIC ANALYSIS; *BERYLLIUM 10--*RADIOMETRIC ANALYSIS; *BIKINI--*FALLOUT; *CARBON 14--*RADIOMETRIC ANALYSIS; *ENIWETOK--*FALLOUT; *FALLOUT--*RADIOMETRIC ANALYSIS; *IRON 55--*RADIOMETRIC ANALYSIS; *MANGANESE 53--*RADIOMETRIC ANALYSIS; *PLUTONIUM 238--*RADIOMETRIC ANALYSIS; *PLUTONIUM 239--*RADIOMETRIC ANALYSIS; ABUNDANCE; CHEMICAL ANALYSIS; FISSION PRODUCTS; NUCLEAR EXPLOSIONS; QUANTITATIVE CHEMICAL ANALYSIS; SEDIMENTS; SEPARATION PROCESSES; SOILS; WATER
5003539
Descriptor Groups (Splits): ABUNDANCE

Subject Codes (NSA): N40130* Chemistry--Analytical & Separations Chemistry--Radiometric & Radiochemical Procedures

10/5/56 (Item 56 from file: 109)
818845 NSA-28-015485
Studies of concentrations of unreported long-lived radionuclides in biota and ocean sediments at Bikini and Eniwetok Atolls. Annual progress report, 1972--1973 ($sup 241$Am content of seawater and sediments at Bikini during 1972)
Schell, W.R.
Washington Univ., Seattle (USA). Lab. of Radiation Ecology
Corp. Source Code: 6816000
Publication Date: 1 May 1973 19 p.
Primary Report No.: RLO--2225-T-18-4
Journal Announcement: NSA28
Availability: Dep. NTIS $3.00.
Document Type: Progress Report
Language: English
Subfile: NSA (Nuclear Science Abstracts)
Work Location: USA
Contract No.: AT(45-1)-2225
Descriptors: *ALPHA SOURCES--*RADIATION MONITORING; *AMERICIUM 241--* RADIATION MONITORING; *BIKINI--*RADIATION MONITORING; *SEAWATER--* RADIOMETRIC ANALYSIS; *SEDIMENTS--*RADIOMETRIC ANALYSIS; DEPTH; RADIONUCLIDE MIGRATION; SAMPLE PREPARATION; SEPARATION PROCESSES

10/5/57 (Item 57 from file: 109)
811892 NSA-28-008508
Distributions of radionuclides in reef corals: opportunity for data retrieval and study of effects
Radioactive contamination of the marine environment ($sup 14$C and $sup 90$Sr stratification during growth)
Knutson, D.W.; Buddemeier, R.W.
Univ. of Hawaii, Honolulu
Publication Date: 1973 735-746 p.
Conference title: Symposium on the interaction of radioactive contaminants with the constituents of the marine environment
Conference location: Seattle, Washington, USA
Conference date: 10 Jul 1972
Publ: International Atomic Energy Agency, Vienna
Note: See STI/PUB--313; CONF-720708--
Journal Announcement: NSA28
Document Type: Book Analytic
Language: English
Subfile: NSA (Nuclear Science Abstracts)
Work Location: USA
Descriptors: *CARBON 14--*RADIOECOLOGICAL CONCENTRATION; *CORALS--* BIOLOGICAL RADIATION EFFECTS; *INVERTEBRATES--*RADIONUCLIDE KINETICS; * STRONTIUM 90--*RADIOECOLOGICAL CONCENTRATION; AQUATIC ECOSYSTEMS; AUTORADIOGRAPHY; COASTAL WATERS; ENIWETOK; FALLOUT DEPOSITS; GROWTH; MARSHALL ISLANDS; PACIFIC OCEAN; RETENTION; SAMPLE PREPARATION; STRATIGRAPHY; UPTAKE; X-RAY RADIOGRAPHY
Subject Codes (NSA): N48710* Life Sciences--Nuclide Kinetics & Toxicology--Man; N44340 Environmental & Earth Sciences--Radioactivity Monitoring & Transport--Ecosystems & Food Cycles

10/5/58 (Item 58 from file: 109)
779012 NSA-27-005499
PROTECTION AND TREATMENT OF RADIATION INJURIES IN HUMAN BODIES.
Miyakawa, T.
Tokyo Univ.
pp 363-454 of Studies on Radiation Effects. /Hiyama, Yoshio (ed.). Tokyo Tokyo Daigaku Shuppankai (1971).
Publication Date: 1971
Journal Announcement: NSA27
Document Type: Journal Article

Language: Japanese
Subfile: NSA (Nuclear Science Abstracts)
Work Location: Japan
Descriptors: AET; BIKINI; BIOLOGICAL RADIATION EFFECTS; BIOLOGICAL REPAIR; BLOOD CELLS; BLOOD FORMATION; CARCINOGENESIS; CENTRAL NERVOUS SYSTEM; DELAYED RADIATION EFFECTS; DOSE-RESPONSE RELATIONSHIPS; EARLY RADIATION EFFECTS; GENETIC RADIATION EFFECTS; HIROSHIMA; LET; LEUKEMIA; LEUKEMOGENESIS; LOW DOSE IRRADIATION; LYMPHATIC SYSTEM; MAN; MEA; MEG; NAGASAKI; NEOPLASMS; NUCLEAR EXPLOSIONS; NUCLEAR WEAPONS; RADIATION ACCIDENTS; RADIATION INJURIES; RADIATION PROTECTION; RADIATION QUALITY; RADIORESISTANCE; RADIOSENSITIVITY; THERAPY
Subject Headings/Modifiers: MAN/radiation effects on central nervous system and hematopoietic system in, review of
RADIATION/effects on man, review of clinical course of leukemogenic and neoplastic

NERVOUS SYSTEM/radiation effects on human central, review of

NEOPLASMS/radioinduced, in man, review of clinical course of

HEMATOPOIETIC SYSTEM/radiation effects on human, review of

VITAMINS/effectiveness for treatment of radiation injuries in man, review of

RADIATION/effects on man following accidental external and internal exposure, review of treatment for

MAN/radiation effects on, following accidental external and internal exposure, review of treatment for

MAN/radioinduced neoplasms in, review of clinical course of

RADIATION/effects on man, role of cellular radiosensitivity in early and delayed pathological
MAN/radioinduced pathological changes in, role of cellular radiosensitivity in early and delayed

RADIATION/effects on man, protective effects of adenosine derivatives, amines, and thiols against

MAN/radiation effects on, protective effects of adenosine derivatives, amines, and thiols against

ADENOSINE/radioprotective effects of derivatives of, on man, review of

AMINES/radioprotective effects of, on man, review of

THIOLS/radioprotective effects of, on man, review of

RADIATION/effects on man, effectiveness of endotoxins, hormones, nucleic acids, and vitamins for treatment of pathological

MAN/radioinduced pathological changes in, effectiveness of endotoxins, hormones, nucleic acids, and vitamins for treatment of

ENDOTOXINS/effectiveness for treatment of radiation injuries in man, review of

HORMONES/effectiveness for treatment of radiation injuries in man, review of

MAN/radioinduced leukemia in, review of clinical course of

RADIATION/effects on human central nervous system and hematopoietic system, review of

NEOPLASMS/leukemia, radioinduced, in man, review of clinical course of

NUCLEIC ACID/effectiveness for treatment of radiation injuries in man, review of
Subject Codes (NSA): N48510* Life Sciences--Radiation Effects on Animals --Man

10/5/59 (Item 59 from file: 109)
778804 NSA-27-005290
ENVIRONMENTAL CONTAMINATION AND HUMAN FOOD AND BODIES.
Tsugo, T.
Tokyo Univ.
pp 111-88 of Studies on Radiation Effects. /Hiyama, Yoshio (ed.). Tokyo Tokyo Daigaku Shuppankai (1971).
Publication Date: 1971
Journal Announcement: NSA27
Document Type: Journal Article
Language: Japanese
Subfile: NSA (Nuclear Science Abstracts)
Work Location: Japan
Descriptors: BIKINI; CADMIUM 113; CADMIUM 115; CESIUM 137; CONTAMINATION; DECONTAMINATION; DOMESTIC ANIMALS; ENVIRONMENT; FALLOUT DEPOSITS; FISHES; FOOD; FOOD CHAINS; IRON 55; IRON 59; JAPAN; MAXIMUM PERMISSIBLE BODY BURDE; MILK; MILK PRODUCTS; NATURAL RADIOACTIVITY; RADIOECOLOGICAL CONCENTRATION; RADIONUCLIDE KINETICS; RADIONUCLIDE MIGRATION; SEAFOOD; SOILS; STRONTIUM 90; UPTAKE
Subject Headings/Modifiers: CESIUM ISOTOPES Cs-137/content of fresh and powdered milk in Japan during 1963 to 1968, maximum values for

MILK/radioisotope content of fresh and powdered, in Japan during 1963 to 1968, maximum values for cesium-137 and strontium-90

IRON ISOTOPES Fe-55/monitoring in seafood in Japan

IRON ISOTOPES Fe-59/monitoring in seafood in Japan

CADMIUM ISOTOPES Cd-113/monitoring of metastable, in seafood in Japan

CADMIUM ISOTOPES Cd-115/monitoring in seafood in Japan

MEATS/seafood, radioisotope monitoring in, in Japan, cadmium-113m, cadmium-115, iron-55, and iron-59

JAPAN/radioisotope monitoring in seafood in, cadmium-113m, cadmium-115, iron-55, and iron-59

FOOD/radioactive contamination of, in Japan, maximum range of

ENVIRONMENT/radioactive contamination of, in Japan, maximum range of

SOILS/strontium-90 content of cultivated, in Tokyo during 1961 to 1964
STRONTIUM ISOTOPES Sr-90/content of cultivated soils in Tokyo during 1961 to 1964

JAPAN/strontium-90 content of cultivated soils in Tokyo, during 1961 to 1964

JAPAN/radioactive contamination of environment and food in, maximum range of

STRONTIUM ISOTOPES Sr-90/content of fresh and powdered milk in Japan during 1963 to 1968, maximum values for
Subject Codes (NSA): N44340* Environmental & Earth Sciences--Radioactivity Monitoring & Transport--Ecosystems & Food Cycles

10/5/60 (Item 60 from file: 109)
758496 NSA-26-045792
EFFECTS OF AGE AND RADIATION EXPOSURE ON CHROMOSOMES IN A MARSHALL ISLAND POPULATION.
Demoise, C.F. ; Conard, R.A.
Microbiological Associates, Inc., Bethesda, Md.)
J. Gerontol. 27: No. 2, 197-201(Apr 1972).
Publication Date: 1972
Coden: JOGEA
Journal Announcement: NSA26
Document Type: Journal Article
Language: English
Subfile: NSA (Nuclear Science Abstracts)
Descriptors: AGE DEPENDENCE; ANEUPLOIDY; BIOLOGICAL RADIATION EFFECTS; CELL CULTURES; CHROMOSOMAL ABERRATIONS; FALLOUT; LYMPHOCYTES; MAN; MARSHALL ISLANDS; RESPONSE MODIFYING FACTORS; SEX; TIME DEPENDENCE
Subject Headings/Modifiers: CELLS, CULTURED/radioinduced aberrations of chromosomes in lymphocyte, from human population of Marshall Island in relation to age and sex

SEX/effects on frequency of chromosome aberrations in lymphocytes of irradiated Marshall Island population
MAN/radioinduced chromosome aberrations in cultured lymphocytes from Marshall Island, combined effects of age and sex on frequency of

RADIATION/effects on chromosomes in lymphocytes of Marshall Island human population, combined effects of age and sex on frequency of aberrant

CHROMOSOMES/radioinduced aberrations of, in cultured lymphocytes from Marshall Island human population, combined effects of age and sex on frequency of

AGE/effects on frequency of chromosome aberrations in lymphocytes of irradiated Marshall Island population
Subject Codes (NSA): N48510* Life Sciences--Radiation Effects on Animals --Man

10/5/61 (Item 61 from file: 109)
754379 NSA-26-041674
LIGHTNING INDUCED BY THERMONUCLEAR DETONATIONS.
Uman, M.A. ; Seacord, D.F.; Price, G.H.; Pierce, E.T.
Westinghouse Research Labs., Pittsburgh
J. Geophys. Res. 77: No. 9, 1591-6(20 Mar 1972).
Publication Date: 1972
Coden: JGREA
Journal Announcement: NSA26
Document Type: Journal Article
Language: English
Subfile: NSA (Nuclear Science Abstracts)
Descriptors: CLOUDS; ELECTRIC FIELDS; GROUND LEVEL; LIGHTNING; NUCLEAR EXPLOSIONS; THERMONUCLEAR EXPLOSIONS
Subject Headings/Modifiers: NUCLEAR EXPLOSIONS, SURFACE/effects on lightning production of Eniwetok, Oct. 31, 1952, (E)

LIGHTNING/discharges of nuclear-explosion-induced, at Eniwetok, Oct. 31, 1952, (E)
Subject Codes (NSA): N58200* Physics (Atmospheric)--Effects of Nuclear Detonations; N58100 Physics (Atmospheric)--Auroral & Ionospheric Phenomena

10/5/62 (Item 62 from file: 109)
753996 NSA-26-041291
RADIOLOGICAL RESURVEY OF ANIMALS, SOILS, AND GROUNDWATER AT BIKINI ATOLL, 1969--1970.
Held, E.E.
Washington Univ., Seattle. Lab. of Radiation Ecology
Corp. Source Code: 8688100

Publication Date: 1971 44 p.
Primary Report No.: NVO--269-8(Rev.1)
Note: UNCL
Journal Announcement: NSA26
Availability: Dep. NTIS.
Document Type: Report
Language: English
Subfile: NSA (Nuclear Science Abstracts)
Contract No.: AT(26-1)-269.
Descriptors: ANTIMONY 125; BIKINI; BIRDS; BISMUTH 207; CESIUM 137; COBALT 60; CRUSTACEANS; FISHES; IRON 55; MARINE ECOSYSTEMS; MOLLUSCS; RADIONUCLIDE KINETICS; RADIONUCLIDE MIGRATION; SILVER 108; SOILS; STRONTIUM 90; TRITIUM; WATER; ZINC 65
Subject Headings/Modifiers: CESIUM ISOTOPES Cs-137/content of soils at Bikini Atoll during 1969 and 1970
SOILS/radioisotope content of, at Bikini Atoll during 1969 and 1970

COBALT ISOTOPES Co-60/content of fish, lobsters, clams, and sea birds at Bikini Atoll during 1969 and 1970

STRONTIUM ISOTOPES Sr-90/content of fish and crabs at Bikini Atoll during 1969 and 1970

STRONTIUM ISOTOPES Sr-90/content of soils at Bikini Atoll during 1969 and 1970

ANTIMONY ISOTOPES Sb-125/content of soils at Bikini Atoll during 1969 and 1970

OSTEICHTHYES/radioisotope content of, at Bikini Atoll during 1969 and 1970, cesium-137, cobalt-60, and strontium-90

AVES/Numenius tahitiensis (curlew), cobalt-60 content of, at Bikini Atoll during 1969 and 1970

AVES/Arenaria interpres (turnstone), radioisotope content of, at Bikini Atoll during 1969 and 1970, cesium-137 and cobalt-60
AVES/Gygis alba (fairy tern), radioisotope content of, at Bikini Atoll during 1969 and 1970, cesium-137 and cobalt-60

AVES/Anous stolidus (noddy tern), radioisotope content of, at Bikini Atoll during 1969 and 1970, cesium-137 and cobalt-60

MOLLUSCA/Tridacna squamosa (giant clam), cobalt-60 content of, at Bikini Atoll during 1969 and 1970

CRUSTACEA/Panulirus sp. (spiny lobster), radioisotope content of, at Bikini Atoll during 1969 and 1970, cobalt-60 and silver-108m

BIKINI ATOLL/radioisotope content of animals, groundwater, and soils of, during 1969 and 1970, fallout

IRON ISOTOPES Fe-55/content of soils at Bikini Atoll during 1969 and 1970

COBALT ISOTOPES Co-60/content of soils at Bikini Atoll during 1969 and 1970

CESIUM ISOTOPES Cs-137/content of fish and sea birds at Bikini Atoll during 1969 and 1970
SILVER ISOTOPES Ag-108/content of metastable, in spiny lobsters at Bikini Atoll during 1969 and 1970

TRITIUM/content of groundwater at Bikini Atoll during 1969 and 1970

CRUSTACEA/Birgus latro (coconut crab), strontium-90 content of, at Bikini Atoll during 1969 and 1970

ZINC ISOTOPES Zn-65/content of soils at Bikini Atoll during 1969 and 1970
Subject Codes (NSA): N48720* Life Sciences--Nuclide Kinetics & Toxicology--Animals

10/5/63 (Item 63 from file: 109)
748806 NSA-26-036099
STUDIES OF CONCENTRATIONS OF UNREPORTED LONG-LIVED RADIONUCLIDES IN BIOTA AND OCEAN SEDIMENTS AT BIKINI AND ENIWETOK ATOLLS. Annual Progress Report, 1971--1972.
Schell, W.R.
Washington Univ., Seattle. Lab. of Radiation Ecology
Corp. Source Code: 8688100
Publication Date: 1972 12 p.
Primary Report No.: RLO--2225-T-18-2
Note: UNCL
Journal Announcement: NSA26
Availability: Dep. NTIS.
Document Type: Report
Language: English
Subfile: NSA (Nuclear Science Abstracts)
Contract No.: AT(45-1)-2225.
Descriptors: AQUATIC ECOSYSTEMS; BERYLLIUM 10; BIKINI; COSMIC RADIATION ; DISTRIBUTION; ENIWETOK; FALLOUT; IRON 55; MEASURING METHODS; RADIOISOTOPES; SEAWATER; SEDIMENTS; TRACER TECHNIQUES
Subject Headings/Modifiers: SILTS/radioisotope content of, near Bikini and Eniwetok Atolls, measurement of long-lived
RADIOISOTOPES/content of long-lived, in marine environment near Bikini and Eniwetok Atolls

ORGANISMS/radioisotope content of marine, near Bikini and Eniwetok Atolls, measurement of long-lived

BIKINI ATOLL/radioisotope content in marine environment of, measurement of long-lived

ENIWETOK ATOLL/radioisotope content in marine environment of, measurement of long-lived
Subject Codes (NSA): N44430* Environmental & Earth Sciences--Radiometric Techniques--Water

10/5/64 (Item 64 from file: 109)
733120 NSA-26-020355
$sup 55$Fe IN RONGELAP PEOPLE, FISH, AND SOILS.
Beasley, T.M. ; Held, E.E.; Conard, R.M.
Univ. of Washington, Seattle
Health Phys. 22: No. 3, 245-50(Mar 1972).
Publication Date: 1972
Journal Announcement: NSA26
Document Type: Journal Article
Language: English
Subfile: NSA (Nuclear Science Abstracts)
Descriptors: AGE GROUPS; BIKINI; BLOOD; BODY; DIET; FALLOUT DEPOSITS; FISHES; FOOD CHAINS; IRON 55; ISOTOPE RATIO; JAPAN; MEN; RADIOACTIVITY; RADIOECOLOGICAL CONCENTRATION; RETENTION; SAMPLING; SEAFOOD; SOILS; THERMONUCLEAR EXPLOSIONS; WOMEN
Subject Headings/Modifiers: SOILS/iron-55 content of Rongelap Atoll, (E)

OSTEICHTHYES/iron-55 content of Rongelap Atoll, (E)

MAN/iron-55 content of Rongelap Atoll, (E)

MARSHALL ISLANDS/iron-55 content of fish, man, and soils of Rongelap Atoll in, (E)
IRON ISOTOPES Fe-55/content in fish, man, and soils of Rongelap Atoll, (E)

Subject Codes (NSA): N44340* Environmental & Earth Sciences--Radioactivity Monitoring & Transport--Ecosystems & Food Cycles

10/5/65 (Item 65 from file: 109)
727996 NSA-26-015212
REPORT OF THE RADIOLOGICAL CLEAN-UP OF BIKINI ATOLL.
Smith, A.E.; Moore, W.E.
Western Environmental Research Lab., Las Vegas, Nev.
Corp. Source Code: 8768000
Publication Date: 1972 45 p.
Primary Report No.: SWRHL--111-r
Note: UNCL
Journal Announcement: NSA26
Availability: Dep. NTIS.
Document Type: Report
Language: English
Subfile: NSA (Nuclear Science Abstracts)
Descriptors: AQUATIC ECOSYSTEMS; BIKINI; DOSE RATES; ENVIRONMENT; FOOD CHAINS; INTEGRAL DOSES; MARSHALL ISLANDS; RADIATION DOSES; RADIATION MONITORING; RADIONUCLIDE MIGRATION; TERRESTRIAL ECOSYSTEMS; TIME DEPENDENCE
Subject Headings/Modifiers: ECOSYSTEMS/radiation monitoring of Bikini Atoll, before, during, and following 1969 cleanup

RADIATION/monitoring in ecosystems and environment of Bikini Atoll before, during, and following 1969 clean-up
ENVIRONMENT/radiation monitoring of Bikini Atoll, before, during, and following 1969 cleanup

BIKINI ATOLL/radiation monitoring of environment of, before, during, and following 1969 clean-up
Subject Codes (NSA): N44340* Environmental & Earth Sciences--Radioactivity Monitoring & Transport--Ecosystems & Food Cycles

10/5/66 (Item 66 from file: 109)
722432 NSA-26-009647
SYMPTOMS OF RADIATION DISEASE AND VARIOUS SEQUELAE IN MAN WITH SPECIAL REFERENCE TO THE VICTIMS OF THE HIROSHIMA AND NAGASAKI ATOMIC EXPLOSIONS.
Szirmai, E.; Medgyesi, G.; Srebro, Z.
Inst. of Nuclear Hematology, London
Przegl. Lek. 28: No. 3, 253-7(1971).
Publication Date: 1971
Journal Announcement: NSA26
Document Type: Journal Article
Language: Polish
Subfile: NSA (Nuclear Science Abstracts)
Work Location: United Kingdom
Descriptors: DELAYED RADIATION EFFECTS; HIROSHIMA; MAN; NAGASAKI; NUCLEAR EXPLOSIONS; RADIATION EFFECTS; RADIATION SICKNESS
Subject Headings/Modifiers: NUCLEAR EXPLOSIONS, ATMOSPHERIC/effects on man following atomic bombing of Hiroshima, Nagasaki, and Rongelap atoll, review of pathology and late symptoms of

NAGASAKI/atomic bombing of, review of pathology and late symptoms of effects on man of

RADIATION SYNDROME/review of pathology and late sequelae of, in man exposed to atomic bombing in Hiroshima, Nagasaki, and Rongelap atoll

HIROSHIMA/atomic bombing of, review of pathology and late symptoms of, effects on man

MAN/pathology and late symptoms in, following exposure to atomic bombing in Hiroshima, Nagasaki, and Rongelap atoll
Subject Codes (NSA): N28630* Life Sciences--Radiation Effects on Animals --Man

10/5/67 (Item 67 from file: 109)
717501 NSA-26-004714
FALLOUT RADIONUCLIDES IN PACIFIC OCEAN TUNA.
Held, E.E.
Washington Univ., Seattle. Lab. of Radiation Ecology
Corp. Source Code: 8688100
Publication Date: 1971 16 p.
Primary Report No.: NVO--269-13
Secondary Report No.: CONF-710501--36
Note: From 3. national symposium on radioecology; Oak Ridge, Tenn. (10 May 1971).
Note: UNCL
Journal Announcement: NSA26
Availability: Dep. NTIS.
Document Type: Report
Language: English
Subfile: NSA (Nuclear Science Abstracts)
Contract No.: AT(26-1)-269.
Descriptors: BIKINI; CESIUM 137; COBALT 60; FISH; IRON 55; JAPAN; LATITUDE EFFECT; PACIFIC OCEAN; TISSUES; TUNA FISH
Subject Headings/Modifiers: COBALT ISOTOPES Co-60/content in Pacific tuna, effects of latitude on
MEATS/seafood, radioisotope content of tuna from Pacific Ocean, cesium-137, cobalt-60, and iron-55

CESIUM ISOTOPES Cs-137/content in Pacific tuna, effects of latitude on

IRON ISOTOPES Fe-55/content in Pacific tuna, effects of latitude on

OSTEICHTHYES/Thunnus albacares (tuna), specific activities of cesium-137, cobalt-60, and iron-55 in tissues of, from Pacific in vicinity of Bikini and Japan
Subject Codes (NSA): N28210* Life Sciences--Ecology--Interrelation; N28410 Life Sciences--Health Physics & Safety--Radioactive Contamination & Decontamination

10/5/68 (Item 68 from file: 109)
701575 NSA-25-049078
STUDY OF THE PHYSIOLOGICAL FUNCTION AND HISTOLOGICAL CHANGES IN THYROIDS IRRADIATED WITH RADIOACTIVE IODINE. Summary Report, August 1, 1951--June 1, 1971.
Dobyns, B.M.
Case-Western Reserve Univ., Cleveland, Ohio. School of Medicine
Corp. Source Code: 1837800
Publication Date: 1971 35 p.
Primary Report No.: COO--1784-24
Note: UNCL
Journal Announcement: NSA25
Availability: Dep. NTIS.
Document Type: Report
Language: English
Subfile: NSA (Nuclear Science Abstracts)
Contract No.: AT(30-1)-1243.
Descriptors: ANIMAL CELLS; BIOCHEMISTRY; BIOSYNTHESIS; BLOOD; CANCER; CARBON 14; CHROMOSOMES; DNA; FALLOUT; HORMONES; HYPERTHYROIDISM; IODINE 131 ; MALFORMATIONS; MAN; MARSHALL ISLANDS; MITOSIS; NEVADA; POLYPEPTIDES; POPULATIONS; PROTEINS; RADIATION EFFECTS; RADIOTHERAPY; RATS; THYROID; TISSUES; TRACER TECHNIQUES; TYROSINE; UTAH; X RADIATION
Subject Headings/Modifiers: DISEASES, NEOPLASTIC/carcinomas, radiation effects on development of, in thyroid of animals and man following exposure to iodine-131

DISEASES, PHYSIOLOGICAL/hyperthyroidism, radiotherapy using iodine-131, iodotyrosine content of blood following

X RADIATION/effects on human thyroid gland

IODINE ISOTOPES I-131/effects of therapeutic use of, on polypeptides and proteins in blood

NUCLEIC ACID, DEOXYRIBO-/content of thyroid cells, effects of iodine-131 on

CHROMOSOMES/radioinduced aberrations in human, following iodine-131 therapy

IODINE ISOTOPES I-131/effects on function and histology of human thyroid gland

THYROID GLAND/radiation effects on function and histology of human, iodine-131
MAN/radioinduced thyroid nodules in, exposed to radioiodine fallout in Marshall Islands and Utah--Nevada area

THYROID GLAND/radiation effects on mitosis in, use of tritium-labeled thymidine in assessment of iodine-131

RATS/radiation effects on cellular structure of thyroid gland of, iodine-131

HORMONES, THYROID/synthesis of, use of carbon-14-labeled tyrosine in studies of

DISEASES, PHYSIOLOGICAL/goiters, development in offspring following exposure of mothers to iodine-131
Subject Codes (NSA): N28130* Life Sciences--Biochemistry, Physiology, & Molecular Biology--Metabolism, Physiology & Toxicology; N28630 Life Sciences--Radiation Effects on Animals--Man; N28620 Life Sciences--Radiation Effects on Animals--Vertebrates; N28540 Life Sciences--Medicine--Radiotherapy

10/5/69 (Item 69 from file: 109)
699269 NSA-25-046771
FEEDING PATTERNS OF RATTUS RATTUS AND RATTUS EXULANS ON ENIWETOK ATOL, MARSHALL ISLANDS.
Fall, M.W.; Medina, A.B.; Jackson, W.B.
Bowling Green State Univ., Ohio
J. Mammalogy 52: No. 1, 69-76(Feb 1971).
Publication Date: 1971
Secondary Report No.: COO--1485-23
Journal Announcement: NSA25
Document Type: Journal Article
Language: English
Subfile: NSA (Nuclear Science Abstracts)
Contract No.: AT(11-1)-1485.
Descriptors: ENIWETOK; FOOD CHAIN; NUCLEAR EXPLOSIONS; QUANTITY RATIO; RATS
Subject Headings/Modifiers: NUCLEAR EXPLOSIONS, ATMOSPHERIC/effects on feeding patterns of Rattus exulans and R. rattus on Eniwetok Atoll

ENIWETOK ATOLL/nuclear explosions on, rat population feeding patterns following

RATS/feeding patterns of populations of, on Eniwetok following nuclear testing
Subject Codes (NSA): N28210* Life Sciences--Ecology--Interrelation

10/5/70 (Item 70 from file: 109)
694877 NSA-25-042377
/sup 108m/Ag IN BIOTA SEDIMENTS AT BIKINI AND ENIWETOK ATOLLS.
Beasley, T.M.; Held, E.E.
Univ. of Washington, Seattle

Nature (London) 230: 450-1 (16 Apr 1971).
Publication Date: 1971
Journal Announcement: NSA25
Document Type: Journal Article
Language: English
Subfile: NSA (Nuclear Science Abstracts)
Descriptors: BIKINI; BIOSPHERE; CRUSTACEANS; ENIWETOK; MEASURED VALUES; NUCLEAR EXPLOSIONS; SEDIMENTS; SILVER 108; SILVER 110
Subject Headings/Modifiers: ENIWETOK ATOLL/silver-108m content of animals, plants, and sediments at, following nuclear testing during 1958

ANIMALS/silver-108m content of, at Bikini and Eniwetok atolls following nuclear testing during 1958

PLANTS/silver-108m content of, at Bikini and Eniwetok atolls following nuclear testing during 1958

BIKINI ATOLL/silver-108m content of animals, plants, and sediments at, following nuclear testing during 1958

SILVER ISOTOPES Ag-108/activity ratio of metastable, to silver-110m in Pacific Ocean following nuclear testing during 1958

NUCLEAR EXPLOSIONS, ATMOSPHERIC/effects on silver-108m content of animals, plants, and sediments at Bikini and Eniwetok atolls

SILVER ISOTOPES Ag-110/activity ratio of metastable, to silver-108m in Pacific Ocean following nuclear testing during 1958

SILVER ISOTOPES Ag-108/content of metastable, in animals, plants, and sediments at Bikini and Eniwetok atolls following nuclear testing during 1958

SILTS/silver-108m content of, at Bikini and Eniwetok atolls following nuclear testing during 1958
Subject Codes (NSA): N28410* Life Sciences--Health Physics & Safety--Radioactive Contamination & Decontamination; N28210 Life Sciences--Ecology --Interrelation; N22210 Environmental & Earth Sciences--Radioactivity Monitoring & Transport--Atmosphere--Fallout Transport & Deposition

10/5/71 (Item 71 from file: 109)
679561 NSA-25-027058
IMMUNOHEMATOLOGICAL STUDIES OF MARSHALL ISLANDERS SIXTEEN YEARS AFTER FALLOUT RADIATION EXPOSURE.
Conard, R.A.; Demoise, C.F.; Scott, W.A.; Makar, M.
Brookhaven National Lab., Upton, N. Y.
J. Gerontol. 26: 28-36(1971).
Publication Date: 1971
Journal Announcement: NSA25
Document Type: Journal Article
Language: English
Subfile: NSA (Nuclear Science Abstracts)
Descriptors: AGE; BLOOD CELLS; BLOOD PLASMA; FALLOUT; IMMUNITY; MARSHALLESE; PLATELETS; POPULATIONS; RADIATION EFFECTS
Subject Headings/Modifiers: AGING/radioinduced, in human populations on Marshall Islands

FALLOUT/effects on aging, immune reactions, and peripheral blood of human populations on Marshall Islands, correlation of

IMMUNE REACTIONS/radiation effects on, in blood of human populations on Marshall Islands, correlation of aging and fallout
POPULATIONS/radiation effects on aging, immune reactions, and peripheral blood of human, on Marshall Islands, correlation of fallout

MARSHALL ISLANDS/radiation effects on aging, immune reactions, and

peripheral blood of populations on, correlation of fallout

BLOOD CELLS/radiation effects on immune reactions in peripheral, in human populations on Marshall Islands, correlation of aging and fallout
Subject Codes (NSA): N28630* Life Sciences--Radiation Effects on Animals --Man; N28150 Life Sciences--Biochemistry, Physiology, & Molecular Biology --Immunology

10/5/72 (Item 72 from file: 109)
671653 NSA-25-019148
FOURTEEN YEARS AFTER BIKINI: THE LONG TERM EFFECTS OF RADIOACTIVE FALLOUT.
Nelson, A.
Laekartidningen 65: 1779-84(Apr 1968).
Publication Date: 1968
Journal Announcement: NSA25
Document Type: Journal Article
Language: Swedish
Subfile: NSA (Nuclear Science Abstracts)
Work Location: Sweden
Descriptors: BIKINI; FALLOUT; JAPAN; MAN; NUCLEAR EXPLOSIONS; RADIATION EFFECTS; TIME DEPENDENCE
Subject Headings/Modifiers: FALLOUT/effects on Japanese fishermen 14 years after exposure from Bikini nuclear tests, long-term

MAN/radiation effects on Japanese, 14 years after exposure from Bikini nuclear test, long-term
Subject Codes (NSA): N28630* Life Sciences--Radiation Effects on Animals --Man; N28410 Life Sciences--Health Physics & Safety--Radioactive Contamination & Decontamination

10/5/73 (Item 73 from file: 109)
663503 NSA-25-010997
STUDIES OF THE NATURAL ALPHA-EMITTING RADIOISOTOPES IN MARINE ORGANISMS. Annual Progress Report, 1970--1971.
Beasley, T.M.
Washington Univ., Seattle. Lab. of Radiation Ecology
Corp. Source Code: 8688100
Publication Date: 1970 46 p.
Primary Report No.: RLO--2225-T-14-1
Note: UNCL
Journal Announcement: NSA25
Availability: Dep. NTIS.
Document Type: Report
Language: English
Subfile: NSA (Nuclear Science Abstracts)
Contract No.: AT(45-1)-2225.
Descriptors: ABUNDANCE; BLOOD; CRUSTACEANS; ECHINODERMS; FISH; INVERTEBRATES; IRON 55; LEAD; LEAD 210; MAN; PACIFIC OCEAN; PLANKTON; POLONIUM 210; PROTEINS; RADIOISOTOPES
Subject Headings/Modifiers: LEAD ISOTOPES Pb-210/content of benthic fish and invertebrates, pelagic fish, and zooplankton of Pacific Ocean

LEAD/content of benthic fish and invertebrates, pelagic fish, and zooplankton of Pacific Ocean

ECHINODERMATA/radioisotope content of sea cucumbers and sea urchins in Pacific Ocean, lead-210 and polonium-210

CRUSTACEA/radioisotope content of copepods and crabs in Pacific Ocean, lead-210 and polonium-210

IRON ISOTOPES Fe-55/content of blood of Rongelap Atoll residents

OSTEICHTHYES/radioisotope content of benthic and pelagic, from Pacific Ocean, lead-210, polonium-210

PROTEINS/radioisotope content of concentrates of, from pelagic fish

POLONIUM ISOTOPES Po-211/content of benthic fish and invertebrates, pelagic fish, and zooplankton of Pacific Ocean

PLANKTON/radioisotope content of, in Pacific Ocean, lead-210 and polonium-210

MAN/iron-55 content of blood of, in Rongelap Atoll
Subject Codes (NSA): N28210* Life Sciences--Ecology--Interrelation; N28410 Life Sciences--Health Physics & Safety--Radioactive Contamination & Decontamination

10/5/74 (Item 74 from file: 109)
650231 NSA-24-050798
MEDICAL SURVEY OF THE PEOPLE OF RONGELAP AND UTIRIK ISLANDS THIRTEEN, FOURTEEN, AND FIFTEEN YEARS AFTER EXPOSURE TO FALLOUT RADIATION (MARCH 1967, MARCH 1968, AND MARCH 1969).
Conard, R.A.; Sutow, W.W.; Lowrey, A.
and others)
Brookhaven National Lab., Upton, N. Y.
Corp. Source Code: 1401000
Primary Report No.: BNL--50220
Note: UNCL
Journal Announcement: NSA24
Availability: Dep. CFSTI.
Document Type: Report
Language: English
Subfile: NSA (Nuclear Science Abstracts)
Descriptor Groups (Splits): CARCINOGENESIS--CARCINOMAS--GLANDS--INGESTION--INHALATION--IODINE ISOTOPES--MAN--RADIATION DOSES--THYROID--TIME--TUMORS

FALLOUT--MAN--MARSHALL ISLANDS--MEDICINE--POPULATIONS--RADIATION DOSES--RADIATION EFFECTS--TESTING--TIME
Subject Headings/Modifiers: POPULATIONS/medical survey of Marshall Island, 13, 14, and 15 years following exposure to fallout

IODINE ISOTOPES I-131/effects on human thyroid gland following exposure to fallout, carcinogenic

IODINE ISOTOPES I-132/effects on human thyroid gland following exposure to fallout, carcinogenic

MARSHALL ISLANDS/medical survey of population of, 13, 14, and 15 years following exposure to fallout

DISEASES, NEOPLASTIC/carcinomas, incidence in human thyroid glands, effects of exposure to fallout iodine radioisotopes on

DISEASES, PHYSIOLOGICAL/hypothyroidism, incidence in man in relation to exposure to fallout iodine radioisotopes

MAN/radioinduced thyroid neoplasms in, relation to exposure to fallout, iodine-131, iodine-132, iodine-133, and iodine-134 $beta$ and

FALLOUT/radioisotope content of, relation of, to thyroid carcinogenicity, iodine-131, iodine-132, iodine-133, and iodine-134
DISEASES, NEOPLASTIC/benign, incidence in human thyroid glands, effects of exposure to fallout iodine radioisotopes on

IODINE ISOTOPES I-134/effects on human thyroid gland following exposure to fallout, carcinogenic

IODINE ISOTOPES I-133/effects on human thyroid gland following exposure

to fallout, carcinogenic
Subject Codes (NSA): N28220* Life Sciences--Ecology--Radiation Effects; N28420 Life Sciences--Health Physics & Safety--Dosimetry & Monitoring; N28630 Life Sciences--Radiation Effects on Animals--Man

10/5/75 (Item 75 from file: 109)
639018 NSA-24-039582
A STUDY OF THE PHYSIOLOGICAL FUNCTION AND HISTOLOGICAL CHANGES IN THYROIDS IRRADIATED WITH RADIOACTIVE IODINE. Progress Report, July 1, 1969--June 30, 1970.
Dobyns, B.M.
Case Western Reserve Univ., Cleveland, Ohio. School of Medicine
Corp. Source Code: 1837800
11 p.
Primary Report No.: COO--1784-22
Note: UNCL
Journal Announcement: NSA24
Availability: Dep. CFSTI.
Document Type: Report
Language: English
Subfile: NSA (Nuclear Science Abstracts)
Contract No.: AT(11-1)-1784.
Descriptors: ABUNDANCE; BLOOD SERUM; CHROMOSOMES; DISEASES; FALLOUT; GOITER; IODINE 131; ISLANDS; MALFORMATIONS; MAN; MARSHALL ISLANDS; MARSHALLESE; NEVADA; NORTH AMERICA; NUCLEAR EXPLOSIONS; NUCLEAR WEAPONS; PACIFIC OCEAN; POPULATIONS; RADIATION EFFECTS; RADIOTHERAPY; RATS; SEA; THYROID; TUMORS; URINE; USA; UTAH
Subject Headings/Modifiers: DISEASES, PHYSIOLOGICAL/goiter, radioinduced, in rats following maternal exposure to iodine-131

BLOOD SERUM/iodine-131 content of human, following therapy

THYROID GLAND/radiation dose to human, following therapy, iodine-131 $beta$ and

RATS/radioinduced neoplasms in thyroid of, iodine-131 $beta$ and

URINE/iodine-131 content of human, following therapy

IODINE ISOTOPES I-131/effects on human thyroid following exposure to fallout or therapy

DISEASES, NEOPLASTIC/radioinduced, in thyroid of rats, iodine-131 $beta$ and

MAN/radiation effects on thyroid of, following exposure to fallout or therapy, iodine-131 $beta$ and

THYROID GLAND/radioinduced nodules in human, in Marshall Islands following nuclear weapons tests
CHROMOSOMES/radioinduced aberrations of human, following iodine-131 therapy, $beta$ and
Subject Codes (NSA): N28630* Life Sciences--Radiation Effects on Animals--Man; N28130 Life Sciences--Biochemistry, Physiology, & Molecular Biology--Metabolism, Physiology & Toxicology; N28540 Life Sciences--Medicine--Radiotherapy

10/5/76 (Item 76 from file: 109)
634002 NSA-24-034564
CYTOGENETIC STUDIES ON FISHERMEN EXPOSED TO FALLOUT RADIATION IN 1954.
Ishihara, T.; Kumatori, T.
National Inst. of Radiological Sciences, Chiba, Japan
Idengaku Zasshi, Suppl. 44: No. 1, 242-51(Jul 1969).
Publication Date: 1969
Note: From 12th International Congress of Genetics, Tokyo, Japan. See CONF-680844.

Journal Announcement: NSA24
Document Type: Journal Article
Language: English
Subfile: NSA (Nuclear Science Abstracts)
Work Location: Japan
Descriptors: ASIA; BIKINI; BONE MARROW; CELL CULTURES; CHROMOSOMES; CYTOLOGY; ENVIRONMENT; GENETICS; IN VITRO; ISLANDS; JAPAN; LYMPHOCYTES; MALFORMATIONS; MAN; NUCLEAR EXPLOSIONS; PACIFIC OCEAN; RADIATION INJURIES; SEA
Subject Headings/Modifiers: LYMPHOCYTES/radioinduced chromosome aberrations in human, following exposure to Bikini fallout

BIKINI ATOLL/fallout from nuclear explosion on, effects on man
BONE MARROW/radioinduced chromosome aberration in cells of human, following exposure to Bikini fallout

FALLOUT/effects on chromosomes of Japanese fisherman following exposure at Bikini, aberrant

MAN/radioinduced chromosome aberrations in bone marrow and cultured lymphocytes of, following exposure to fallout at Bikini

CHROMOSOMES/radioinduced aberrations of bone marrow and cultured lymphocytes from man following exposure to Bikini fallout
Subject Codes (NSA): N28550* Life Sciences--Medicine--Blast & Thermal Effects; N28630 Life Sciences--Radiation Effects on Animals--Man; N28300 Life Sciences--Genetics & Cytogenetics

10/5/77 (Item 77 from file: 109)
634001 NSA-24-034563
THYROID NODULES AS A LATE EFFECT OF EXPOSURE TO FALLOUT.
Conard, R.A. ; Sutow, W.W.; Colcock, B.P.; Dobyns, B.M.; Paglia, D.E.
Brookhaven National Lab., Upton, N. Y.
pp 325-36 of Radiation-Induced Cancer. Vienna International Atomic Energy Agency (1969).
Publication Date: 1969
Secondary Report No.: BNWL--13559
Note: From Symposium on Radiation-Induced Cancer, Athens, Greece. See STI/PUB--228; CONF-690404.
Journal Announcement: NSA24
Document Type: Journal Article
Language: English
Subfile: NSA (Nuclear Science Abstracts)
Descriptors: DISEASES; FALLOUT; IODINE 131; IODINE 132; IODINE 133; IODINE 135; ISLANDS; MAN; MARSHALL ISLANDS; PACIFIC OCEAN; POPULATIONS; SEA ; THYROID; TUMORS
Subject Headings/Modifiers: MARSHALL ISLANDS/radioinduced thyroid nodules in human populations of, fallout iodine isotope

IODINE ISOTOPES I-132/effects on human thyroid following exposure to fallout in Marshall Islands, late neoplastic
IODINE ISOTOPES I-135/effects on human thyroid following exposure to fallout in Marshall Islands, late neoplastic

MAN/radioinduced thyroid nodules of, in Marshall Islands, fallout iodine isotope

THYROID GLAND/radioinduced nodules in, of human populations of Marshall Islands, fallout iodine isotope

DISEASES, NEOPLASTIC/nodules, radioinduced, in thyroid of human populations of Marshall Islands, fallout iodine isotope

IODINE ISOTOPES I-131/effects on human thyroid following exposure to fallout in Marshall Islands, late neoplastic

IODINE ISOTOPES I-133/effects on human thyroid following exposure to fallout in Marshall Islands, late neoplastic
Subject Codes (NSA): N28550* Life Sciences--Medicine--Blast & Thermal Effects; N28630 Life Sciences--Radiation Effects on Animals--Man

10/5/78 (Item 78 from file: 109)
624869 NSA-24-025429
BIRD POPULATIONS AT ENIWETOK ATOLL.
Carpenter, M.L.; Jackson, W.B.; Fall, M.W.
Bowling Green State Univ., Ohio
Micronesica 4: 295-307 (Dec 1968).
Publication Date: 1968
Secondary Report No.: COO--1485-18
Journal Announcement: NSA24
Document Type: Journal Article
Language: English
Subfile: NSA (Nuclear Science Abstracts)
Descriptors: ABUNDANCE; BIRDS; ENIWETOK; ENVIRONMENT; ISLANDS; NUCLEAR EXPLOSIONS; PACIFIC OCEAN; POPULATIONS; SEA; TESTING
Subject Headings/Modifiers: AVES/Sterna fuscata, breeding cycle of, on Eniwetok Atoll

ENIWETOK ATOLL/bird populations of, from 1964 through 1967, diversity and kinetics of

NUCLEAR EXPLOSIONS, SURFACE/effects on bird populations of Eniwetok, observations of 1964 through 1967 on
AVES/populations of Eniwetok Atoll, observations from 1964 through 1967 of diversity and kinetics of
Subject Codes (NSA): N28200* Life Sciences--Ecology

10/5/79 (Item 79 from file: 109)
622821 NSA-24-023380
THE EFFECTS OF FALLOUT RADIATION ON MARSHALLESE CHILDREN.
Sutow, W.W. ; Conard, R.A.
Texas Univ., Houston); (Brookhaven National Lab., Upton, N. Y.)
Primary Report No.: CONF-690501--
Report No., Pages: CONF-690501--, pp 661-73
Note: UNCL
Journal Announcement: NSA24
Document Type: Report
Language: English
Subfile: NSA (Nuclear Science Abstracts)
Descriptors: AGE; CHILDREN; FALLOUT; FISSION PRODUCTS; GAMMA RADIATION; HAIR; INGESTION; ISLANDS; MAN; MARSHALL ISLANDS; NUCLEAR EXPLOSIONS; PACIFIC OCEAN; POPULATIONS; RADIATION EFFECTS; SEA; SKIN; STOMACH; TESTING
Subject Headings/Modifiers: FALLOUT/effects on Marshallese children following deposition on skin and hair and ingestion

MARSHALL ISLANDS/radiation effects on children on, exposed to fallout from atomic bomb tests,

GAMMA RADIATION/effects on children exposed to fallout from atomic bomb tests in Marshall Islands
MAN/radiation effects on Marshallese children exposed to fallout from atomic bomb tests,
Subject Codes (NSA): N28630* Life Sciences--Radiation Effects on Animals --Man

10/5/80 (Item 80 from file: 109)
609255 NSA-24-009806
SURVIVAL OF RATS AT ENIWETOK ATOLL.
Jackson, W.B.
Bowling Green State Univ., Ohio
Pac. Sci. 23: 265-75(Jul 1969).
Publication Date: 1969

5003554

Secondary Report No.: COO--1485-20
Journal Announcement: NSA24
Document Type: Journal Article
Language: English
Subfile: NSA (Nuclear Science Abstracts)
Descriptors: ENIWETOK; EXPANSION; ISLANDS; NUCLEAR EXPLOSIONS; PACIFIC OCEAN; POPULATIONS; RADIATION DOSES; RADIATION EFFECTS; RATS; SEA; SURVIVAL TIME
Subject Headings/Modifiers: ENIWETOK ATOLL/ecology of rat populations of

RATS/radiation effects on ecology of populations of, following atomic explosions at Eniwetok Atoll

NUCLEAR EXPLOSIONS/effects on ecology of rat populations at Eniwetok Atoll, long-term study of
Subject Codes (NSA): N28220* Life Sciences--Ecology--Radiation Effects; N28620 Life Sciences--Radiation Effects on Animals--Vertebrates; N28550 Life Sciences--Medicine--Blast & Thermal Effects

10/5/81 (Item 81 from file: 109)
608986 NSA-24-009537
COMPARISON OF THE 1968 P TABLES WITH TIMES FROM NUCLEAR EXPLOSIONS. II. THE MARSHALL ISLANDS AND SAHARA SERIES.
Muirhead, K.J.; Cleary, J.R.
Australian National Univ., Canberra
Earth Planet. Sci. Lett. 7: 132-6(Nov 1969).
Publication Date: 1969
Journal Announcement: NSA24
Document Type: Journal Article
Language: English
Subfile: NSA (Nuclear Science Abstracts)
Work Location: AU
Descriptors: ANGULAR MOMENTUM; EARTHQUAKES; MEASUREMENT; NUCLEAR EXPLOSIONS; P-WAVE; PARTIAL WAVES; QUANTUM MECHANICS; SEISMOLOGY; SHOCK WAVES; TABLES; UNDERGROUND EXPLOSIONS; VELOCITY
Subject Headings/Modifiers: SEISMIC WAVES/travel times of P, compared with 1968 P wave data from Marshall Islands and Sahara Desert nuclear explosions

NUCLEAR EXPLOSIONS/seismic waves from Marshall Islands and Sahara Desert, compared with 1968 P wave travel time data
Subject Codes (NSA): N22510* Environmental & Earth Sciences--Nuclear Explosions--Nuclear Explosion Detection; N24100 Engineering--Nuclear Explosions

10/5/82 (Item 82 from file: 109)
592351 NSA-23-045417
EXTERNAL RADIATION ON BIKINI ATOLL.
Bennett, B.G.; Beck, H.L.
Atomic Energy Commission, New York
Nature (London), 223: 925-8(Aug. 30, 1969).
Publication Date: 1969
Journal Announcement: NSA23
Document Type: Journal Article
Language: English
Subfile: NSA (Nuclear Science Abstracts)
Descriptors: ABUNDANCE; ACTIVATION; BIKINI ATOLL; CESIUM 137; COBALT 60 ; DETECTION; EUROPIUM 152; FALLOUT; FISSION; ISLANDS; MEASUREMENT; MONITORING; NUCLEAR EXPLOSIONS; NUCLEAR WEAPONS; PACIFIC OCEAN; RADIATIONS; RADIOACTIVITY; RADIOISOTOPES; SEA; TESTING; VARIATIONS
Subject Headings/Modifiers: EUROPIUM ISOTOPES Eu-152/activity on Bikini Atoll, May 1967

RADIOACTIVITY/measurements on Bikini Atoll, May 1967 5003555

COBALT ISOTOPES Co-60/activity on Bikini Atoll, May 1967

BIKINI ATOLL/radiation monitoring on, May 1967
CESIUM ISOTOPES Cs-137/activity on Bikini Atoll, May 1967
Subject Codes (NSA): N22200* Environmental & Earth Sciences--Meteorology

10/5/83 (Item 83 from file: 109)
588400 NSA-23-041465
A STUDY OF THE PHYSIOLOGICAL FUNCTION AND HISTOLOGICAL CHANGES IN THYROIDS IRRADIATED WITH RADIOACTIVE IODINE. Progress Report, July 1, 1968--June 30, 1969.
Dobyns, B.M.
Case Western Reserve Univ., Cleveland, Ohio
Corp. Source Code: 1837400
6 p.
Primary Report No.: COO--1784-16
Note: UNCL
Journal Announcement: NSA23
Availability: Dep. CFSTI.
Document Type: Report
Language: English
Subfile: NSA (Nuclear Science Abstracts)
Contract No.: AT(11-1)-1784.
Descriptors: BETA PARTICLES; GAMMA RADIATION; GLANDS; IODINE 131; MAN; MARSHALL ISLANDS; MARSHALLESE; MIXING; NEVADA; RADIATION DOSES; RADIATION INJURIES; RATS; THYROID; USA; UTAH
Descriptor Groups (Splits): FALLOUT--ISLANDS--NORTH AMERICA--PACIFIC OCEAN--POPULATIONS
ANIMAL CELLS--CARCINOGENESIS--CYTOLOGY--MITOSIS--RADIOAUTOGRAPHY--TESTING --TRACER TECHNIQUES

CHROMOSOMES--CONFIGURATION--LEUCOCYTES--MALFORMATIONS
Subject Headings/Modifiers: MAN/radioinduced chromosome aberrations in leukocytes of, effects of dose on iodine-131 $beta$ and

THYROID GLAND/radioinduced nodules in, of human populations of Marshall Islands, Nevada, and Utah, fallout iodine-131 $beta$ and

IODINE ISOTOPES I-131/effects on thyroids of human populations of Marshall Islands, Nevada, and Utah, fallout

MITOSIS/radiation effects on, in cells of rat thyroid gland, iodine-131, $beta$ and

THYROID GLAND/radiation effects on histology and physiology of, in man and rats, iodine-131 $beta$ and

IODINE ISOTOPES I-131/effects on histology and physiology of thyroid glands in man and rats, $beta$ and
RATS/radiation effects on histology and physiology of thyroid gland in, following administration of various doses of iodine-131, $beta$ and

CHROMOSOMES/radioinduced aberrations of, in human leukocytes following administration of iodine-131, $beta$ and

MAN/radiation effects on histology and physiology of thyroid gland in, following administration of various doses of iodine-131, $beta$ and
Subject Codes (NSA): N28630* Life Sciences--Radiation Effects on Animals --Man

10/5/84 (Item 84 from file: 109)
582620 NSA-23-035683
ENIWETOK MARINE BIOLOGICAL LABORATORY. Annual Report, 1968--69.
Hiatt, R.W.
Hawaii Univ., Honolulu 5003556
Corp. Source Code: 3794000
Publication Date: 1969 30 p.

Primary Report No.: SAN--226-4-X
Note: UNCL
Journal Announcement: NSA23
Availability: Dep. CFSTI.
Document Type: Report
Language: English
Subfile: NSA (Nuclear Science Abstracts)
Contract No.: AT(29-2)-226.
Descriptors: ALGAE; ANIMALS; ARTHROPODS; BACTERIA; BEHAVIOR; CRUSTACEA; ECHINODERMS; ENIWETOK; ENVIRONMENT; FISH; GENETICS; GLOBULINS; GLOBULINS-BETA; INVERTEBRATES; ISLANDS; LIZARDS; MOLLUSKS; PACIFIC OCEAN; POPULATIONS; RATS; REPTILES; SEA; SPIDERS; TOXICITY; TRANSFERRIN
Subject Headings/Modifiers: CHONDRICHTHYES/ecology at Eniwetok Atoll

CRUSTACEA/ecology of amphipod, at Eniwetok Atoll
ECHINODERMATA/ophiuroids, ecology at Eniwetok Atoll

MOLLUSCA/Terebra sp., ecology at Eniwetok Atoll

OSTEICHTHYES/Chromis sp., ecology at Eniwetok Atoll

SCHIZOMYCOTA/sulfur bacteria, biology of marine, at Eniwetok Atoll

CRUSTACEA/Birgus latro, ecology at Eniwetok Atoll

OSTEICHTHYES/Meiacanthus atrodorsalis, behavior at Eniwetok Atoll

ECHINODERMATA/Echinometra sp., ecology at Eniwetok Atoll

CRUSTACEA/Ocypoda ceratophthalma, perception of acoustical stimuli by

TRANSFERRIN/use as genetic marker in determining population structure of rats

OSTEICHTHYES/Plectropomus leopardus, toxicity at Eniwetok Atoll

CYANOPHYTA/toxicity at Eniwetok Atoll
CRUSTACEA/crabs, ecology at Eniwetok Atoll

ARACHNIDA/spiders, ecology at Eniwetok Atoll

REPTILIA/Varanus indicus, ecology at Eniwetok Atoll

RATS/ecology of populations of, at Eniwetok Atoll

ENIWETOK ATOLL/ecology of marine organisms of

MOLLUSCA/nudibranchs, taxonomy at Eniwetok Atoll

OSTEICHTHYES/taxonomy of toxic, at Eniwetok Atoll
Subject Codes (NSA): N28200* Life Sciences--Ecology

10/5/85 (Item 85 from file: 109)
576763 NSA-23-029821
EFFECTS OF FALLOUT RADIATION ON MARSHALLESE CHILDREN.
Sutow, W.W.; Conard, R.A.
Brookhaven National Lab., Upton, N. Y.
Corp. Source Code: 1401000
Publication Date: 1969 21 p.
Primary Report No.: BNL--13584
Secondary Report No.: CONF-690501--2
Note: From 9th Annual Hanford Symposium on Radiation Biology of the Fetal and Juvenile Mammal, Richland, Wash.
Note: UNCL
5003551
Journal Announcement: NSA23
Availability: Dep. CFSTI.

Document Type: Report
Language: English
Subfile: NSA (Nuclear Science Abstracts)
Descriptors: AGE; BETA PARTICLES; BLOOD FORMATION; BODY; BURNS; EXPANSION; FALLOUT; GAMMA RADIATION; HAIR; HEAD; INTESTINE; ISLANDS; LOSSES ; MAN; MARSHALLESE; PACIFIC OCEAN; POPULATIONS; RADIATION DOSES; RADIATION INJURIES; SEX; SKIN; TESTING; THYROID; TIME; VARIATIONS
Subject Headings/Modifiers: MARSHALL ISLANDS/radioinduced injuries in human children in, up to 15 years following exposure to fallout.
THYROID GLAND/radiation dose to, of human Marshallese children, fallout iodine-131, iodine-132, iodine-133, and iodine-135, $beta$ and

HAIR/radioinduced epilation of human, in Marshallese children, fallout

AGE/effects on radiosensitivity of Marshallese children, fallout

DISEASES, TRAUMATIC/burns, radioinduced, on skin of human Marshallese children, effects of age on fallout

POPULATIONS/radioinduced injuries in children of Marshallese, following exposure to fallout

THYROID GLAND/radioinduced injuries to, of human Marshallese children manifested during fifteen years following internal exposure to fallout, effects of chronological age on

GAMMA RADIATION/dose to human Marshallese children from fallout, whole-body

BETA PARTICLES/dose to human Marshallese children from fallout, whole-body
HEMATOPOIETIC SYSTEM/radioinduced injuries to, of human Marshallese children, effects of age on fallout

GASTROINTESTINAL TRACT/radioinduced injuries to, of human Marshallese children following exposure to fallout, acute

GROWTH/radioinduced retardation of, in human male Marshallese children following exposure to fallout

FALLOUT/effects on human Marshallese children manifested up to 15 years after exposure

SKIN/radioinduced injuries to, of human Marshallese children following exposure to fallout, acute

HEAD/radioinduced injuries to, of human Marshallese children following exposure to fallout, acute
Subject Codes (NSA): N28630* Life Sciences--Radiation Effects on Animals --Man

10/5/86 (Item 86 from file: 109)
576650 NSA-23-029708
THYROID NODULES AS A LATE EFFECT OF EXPOSURE TO FALLOUT.
Conard, R.A.; Sutow, W.W.; Colcock, B.P.; Dobyns, B.M.; Paglia, D.E.
Brookhaven National Lab., Upton, N. Y.
Corp. Source Code: 1401000
Publication Date: 1969 19 p.
Primary Report No.: BNL--13559
Secondary Report No.: CONF-690404--4; SM--118/8
Note: From Symposium on Radiation-Induced Carcinogenesis, Athens, Greece.
Note: UNCL
Journal Announcement: NSA23
Availability: Dep. CFSTI. 5003558
Document Type: Report
Language: English

Subfile: NSA (Nuclear Science Abstracts)
Descriptors: BARIUM 140; CALCIUM 45; DISEASES; GOITERS; IODINE 131; IODINE 132; IODINE 133; IODINE 135; ISLANDS; MAN; MARSHALL ISLANDS; MARSHALLESE; NUCLEAR EXPLOSIONS; PACIFIC OCEAN; POPULATIONS; RADIATION DOSES; RUTHENIUM 103; SEA; STRONTIUM 89; THYROID
Subject Headings/Modifiers: RUTHENIUM ISOTOPES Ru-103/dose to Marshallese following nuclear tests
BETA PARTICLES/dose to thyroid of Marshallese following nuclear tests, iodine-132 and iodine-135

MARSHALL ISLANDS/development of thyroid abnormalities in people of, since 1964

DISEASES, NEOPLASTIC/adenomatous goiter, development in Marshallese since 1964

GAMMA RADIATION/dose to thyroid of Marshallese following nuclear tests, iodine-132 and iodine-135

CALCIUM ISOTOPES Ca-45/dose to Marshallese following nuclear tests

STRONTIUM ISOTOPES Sr-89/dose to Marshallese following nuclear tests

BETA PARTICLES/dose to thyroid of Marshallese following nuclear tests, iodine-131

GAMMA RADIATION/dose to thyroid of Marshallese following nuclear tests, iodine-131
BARIUM ISOTOPES Ba-140/dose to Marshallese following nuclear tests

IODINE ISOTOPES I-133/dose to thyroid of Marshallese following nuclear tests

THYROID GLAND/development of nodules in, of Marshallese since 1964
Subject Codes (NSA): N28550* Life Sciences--Medicine--Blast & Thermal Effects

10/5/87 (Item 87 from file: 109)
564992 NSA-23-018040
PHOSPHORUS TURNOVER BY CORAL REEF ANIMALS.
Pomeroy, L.R. ; Kuenzler, E.J.
Georgia Univ., Athens. Dept. of Zoology
North Carolina Univ., Chapel Hill. Dept. of Environmental Sciences and Engineering
Corp. Source Code: 3537500; 6003700
Primary Report No.: CONF-670503--
Report No., Pages: CONF-670503--, pp 474-82
Note: UNCL
Journal Announcement: NSA23
Document Type: Report
Language: English
Subfile: NSA (Nuclear Science Abstracts)
Descriptors: ABUNDANCE; ANIMALS; CALCIUM CARBONATES; CORALS; DIET; ENVIRONMENT; FISH; METABOLISM; MOLLUSKS; PHOSPHORUS; SEA
Subject Headings/Modifiers: OSTEICHTHYES/phosphorus metabolism by, at Eniwetok

PHOSPHORUS/metabolism by coral reef animals at Eniwetok

ENIWETOK ATOLL/phosphorus metabolism by fish and invertebrates at
ANIMALS/phosphorus metabolism by invertebrate, at Eniwetok
Subject Codes (NSA): N28550* Life Sciences--Medicine--Blast & Thermal Effects

5003559

10/5/88 (Item 88 from file: 109)
564929 NSA-23-017977

DISTRIBUTION OF RADIONUCLIDES IN THE ENVIRONMENT OF ENIWETOK AND BIKINI ATOLLS, AUGUST 1964.

Welander, A.D.
Washington Univ., Seattle. Coll. of Fisheries

Corp. Source Code: 8679200
Primary Report No.: CONF-670503--
Report No., Pages: CONF-670503--, pp 346-54
Note: UNCL
Journal Announcement: NSA23
Document Type: Report
Language: English
Subfile: NSA (Nuclear Science Abstracts)
Descriptors: ALGAE; ANIMALS; ANTIMONY 125; BIRDS; BISMUTH 207; CERIUM 144; COBALT 60; DEPOSITS; DISTRIBUTION; ENVIRONMENT; FISH; IRON 55; ISLANDS ; MANGANESE 54; NUCLEAR EXPLOSIONS; PACIFIC OCEAN; PLANTS; PLUTONIUM 239; RADIOISOTOPES; RATS; RUTHENIUM 106; SEA; SEDIMENTS; SOILS; STRONTIUM 90; TESTING; TISSUES; WATER

Subject Headings/Modifiers: RUTHENIUM ISOTOPES Ru-106/content of animals, bottom sediments, plants, and water at Bikini and Eniwetok in 1964

STRONTIUM ISOTOPES Sr-90/content of animals, bottom sediments, plants, and water at Bikini and Eniwetok in 1964

CESIUM ISOTOPES Cs-137/content of animals, bottom sediments, plants, and water at Bikini and Eniwetok in 1964

ENIWETOK ATOLL/radioisotope content of environment at, in 1964

BISMUTH ISOTOPES Bi-207/content of animals, bottom sediments, plants, and water at Bikini and Eniwetok in 1964

CERIUM ISOTOPES Ce-144/content of animals, bottom sediments, plants, and water at Bikini and Eniwetok in 1964

PLUTONIUM ISOTOPES Pu-239/content of animals, bottom sediments, plants, and water at Bikini and Eniwetok in 1964

IRON ISOTOPES Fe-55/content of animals, bottom sediments, plants, and water at Bikini and Eniwetok in 1964

SILTS/radioisotope content of bottom, at Bikini and Eniwetok in 1964

SOILS/radioisotope content of, at Bikini and Eniwetok in 1964

GROUND WATERS/radioisotope content of, at Bikini and Eniwetok in 1964

PACIFIC OCEAN/radioisotope content of, at Bikini and Eniwetok in 1964

PLANKTON/radioisotope content of, at Bikini and Eniwetok in 1964

RATS/radioisotope content of, at Bikini and Eniwetok in 1964

OSTEICHTHYES/radioisotope content of, at Bikini and Eniwetok in 1964

AVES/radioisotope content of, at Bikini and Eniwetok in 1964

ANIMALS/radioisotope content of, at Bikini and Eniwetok in 1964

PLANTS/radioisotope content of terrestrial, at Bikini and Eniwetok in 1964

MANGANESE ISOTOPES Mn-54/content of animals, bottom sediments, plants, and water at Bikini and Eniwetok in 1964

COBALT ISOTOPES Co-60/content of animals, bottom sediments, plants, and water at Bikini and Eniwetok in 1964

ANTIMONY ISOTOPES Sb-125/content of animals, bottom sediments, plants,

and water at Bikini and Eniwetok in 1964

BIKINI ATOLL/radioisotope content of environment at, in 1964
Subject Codes (NSA): N28220* Life Sciences--Ecology--Radiation Effects

10/5/89 (Item 89 from file: 109)
560625 NSA-23-013669
RADIOLOGICAL CHEMISTRY.
Battelle-Northwest, Richland, Wash. Pacific Northwest Lab.
Corp. Source Code: 1158000
Primary Report No.: BNWL--715(Pt.2)
Report No., Pages: BNWL--715(Pt.2), pp 1-149
Note: UNCL
Journal Announcement: NSA23
Document Type: Report
Language: English
Subfile: NSA (Nuclear Science Abstracts)
Descriptor Groups (Splits): ACTIVATION ANALYSIS--ANTIMONY--BROMINE--CHROMIUM--COBALT--DETERMINATION--GAMMA SPECTROMETERS--GOLD--IRON--LUNGS--MAN--MERCURY--MINING--NEUTRON BEAMS--PHOSPHORUS--POTASSIUM--RUBIDIUM--SCANDIUM--SELENIUM--SILVER--SODIUM--TISSUES--TRACE AMOUNTS--TUNGSTEN--URANIUM--ZINC

BARIUM 140--CERIUM 141--CERIUM 143--DETERMINATION--FISSION PRODUCTS--GAMMA SPECTROMETERS--IODINE 131--IODINE 132--IODINE 133--IODINE 135--LANTHANUM 140--MIXING--MOLYBDENUM 99--NEODYMIUM 147--NIOBIUM 95--NIOBIUM 97--PALLADIUM 109--PROMETHIUM 149--RHODIUM 105--RUTHENIUM 103--SAMARIUM 153--SEPARATION PROCESSES--SILVER 111--SILVER 112--TECHNETIUM 99--TELLURIUM 131--TELLURIUM 132--ZIRCONIUM 95

AMERICIUM--BIOLOGICAL MATERIALS--BIOLOGY--DETERMINATION--GAMMA SPECTROMETERS--IMPURITIES--LITHIUM--PLUTONIUM--SILICON

BARIUM 140--BERYLLIUM 7--BISMUTH 214--CESIUM 137--CHROMIUM 51--COBALT 57--COBALT 60--DETERMINATION--DISTRIBUTION--EUROPIUM 152--FISH--GAMMA SPECTROMETERS--IRON 59--MANGANESE 54--MERCURY 203--POTASSIUM 40--RADIUM 226--SALMON--SCANDIUM 46--SILVER 110--SODIUM 22--THALLIUM 208--TISSUES--YTTRIUM 88--ZINC 65

AMERICIUM 241--BIOLOGICAL MATERIALS--BIOLOGY--ELECTRODEPOSITION--HYDROFLUORIC ACID--IRON--PLUTONIUM 239--SEPARATION PROCESSES

ALPHA PARTICLES--BETA PARTICLES--COUNTERS--DETERMINATION--IRON--IRON 55--LEAD--PACIFIC OCEAN--PROPORTIONAL COUNTERS--SEA

BIOLOGICAL MATERIALS--BIOLOGY--DETERMINATION--LEAD--LEAD 210--SPECTROSCOPY

ANTIMONY--ATMOSPHERE--CADMIUM--DETERMINATION--POLAROGRAPHY--PRECIPITATION--TRACE AMOUNTS
ACTIVATION ANALYSIS--ANTIMONY--BROMINE--CESIUM--COBALT--DETERMINATION--FISH--GAMMA SPECTROMETERS--IRON--MERCURY--MUSCLES--NEUTRON BEAMS--POTASSIUM--RUBIDIUM--SALMON--SCANDIUM--SELENIUM--SILVER--SODIUM--TRACE AMOUNTS--ZINC

ACTIVATION ANALYSIS--ANTIMONY--BROMINE--CESIUM--CESIUM 137--CHROMIUM--COBALT--COBALT 60--COINCIDENCE METHODS--DETERMINATION--FISH--GAMMA SPECTROMETERS--IRON--LIVER--MERCURY--NEUTRON BEAMS--POTASSIUM--POTASSIUM 40--RUBIDIUM--SALMON--SCANDIUM--SELENIUM--SILVER--SILVER 110--SODIUM--TISSUES--TRACE AMOUNTS--ZINC--ZINC 65

ACTIVATION ANALYSIS--ANTIMONY--ANTIMONY 124--BROMINE--CESIUM--CESIUM 134--CHROMIUM--COBALT--COBALT 60--DETERMINATION--FISH--GAMMA SPECTROMETERS--IRON--MERCURY--MUSCLES--NEUTRON BEAMS--POTASSIUM--RUBIDIUM--SCANDIUM--SCANDIUM 46--SELENIUM--SILVER--SILVER 110--SODIUM--TISSUES--TRACE AMOUNTS--ZINC--ZINC 65

ACTIVATION ANALYSIS--ANTIMONY--BROMINE--CESIUM--COBALT--COPPER--
DETERMINATION--ERRORS--GAMMA SPECTROMETERS--IRON--NEUTRON BEAMS--SCANDIUM--
SHIELDING--SILVER--SODIUM--TISSUES--TRACE AMOUNTS--ZINC

ACTIVATION ANALYSIS--AEROSOLS--ANTIMONY--CESIUM--CHROMIUM--COBALT--
DETERMINATION--FILTERS--IRON--LEVELS--NEUTRON BEAMS--SCANDIUM--SILVER--
SODIUM--STRATOSPHERE--ZINC

ADSORPTION--ANTIMONY--CESIUM--COBALT--CONTAINERS--GLASS--INDIUM--IRON--
POLYETHYLENES--PYREX--RUBIDIUM--SCANDIUM--SEA--SILVER--STRONTIUM--SURFACES
--URANIUM--VESSELS--WATER--ZINC

ACTIVATION ANALYSIS--ALUMINUM--ANTIMONY--BARIUM--BROMINE--CERIUM--CESIUM
--CHROMIUM--CLAYS--COBALT--DEPOSITS--DETERMINATION--EUROPIUM--GAMMA
SPECTROMETERS--IRON--LANTHANUM--MANGANESE--NEUTRON BEAMS--POTASSIUM--
SAMARIUM--SCANDIUM--SEA--SEDIMENTS--SODIUM--THORIUM--TRACE AMOUNTS--
VANADIUM--YTTERBIUM--ZINC

ACTIVATION ANALYSIS--ANTIMONY--COBALT--DETERMINATION--GAMMA SPECTROMETERS
--NEUTRON BEAMS--PACIFIC OCEAN--RUBIDIUM--SCANDIUM--SEA--STRONTIUM--TRACE
AMOUNTS--URANIUM--WATER--ZINC

ABUNDANCE--ACTIVATION ANALYSIS--ANTIMONY--BERYLLIUM 7--CESIUM--CESIUM 137
--COBALT--COBALT 60--DETERMINATION--ENVIRONMENT--FISH--GAMMA SPECTROMETERS
--IRON--IRON 55--LEAD--LEAD 210--MANGANESE 54--NEUTRON BEAMS--PACIFIC OCEAN
--POLONIUM 210--RADIUM 226--RUBIDIUM--RUTHENIUM 106--SCANDIUM--SEA--SILVER
--STRONTIUM--THORIUM 228--TRACE AMOUNTS--URANIUM--WATER--ZINC--ZINC 65
ANTIMONY--COBALT--COPPER--DEPOSITS--IRON--LANTHANUM--MANGANESE--PACIFIC
OCEAN--SCANDIUM--SEA--TRACE AMOUNTS--WATER--ZINC

ABUNDANCE--ATLANTIC OCEAN--BERYLLIUM 7--PACIFIC OCEAN--SEA--WATER

ABUNDANCE--ESKIMOS--FALLOUT--FISH--IRON 55--MAN--PACIFIC OCEAN--
POPULATIONS--SALMON--SEA

ABUNDANCE--ANTIMONY 125--BARIUM 140--BIKINI--BISMUTH 207--CERIUM 141--
CERIUM 144--CESIUM 137--COBALT 60--EUROPIUM 155--IRON 55--ISLANDS--LEAD 210
--MANGANESE 54--NIOBIUM 95--PACIFIC OCEAN--PRASEODYMIUM 144--RHODIUM 101--
RHODIUM 102--RUTHENIUM 103--RUTHENIUM 106--SEA--SILT--SOILS--STRONTIUM 89--
STRONTIUM 90--THALLIUM 208--ZIRCONIUM 95

AIR--DESIGN--FALLOUT--LABORATORY EQUIPMENT--OPERATION--TRANSPORT

ABUNDANCE--CESIUM 137--IRON 55--MAN--NORTH AMERICA--USA--WASHINGTON

BIOLOGICAL MATERIALS--BIOLOGY--ENVIRONMENT--PERFORMANCE--RADIATION
DETECTORS--SEMICONDUCTORS

CERIUM 141--CERIUM 143--COLUMBIA RIVER--COOLANTS--DETERMINATION--
DYSPROSIUM 165--ERBIUM 171--EUROPIUM 152--EUROPIUM 154--EUROPIUM 156--
GADOLINIUM 159--GAMMA SPECTROMETERS--HOLMIUM 166--HYDROLOGY--LANTHANUM 140
--NEODYMIUM 147--NORTH AMERICA--PRASEODYMIUM 142--REACTORS--RIVERS--
SAMARIUM 153--SCANDIUM 46--SEPARATION PROCESSES--TERBIUM 160--USA--
WASHINGTON--WATER--YTTERBIUM 169--YTTERBIUM 175--YTTRIUM 92--YTTRIUM 93
Subject Headings/Modifiers: HYDROFLUORIC ACID/effects on
electrodeposition of americium-241 and plutonium-239 from ashed biological
materials in presence of iron

CERIUM ISOTOPES Ce-143/determination in reactor effluent and river water
by group separation and $gamma$ spectrometry

EUROPIUM ISOTOPES Eu-152/determination in reactor effluent and river
water by group separation and $gamma$ spectrometry

EUROPIUM ISOTOPES Eu-156/determination in reactor effluent and river
water by group separation and $gamma$ spectrometry

BIOLOGICAL MATERIALS/separation of americium-241 and plutonium-239 from, by electrodeposition in presence of iron, effects of hydrofluoric acid on

CERIUM ISOTOPES Ce-141/determination in reactor effluent and river water by group separation and $gamma$ spectrometry

IRON/effects on electrodeposition of americium-241 and plutonium-239 from ashed biological materials, effects of hydrofluoric acid on

PRASEODYMIUM ISOTOPES Pr-142/determination in reactor effluent and river water by group separation and $gamma$ spectrometry

SCANDIUM ISOTOPES Sc-46/determination in reactor effluent and river water by group separation and $gamma$ spectrometry

SURFACE WATERS/analysis for rare earth radioisotopes by group separation and $gamma$ spectrometry

REACTOR COOLANTS/analysis of water, for rare earth radioisotopes by group separation and $gamma$ spectrometry

WATER/analysis of reactor effluent, for rare earth radioisotopes by group separation and $gamma$ spectrometry

COLUMBIA RIVER/analysis for rare earth radioisotopes by group separation and $gamma$ spectrometry

AMERICIUM/determination in ashed biological materials by lithium-activated silicon photon spectrometry

PLUTONIUM/determination in ashed biological materials by lithium-activated silicon photon spectrometry

BIOLOGICAL MATERIALS/analysis of ashed, for americium and plutonium by lithium-activated silicon photon spectrometry

BERYLLIUM ISOTOPES Be-7/distribution in salmon tissues, determination of, by $gamma$ spectrometry

SODIUM ISOTOPES Na-22/distribution in salmon tissues, determination of, by $gamma$ spectrometry

SAMARIUM ISOTOPES Sm-153/determination in reactor effluent and river water by group separation and $gamma$ spectrometry

TERBIUM ISOTOPES Tb-160/determination in reactor effluent and river water by group separation and $gamma$ spectrometry

YTTRIUM ISOTOPES Y-92/determination in reactor effluent and river water by group separation and $gamma$ spectrometry

YTTRIUM ISOTOPES Y-93/determination in reactor effluent and river water by group separation and $gamma$ spectrometry

YTTERBIUM ISOTOPES Yb-169/determination in reactor effluent and river water by group separation and $gamma$ spectrometry

Subject Codes (NSA): N20140* Chemistry--Analytical & Separations Chemistry

10/5/90 (Item 90 from file: 109)
559033 NSA-23-012076

GAMMA DOSE RATES AT RONGELAP ATOLL, 1954--1963.

Held, E.E.
Washington Univ., Seattle. Lab. of Radiation Biology
Corp. Source Code: 8688000

Publication Date: 1965 16 p 500356 3

Primary Report No.: UWFL--91
Note: UNCL
Journal Announcement: NSA23
Availability: Dep. CFSTI.
Document Type: Report
Language: English
Subfile: NSA (Nuclear Science Abstracts)
Contract No.: AT(45-1)-1385.
Descriptors: DETERMINATION; DISTRIBUTION; FALLOUT; FISSION PRODUCTS; GAMMA RADIATION; ISLANDS; MARSHALL ISLANDS; NUCLEAR EXPLOSIONS; PACIFIC OCEAN; RADIATION DOSES; SEA; TIME; URANIUM 235; VARIATIONS
Subject Headings/Modifiers: NUCLEAR EXPLOSIONS/radiation dose from, on Rongelap Atoll, Marshall Islands during 1954 to 1963, fallout

MARSHALL ISLANDS/radiation dose from fallout on Rongelap Atoll, during 1954 to 1963, calculation of
GAMMA RADIATION/dose to human population of Rongelap Atoll, Marshall Islands during 1954 to 1963, fallout

GAMMA RADIATION/dose from uranium fission products on Rongelap Atoll, Marshall Islands during 1954 to 1963

RADIATION DOSE/predictions for Rongelap Atoll, Marshall Islands in relation to measurements during 1954 to 1963,

GAMMA RADIATION/dosimetry on Rongelap Atoll, Marshall Islands during 1954 to 1963, fallout
Subject Codes (NSA): N28420* Life Sciences--Health Physics & Safety--Dosimetry & Monitoring

10/5/91 (Item 91 from file: 109)
556902 NSA-23-009944
BIKINI--ENIWETOK STUDIES, 1964. PART II. RADIOBIOLOGICAL STUDIES.
Welander, A.D.; Bonham, K.; Palumbo, R.F.; Gessel, S.P.; Lowman, F.G.; Jackson, W.B.; McClin, R.; Lewis, G.B.
Washington Univ., Seattle. Lab. of Radiation Biology
Corp. Source Code: 8688000
Publication Date: 1967 233 p.
Primary Report No.: UWFL--93(Pt.2)
Note: UNCL
Journal Announcement: NSA23
Availability: Dep. CFSTI.
Document Type: Report
Language: English
Subfile: NSA (Nuclear Science Abstracts)
Contract No.: AT(45-1)-1385.
Descriptors: ANIMALS; BIKINI; DISTRIBUTION; ENIWETOK; ENVIRONMENT; FALLOUT; FISSION PRODUCTS; ISLANDS; METABOLISM; NUCLEAR EXPLOSIONS; PACIFIC OCEAN; PLANTS; RADIOISOTOPES; SEA; SOILS; TIME
Subject Headings/Modifiers: FISSION PRODUCTS/content of animals, plants, soils, and waters at Eniwetok Proving Grounds during 1964, survey of

ECOSYSTEMS/radioisotope content of, at Eniwetok Proving Grounds during 1964, survey of

ENIWETOK PROVING GROUNDS/radioisotope contamination of biota and environment at, survey of fallout
Subject Codes (NSA): N28410* Life Sciences--Health Physics & Safety--Radioactive Contamination & Decontamination

10/5/92 (Item 92 from file: 109)
556868 NSA-23-009909
BIKINI--ENIWETOK STUDIES, 1964. PART I. ECOLOGICAL OBSERVATIONS.
Welander, A.D.; Bonham, K.; Donaldson, L.R.; Palumbo, R.F.; Gessel, S.P.; Lowman, F.G.; Jackson, W.B.
Washington Univ., Seattle. Lab. of Radiation Biology

Corp. Source Code: 8688000
Publication Date: 1966 277 p.
Primary Report No.: UWFL--93(Pt.1)
Note: UNCL
Journal Announcement: NSA23
Availability: Dep. CFSTI.
Document Type: Report
Language: English
Subfile: NSA (Nuclear Science Abstracts)
Contract No.: AT(45-1)-1385.
Descriptors: ANIMALS; BIKINI; CONTAMINATION; ENIWETOK; ENVIRONMENT; FALLOUT; ISLANDS; NUCLEAR EXPLOSIONS; PACIFIC OCEAN; PLANTS; RADIATION EFFECTS; SEA; SOILS; TIME
Subject Headings/Modifiers: BIKINI ATOLL/radioactivity levels on, effects of, on ecology, 1964 survey of fallout

ENIWETOK ATOLL/radioactivity levels on, effects of, on ecology, 1964 survey of fallout

ECOLOGY/radiation effects on, of Bikini and Eniwetok Atolls during 1964

ENIWETOK PROVING GROUNDS/radioactive contamination of biota and environment of, 1964 survey of cumulative
Subject Codes (NSA): N28220* Life Sciences--Ecology--Radiation Effects

10/5/93 (Item 93 from file: 109)
556499 NSA-23-009540
ATOLL SOIL TYPES IN RELATION TO THE DISTRIBUTION OF FALLOUT RADIONUCLIDES.
Held, E.E.; Gessel, S.P.; Walker, R.B.
Washington Univ., Seattle. Lab. of Radiation Biology
Corp. Source Code: 8688000
Publication Date: 1965 37 p.
Primary Report No.: UWFL--92
Note: UNCL
Journal Announcement: NSA23
Availability: Dep. CFSTI.
Document Type: Report
Language: English
Subfile: NSA (Nuclear Science Abstracts)
Contract No.: AT(45-1)-1385.
Descriptors: ABSORPTION; ANTIMONY 125; CERIUM 144; CESIUM 137; COBALT 60; DISTRIBUTION; EROSION; EUROPIUM 155; FALLOUT; LAYERS; MIXING; MOTION; NUCLEAR EXPLOSIONS; PRASEODYMIUM 144; RADIOACTIVITY; SAFETY; SOILS; STRONTIUM 90; SURFACES; VARIATIONS; ZINC 65
Subject Headings/Modifiers: STRONTIUM ISOTOPES Sr-90/content and distribution in Rongelap Atoll soils following nuclear explosion on Bikini Atoll
ANTIMONY ISOTOPES Sb-125/content and distribution in Rongelap Atoll soils following nuclear explosion on Bikini Atoll

SOILS/radioisotope distribution in Rongelap Atoll, effects of soil age and organic content on

MARSHALL ISLANDS/radioisotope distribution in soils of Rongelap Atoll in, following detonation of thermonuclear device

COBALT ISOTOPES Co-60/content and distribution in Rongelap Atoll soils following nuclear explosion on Bikini Atoll

PRASEODYMIUM ISOTOPES Pr-144/content and distribution in Rongelap Atoll soils following nuclear explosion on Bikini Atoll

CESIUM ISOTOPES Cs-137/content and distribution in Rongelap Atoll soils following nuclear explosion on Bikini Atoll

ZINC ISOTOPES Zn-65/content and distribution in Rongelap Atoll soils following nuclear explosion on Bikini Atoll

EUROPIUM ISOTOPES Eu-153/content and distribution in Rongelap Atoll soils following nuclear explosion on Bikini Atoll

CERIUM ISOTOPES Ce-144/content and distribution in Rongelap Atoll soils following nuclear explosion on Bikini Atoll
Subject Codes (NSA): N22110* Environmental & Earth Sciences--Geology & Hydrology--Hydrology

10/5/94 (Item 94 from file: 109)
553179 NSA-23-006217
EXTERNAL RADIATION LEVELS ON BIKINI ATOLL, MAY 1967.
Beck, H.L.; Bennett, B.G.; McCraw, T.F.
New York Operations Office (AEC), N. Y. Health and Safety Lab.
Corp. Source Code: 5873000
Publication Date: 1967 79 p.
Primary Report No.: HASL--190
Note: UNCL
Journal Announcement: NSA23
Availability: Dep. CFSTI.
Document Type: Report
Language: English
Subfile: NSA (Nuclear Science Abstracts)
Descriptors: ANTIMONY 125; BIKINI; CESIUM 137; COBALT 60; ENVIRONMENT; GAMMA RADIATION; GAMMA SPECTROMETERS; GEIGER-MUELLER COUNTERS; ISLANDS; MONITORING; PACIFIC OCEAN; RADIATION DOSES; RADIOACTIVITY; RADIOISOTOPES; RHODIUM 102; RUTHENIUM 106; SAMPLING; SCINTILLATION COUNTERS; SEA; SOILS; STRONTIUM 90
Subject Headings/Modifiers: RUTHENIUM ISOTOPES Ru-106/content in Bikini Atoll soils, measurement of

RADIATION MONITORING/equipment and methods for environmental, of Bikini Atoll, April to May 1967

NUCLEAR EXPLOSIONS/effects on gamma radiation level of Bikini Atoll

RHODIUM ISOTOPES Rh-102/content in Bikini Atoll soils, measurement of

GAMMA SOURCES/activity in Bikini Atoll soils, equipment and methods for measurement of

COBALT ISOTOPES Co-60/content in Bikini Atoll soils, measurement of

STRONTIUM ISOTOPES Sr-90/content in Bikini Atoll soils, measurement of

SOILS/radioactivity of Bikini Atoll, measurements of gamma

CESIUM ISOTOPES Cs-137/content in Bikini Atoll soils, measurement of

BIKINI ATOLL/radiation monitoring of, equipment and methods for gamma, April to May 1967

ANTIMONY ISOTOPES Sb-125/content in Bikini Atoll soils, measurement of
Subject Codes (NSA): N22110* Environmental & Earth Sciences--Geology & Hydrology--Hydrology

10/5/95 (Item 95 from file: 109)
543364 NSA-21-043445
ENGEBI RATS: ANOTHER CHAPTER.
Jackson, W.B.
Bowling Green State Univ., Ohio
Corp. Source Code: 1341000
Publication Date: 1967 16 p. 500356b
Primary Report No.: COO--1485-12

Secondary Report No.: CONF-670503--24
Note: From 2nd National Symposium on Radioecology, Ann Arbor, Mich.
Note: UNCL
Journal Announcement: NSA21
Availability: Dep. CFSTI.
Document Type: Report
Language: English
Subfile: NSA (Nuclear Science Abstracts)
Contract No.: AT(11-1)-1485.
Descriptors: ABUNDANCE; BACKGROUND; EFFICIENCY; ENIWETOK; ISLANDS; NUCLEAR EXPLOSIONS; NUCLEAR WEAPONS; PACIFIC OCEAN; RADIATION DOSES; RADIATION EFFECTS; RATS; SEA; SURVIVAL TIME; TESTING
Subject Codes (NSA): N28550* Life Sciences--Medicine--Blast & Thermal Effects

10/5/96 (Item 96 from file: 109)
543335 NSA-21-043416
FOOD CHAINS IN THE SEA.
Chipman, W.A.
International Atomic Energy Agency
pp 419-53 of Radioactivity and Human Diet. Russell, R. Scott (ed.). New York, Pergamon Press, 1966.
Journal Announcement: NSA21
Document Type: Journal Article
Language: English
Subfile: NSA (Nuclear Science Abstracts)
Descriptors: ABUNDANCE; ALGAE; CESIUM 137; COBALT; CONTAMINATION; ENIWETOK; FISH; FOOD; FOOD CHAIN; HYDROLOGY; IRON; IRRADIATION; ISLANDS; MANGANESE; MEASUREMENT; MICROORGANISMS; NEUTRONS; NUCLEAR WEAPONS; PACIFIC OCEAN; PLANKTON; PRODUCTION; RADIOISOTOPES; RUTHENIUM 106; SEA; STRONTIUM 90; TESTING; VARIATIONS; ZINC
Subject Codes (NSA): N28410* Life Sciences--Health Physics & Safety--Radioactive Contamination & Decontamination

10/5/97 (Item 97 from file: 109)
543237 NSA-21-043318
RADIOISOTOPE CYCLING IN TERRESTRIAL COMMUNITIES AT ENIWETOK ATOLL.
Jackson, W.B.; Carpenter, M.L.
Bowling Green State Univ., Ohio
Corp. Source Code: 1341000
Publication Date: 1967 13 p.
Primary Report No.: COO--1485-13
Secondary Report No.: CONF-670503--25
Note: From 2nd National Symposium on Radioecology, Ann Arbor, Mich.
Note: UNCL
Journal Announcement: NSA21
Availability: Dep. CFSTI.
Document Type: Report
Language: English
Subfile: NSA (Nuclear Science Abstracts)
Contract No.: AT(11-1)-1485.
Descriptors: ABUNDANCE; CESIUM 137; DIET; ENIWETOK; PACIFIC OCEAN; PLANTS; POPULATIONS; RADIOISOTOPES; RATS; SEA; TISSUES
Subject Codes (NSA): N28410* Life Sciences--Health Physics & Safety--Radioactive Contamination & Decontamination

10/5/98 (Item 98 from file: 109)
539376 NSA-21-039446
PROGRESS REPORT I [ON CANCER RESEARCH], MAY 1, 1966--APRIL 30, 1967.
Warren, S.
New England Deaconess Hospital, Boston, Mass. Cancer Research Inst.
Corp. Source Code: 5829000
51 p.
Primary Report No.: NYO--3777-7
Note: UNCL
Journal Announcement: NSA21

Availability: Dep. CFSTI.
Document Type: Report
Language: English
Subfile: NSA (Nuclear Science Abstracts)
Contract No.: AT(30-1)-3777.
Descriptor Groups (Splits): LIFE SPAN--LIFETIME--MEDICINE--PERSONNEL--RADIATION EFFECTS--RADIATIONS--X RADIATION

CANCER--DIAGNOSIS--ISOTOPES--MAN--RADIATION DETECTORS--TUMORS--USES

LEUKEMIA--MICE--RADIATION EFFECTS--RADIATIONS

ABUNDANCE--FETUSES--GENETICS--GONADS--MICE--PREGNANCY--PROGENY--RADIATION EFFECTS--RADIATION INJURIES--RADIATIONS--REPRODUCTION--TESTES

ABUNDANCE--CHROMOSOMES--FALLOUT--ISLANDS--MALFORMATIONS--MAN--MARSHALL ISLANDS--PACIFIC OCEAN--POPULATIONS--PRODUCTION--RADIATION EFFECTS--SEA

ADRENAL GLANDS--AMINO ACIDS--ANTHRACENE--BENZENE--BIRDS--CANCER--CHICKENS --DRUGS--EFFICIENCY--EMBRYOS--ENZYMES--GLANDS--INJECTION--LIVER--METHYL RADICALS--NEOPLASMS--PERFORMANCE--RATS--TOXICITY--TRYPTOPHAN OXYGENASE--TUMORS--TYROSINE AMINOTRANSFERASE

BONES--MICE--PLUTONIUM--TISSUES--TOXICITY--TUMORS

CANCER--DRUGS--EFFICIENCY--FETUSES--PURINE--RATS--TOXICITY--USES

BIRDS--BLOOD FORMATION--CHICKENS--COBALT CHLORIDES--SELENIUM--TOXICITY

IODINE 131--MICE--NEOPLASMS--PRODUCTION--RADIATION EFFECTS--SURGERY--THYMUS--THYROID--TUMORS--USES

BIBLIOGRAPHY--RADIOBIOLOGY

ABUNDANCE--BLOOD--CALCIUM--CANCER--NEOPLASMS--PARABIOSIS--RADIATION DOSES --RADIATION EFFECTS--RADIATION PROTECTION--RADIATION SICKNESS--RATS--SHIELDING--SURGERY--TUMORS--X RADIATION

CANCER--CARCINOMAS--ESOPHAGUS--GAMMA RADIATION--RADIATION EFFECTS--TISSUES

ANIMALS--HAMSTERS--LABELLED COMPOUNDS--LIVER--MAN--MEDICINE--METABOLISM--NUCLEIC ACIDS--NUCLEOSIDES--RADIOAUTOGRAPHY--SEX--THYMIDINE--THYMINE--TISSUES--TRITIUM--TUMORS--USES--UTERUS
Subject Codes (NSA): N28540* Life Sciences--Medicine--Radiotherapy

10/5/99 (Item 99 from file: 109)
536482 NSA-21-036549
CHROMOSOME STUDIES ON MARSHALL ISLANDERS EXPOSED TO FALLOUT RADIATION.
Lisco, H. ; Conard, R.A.
New England Deaconess Hospital, Boston. Harvard Univ., Boston
Science, 157: 445-7(July 28, 1967).
Publication Date: 1967
Secondary Report No.: BNL--11257; NYO--3777-5
Journal Announcement: NSA21
Document Type: Journal Article
Language: English
Subfile: NSA (Nuclear Science Abstracts)
Descriptors: CHROMOSOMES; FALLOUT; ISLANDS; LYMPHOCYTES; MALFORMATIONS; MAN; MARSHALL ISLANDS; MARSHALLESE; NUCLEAR EXPLOSIONS; PACIFIC OCEAN; POPULATIONS; PRODUCTION; RADIATION EFFECTS; SEA
Subject Codes (NSA): N28320* Life Sciences--Genetics & Cytogenetics--Mutations & Aberrations

5003568

10/5/100 (Item 100 from file: 109)
526413 NSA-21-026470

MEDICAL SURVEY OF THE PEOPLE OF RONGELAP AND UTIRIK ISLANDS ELEVEN AND TWELVE YEARS AFTER EXPOSURE TO FALLOUT RADIATION (MARCH 1965 AND MARCH 1966).
Conard, R.A.; Meyer, L.M.; Sutow, W.W.
and others
Brookhaven National Lab., Upton, N. Y.
Corp. Source Code: 1401000
Publication Date: 1967 170 p.
Primary Report No.: BNL--50029
Note: UNCL
Journal Announcement: NSA21
Availability: Dep. CFSTI.
Document Type: Report
Language: English
Subfile: NSA (Nuclear Science Abstracts)
Descriptors: AGE ESTIMATION; BLOOD; CESIUM 137; CHROMOSOMES; COBALT 60; FALLOUT; GROWTH; HORMONES; IODINE 131; LEUCOCYTES; MAN; NUCLEAR EXPLOSIONS; RADIATION DOSES; STRONTIUM 90; THYROID; THYROXINE
Subject Codes (NSA): N28550* Life Sciences--Medicine--Blast & Thermal Effects

10/5/101 (Item 101 from file: 109)
524489 NSA-21-024543
RATS, BOMBS, AND PARADISE: THE STORY AT ENIWETOK.
Jackson, W.B.
Bowling Green State Univ., Ohio
Corp. Source Code: 1341000
Publication Date: 1967 5 p.
Primary Report No.: COO--1485-10
Secondary Report No.: CONF-670316--1
Note: From 3rd Vertebrate Pest Control Conference, San Francisco, Calif.
Note: UNCL
Journal Announcement: NSA21
Availability: Dep. CFSTI.
Document Type: Report
Language: English
Subfile: NSA (Nuclear Science Abstracts)
Contract No.: AT(11-1)-1485.
Descriptors: AGRICULTURE; ANIMALS; CROPS; ENIWETOK; NUCLEAR EXPLOSIONS; PACIFIC OCEAN; PLANTS; POPULATIONS; RATS
Subject Codes (NSA): N28620* Life Sciences--Radiation Effects on Animals --Vertebrates

10/5/102 (Item 102 from file: 109)
522426 NSA-21-022477
MEDICAL RESEARCH.
Brookhaven National Lab., Upton, N. Y.
Corp. Source Code: 1401000
Primary Report No.: BNL--994
Report No., Pages: BNL--994, pp 124-39
Note: UNCL
Journal Announcement: NSA21
Document Type: Report
Language: English
Subfile: NSA (Nuclear Science Abstracts)
Descriptor Groups (Splits): EYES--MICE--RADIATION DOSES--RADIATION EFFECTS--RADIATION INJURIES--THERMAL NEUTRONS--TISSUES--X RADIATION

BLOOD CIRCULATION--DISEASES--HALF-LIFE--HYPERTENSION--MAN--PRODUCTION--SALTS--SODIUM CHLORIDES--SODIUM 22

ACIDS--HETEROCYCLICS--MAN--MEASUREMENT--ORGANIC NITROGEN COMPOUNDS--QUINOLINES--URINE--VITAMIN B-6--VITAMINS

BODY--CARBOHYDRATES--CARBON 14--DETERMINATION--DIABETES--DISEASES--MAN--MEASUREMENT--METABOLISM--OBESITY--TRACER TECHNIQUES--WEIGHT

BLOOD--GAMMA RADIATION--LEUKEMIA--RADIOTHERAPY

HORMONES--INSULIN--MAN

AMINO ACIDS--CARBON 14--COLLAGEN--DISEASES--EFFICIENCY--GUINEA PIGS--LABELLED COMPOUNDS--LYSINE--METABOLISM--PRODUCTION--PROLINE--PROTEINS--SALTS--SOLUBILITY--VITAMIN C--VITAMINS

ANALYSIS--DESIGN--DIFFRACTION--DNA--MOLECULES--NUCLEIC ACIDS--STABILITY--X RADIATION

DETERMINATION--DISEASES--FALLOUT--FETUSES--MAN--MARSHALL ISLANDS--PACIFIC OCEAN--POPULATIONS--RADIATION EFFECTS--RADIATION INJURIES--RADIATION SOURCES--SEA--THYROID

BLOOD--CATTLE--EFFICIENCY--IMMUNITY--INFECTIONS--IRRADIATION--LOSSES--LYMPH SYSTEM--LYMPHOCYTES--PROTEINS--RATS--TETANUS--TOXICITY

CATTLE--EFFICIENCY--IRRADIATION--LYMPH SYSTEM--SKIN--TRANSPLANTS

ANALYSIS--ANIMALS--DESIGN--MAMMALS--MOLECULES--PREPARATION--RIBONUCLEIC ACID

AGGLUTININS--ANTIBODIES--BLOOD CELLS--EFFICIENCY--GUINEA PIGS--HEME--HEMOGLOBIN--LYMPHOCYTES--MALFORMATIONS--PLANTS--PRODUCTION

ANIMAL CELLS--ANTIBODIES--LYMPH SYSTEM--REACTION KINETICS--RETICULOENDOTHELIAL SYSTEM

ANIMALS--FISSION PRODUCTS--NEUTRONS--RADIATION DOSES--RADIATION EFFECTS--RADIATION INJURIES--RECOVERY--SKIN--SWINE--TESTING--THERMAL NEUTRONS--X RADIATION

DISEASES--EXPANSION--MICE--NODULES--RADIATION EFFECTS--RADIATION INJURIES--SPLEEN--TIME--X RADIATION

Subject Codes (NSA): N28500* Life Sciences--Medicine

10/5/103 (Item 103 from file: 109)

511044 NSA-21-011058

THYROID NODULES AS A LATE SEQUELA OF RADIOACTIVE FALLOUT IN A MARSHALL ISLAND POPULATION EXPOSED IN 1954.

Conard, R.A. ; Rall, J.E.; Sutow, W.W.

Brookhaven National Lab., Upton, N. Y.

New Eng. J. Med., 274: 1392-9(June 23, 1966).

Publication Date: 1966

Journal Announcement: NSA21

Document Type: Journal Article

Language: English

Subfile: NSA (Nuclear Science Abstracts)

Descriptors: ABSORPTION; DISEASES; FALLOUT; GAMMA RADIATION; HYPERTHYROIDISM; IODINE 131; MAN; MARSHALL ISLANDS; NUCLEAR EXPLOSIONS; RADIATION INJURIES; SEA; SKIN; SURGERY; THYROID

Subject Codes (NSA): N28620* Life Sciences--Radiation Effects on Animals--Vertebrates

10/5/104 (Item 104 from file: 109)

504751 NSA-21-004759

ELEVATION OF THE SERUM PROTEIN-BOUND IODINE LEVEL IN INHABITANTS OF THE MARSHALL ISLANDS.

Rall, J.E. ; Conard, R.A.

National Inst. of Arthritis and Metabolic Diseases, Bethesda, Md.

Amer. J. Med., 40: 833-6(June 1966).

Publication Date: 1966

Coden: AJMEA

Secondary Report No.: BNL--9632

5003570

Journal Announcement: NSA21

Document Type: Journal Article

Language: English
Subfile: NSA (Nuclear Science Abstracts)
Descriptors: ABUNDANCE; BLOOD SERUM; FALLOUT; HORMONES; IODINE; IODINE COMPOUNDS; MAN; MARSHALL ISLANDS; NUCLEAR EXPLOSIONS; POPULATIONS; PROTEIN-BOUND IODINE; PROTEINS; RADIATIONS; THYROID; THYRONINE; THYROXINE; VARIATIONS
Subject Codes (NSA): N28130* Life Sciences--Biochemistry, Physiology, & Molecular Biology--Metabolism, Physiology & Toxicology

10/5/105 (Item 105 from file: 109)
489859 NSA-22-043360
AGEING STUDIES IN A MARSHALLESE POPULATION EXPOSED TO RADIOACTIVE FALLOUT IN 1954.
Conard, R.A.; Lowrey, A.; Eicher, M.; Thompson, K.; Scott, W.A.
Brookhaven National Lab., Upton, N. Y.
pp 345-60 of Radiation and Ageing. Lindop, Patricia J. (ed.). London, Taylor and Francis Ltd., 1966.
Note: From International Colloquium on Radiations and Ageing, Semmering, Austria, June 23--24, 1966. See CONF-660635.
Journal Announcement: NSA22
Document Type: Journal Article
Language: English
Subfile: NSA (Nuclear Science Abstracts)
Descriptors: AGE; AGING; FALLOUT; ISLANDS; MAN; MARSHALL ISLANDS; MARSHALLESE; PACIFIC OCEAN; POPULATIONS; RADIATION EFFECTS; SEA
Descriptor Groups (Splits): NERVOUS SYSTEM

BLOOD--PRESSURE

ABUNDANCE--BODY--POTASSIUM 40

RADIATION INJURIES--THYROID
EYES--VISION

EARS--SOUND

BLOOD--CHOLESTEROL

ELASTICITY--SKIN

COLOR--HAIR--SKIN
Subject Headings/Modifiers: POTASSIUM ISOTOPES K-40/content of thyroid glands in human population of Marshall Islands exposed to fallout during 1954

NERVOUS SYSTEM/radiation effects on, of human population of Marshall Islands exposed to fallout during 1954

CHOLESTEROL/content of blood in human population of Marshall Islands exposed to fallout during 1954

BLOOD PRESSURE/measurement in human population of Marshall Islands exposed to fallout during 1954
VISION/measurement in human population of Marshall Islands exposed to fallout during 1954

HEARING/measurement in human population of Marshall Islands exposed to fallout during 1954

HAIR/radiation effects on, of human population of Marshall Islands exposed to fallout during 1954

FALLOUT/effects on human population of Marshall Islands exposed during 1954, late

SKIN/radiation effects on, of human population of Marshall Islands

exposed to fallout during 1954

MARSHALL ISLANDS/radiation effects on human population of, exposed to fallout during 1954, late

AGING/radiation effects on, in Marshall Islanders exposed to fallout during 1954

THYROID GLAND/radiation effects on, in Marshall Islanders exposed to fallout during 1954

POPULATIONS/radiation effects on human, of Marshall Islands exposed to fallout during 1954, late
Subject Codes (NSA): N28550* Life Sciences--Medicine--Blast & Thermal Effects

10/5/106 (Item 106 from file: 109)
484920 NSA-22-038417
CLINICAL CONSEQUENCES OF PROTRACTED EXPOSURE TO FALLOUT.
Hasterlik, R.J.
Chicago Univ., Ill. Dept. of Medicine. Argonne Cancer Research Hospital, Chicago, Ill.
Corp. Source Code: 1986200; 0633000
Publication Date: 1968 23 p.
Primary Report No.: ACRH--1000-59
Secondary Report No.: CONF-680507--3
Note: From Conference on Radiological Protection of the Publich in Nuclear Mass Disasters, Interlaken, Switzerland.
Note: UNCL
Journal Announcement: NSA22
Availability: Dep. CFSTI.
Document Type: Report
Language: English
Subfile: NSA (Nuclear Science Abstracts)
Contract No.: AT(11-1)-69.
Descriptors: DIAL PAINTERS; GAMMA RADIATION; IODINE ISOTOPES; MAN; RADIATION DOSES; RADIATION INJURIES; STRONTIUM 90
Descriptor Groups (Splits): BONES--PERSONNEL--RADIUM 226
FALLOUT--RADIOISOTOPES--THYROID
Subject Headings/Modifiers: FALLOUT/effects on man

GAMMA RADIATION/dose to man from fallout, estimation of LD

BONES/radiation effects on, of dial painters, radium-226

STRONTIUM ISOTOPES Sr-90/ingestion of fallout, hazards from

THYROID GLAND/radiation effects on, of human population of Marshall Islands following exposure to fallout

IODINE ISOTOPES/effects on thyroid of human population of Marshall Islands in relation to external dose

MAN/radiation effects on, following protracted exposure to fallout

RADIUM ISOTOPES Ra-226/effects on bones of dial painters, late pathological
Subject Codes (NSA): N28630* Life Sciences--Radiation Effects on Animals --Man

10/5/107 (Item 107 from file: 109)
476936 NSA-22-030417
ENIWETOK MARINE BIOLOGICAL LABORATORY. Annual Report, 1966--67.
Hiatt, R.W.
Hawaii Univ., Honolulu
Corp. Source Code: 3794000

Publication Date: 1967 25 p.
Primary Report No.: TID--24205
Note: UNCL
Journal Announcement: NSA22
Availability: Dep. CFSTI.
Document Type: Report
Language: English
Subfile: NSA (Nuclear Science Abstracts)
Contract No.: AT(29-2)-226.
Descriptors: ANIMALS; BIOLOGY; EARTH; ENIWETOK; ENVIRONMENT; EXPANSION; INSECTS; INVERTEBRATES; ISLANDS; PACIFIC OCEAN; PLANTS; RATS; REPRODUCTION; SEA; TESTING
Subject Headings/Modifiers: CYANOPHYTA/ecology at Eniwetok Atoll

CRUSTACEA/Birgus sp., ecology at Eniwetok Atoll

CHONDRICHTHYES/sharks, protection of man against, design of buoyed plastic bag for

INSECTA/Drosophila sp., ecology at Eniwetok Atoll

CRUSTACEA/Trapezia sp., ecology at Eniwetok Atoll

PROTOZOA/Cohnilembus sp., ecology at Eniwetok Atoll

PROTOZOA/Pseudocohnilembus sp., ecology at Eniwetok Atoll

CARBON DIOXIDES/content of seawater at Eniwetok Atoll

RATS/ecology at Eniwetok Atoll

CRUSTACEA/Birgus latro, ecology at Eniwetok Atoll

CRUSTACEA/Stenopus hispidus, ecology at Eniwetok Atoll

MOLLUSCA/Nerita plicata, ecology of Eniwetok Atoll

MOLLUSCA/Nerita polita, ecology at Eniwetok Atoll
MOLLUSCA/Tridacna gigas, ecology at Eniwetok Atoll

MOLLUSCA/Terebra maculata, ecology at Eniwetok Atoll

MOLLUSCA/Terebra crenulata, ecology at Eniwetok Atoll

MOLLUSCA/Siphonaria normalis, ecology at Eniwetok Atoll

CNIDARIA/Tridaca sp., ecology at Eniwetok Atoll

CRUSTACEA/Birgus latro, ecology at Eniwetok Atoll

CNIDARIA/Nephthea sp., ecology at Eniwetok Atoll

CNIDARIA/Anthopleura elegantissima, ecology at Eniwetok Atoll

CNIDARIA/Eunical mammosa, ecology of Eniwetok Atoll

CNIDARIA/Pseudoplexaura porosa, ecology at Eniwetok Atoll

PORIFERA/ecology at Eniwetok Atoll
OSTEICHTHYES/Labroides dimidiatus, ecology at Eniwetok Atoll

OSTEICHTHYES/Labroides bicolor, ecology at Eniwetok Atoll

OSTEICHTHYES/Labroides sp., ecology at Eniwetok Atoll

PROTOZOA/Uronema sp., ecology at Eniwetok Atoll

PROTOZOA/Cyclidium sp., ecology at Eniwetok Atoll

CRUSTACEA/Uca sp., ecology at Eniwetok Atoll

CRUSTACEA/Coenobitis sp., ecology at Eniwetok Atoll

MAN/protection against sharks, design of buoyed plastic bag for

CRUSTACEA/Gecarcoidea lalandii, ecology at Eniwetok Atoll

PROTOZOA/Hymenostomidae sp., ecology at Eniwetok Atoll
Subject Codes (NSA): N28210* Life Sciences--Ecology--Interrelation

10/5/108 (Item 108 from file: 109)
475093 NSA-22-028574
CHROMOSOME STUDIES ON JAPANESE EXPOSED TO RADIATION RESULTING FROM NUCLEAR BOMB EXPLOSIONS.
Ishihara, T.; Kumatori, T.
National Inst. of Radiological Sciences, Chiba, Japan
pp 144-66 of Human Radiation Cytogenetics. Evans, H. J. Court Brown, W. M. McLean, A. S. (eds.). New York, John Wiley and Sons, Inc., 1967.
Note: From International Symposium on Human Radiation Cytogenetics, Edinburgh. See CONF-661062.
Journal Announcement: NSA22
Document Type: Journal Article
Language: English
Subfile: NSA (Nuclear Science Abstracts)
Work Location: Japan
Descriptors: ABUNDANCE; ANIMAL CELLS; BIKINI; CHROMOSOMES; FALLOUT; HIROSHIMA; IN VITRO; ISLANDS; JAPAN; LEUCOCYTES; MALFORMATIONS; MAN; MITOSIS; NAGASAKI; NUCLEAR EXPLOSIONS; PACIFIC OCEAN; PLOIDY; RADIATION INJURIES; RADIATIONS; SEA; TIME; VARIATIONS
Subject Headings/Modifiers: FALLOUT/effects on chromosomes in cultured leukocytes from human fisherman following exposure near Bikini, aberrant

LEUKOCYTES/chromosome aberrations in cultured, from human populations exposed to fallout radiation at Bikini, Hiroshima, or Nagasaki, characterization of

NAGASAKI/characterization of chromosome aberrations in cultured leukocytes from human populations exposed to atomic bombing of

RADIATION/effects on chromosomes in human leukocytes following exposure to fallout at Bikini, Hiroshima, or Nagasaki

MAN/characterization of chromosome aberrations in cultured leukocytes from, exposed to fallout radiation at Bikini, Hiroshima, or Nagasaki

CHROMOSOMES/aberrations of, in cultured leukocyte, from human populations exposed to fallout radiation at Bikini, Hiroshima, or Nagasaki
Subject Codes (NSA): N28550* Life Sciences--Medicine--Blast & Thermal Effects

10/5/109 (Item 109 from file: 109)
474986 NSA-22-028467
RADIOACTIVITY IN THE INDIVIDUAL: CONTAMINATION OF SOFT TISSUES OF INFANTS AND CHILDREN WITH RADIOACTIVE FALLOUT AS EXEMPLIFIED BY $sup 137$Cs AND $sup 131$I.
Hanson, W.C.
Pacific Northwest Lab., Richland, Wash.
Pediatrics, 41: Suppl., 240-56(Jan. 1968).
Publication Date: 1968
Journal Announcement: NSA22
Document Type: Journal Article
Language: English

5003574

Subfile: NSA (Nuclear Science Abstracts)
Descriptors: ABUNDANCE; AGE; ALASKA; BONES; CESIUM 137; DIET; ENVIRONMENT; FALLOUT; FOOD CHAIN; IODINE 131; MAN; MARSHALL ISLANDS; METABOLISM; NEVADA; NORTH AMERICA; NUCLEAR EXPLOSIONS; PACIFIC OCEAN; POPULATIONS; SEA; THYROID; TIME; TISSUES; USA
Subject Headings/Modifiers: MAN/cesium-137 content of, effects of age, diet, and environment locale on

MAN/iodine-131 content of, effects of age, diet, and environment locale on
UNITED KINGDOM/iodine-131 content of thyroid gland of human children in, effects of nuclear testing on

THYROID GLAND/iodine-131 content of, in human children in UK and USA, effects of nuclear testing on

ALASKA/cesium-137 content of man at Anaktuvuk Pass, effects of food chain on

FOOD CHAINS/effects on cesium-137 content of man at Anaktuvuk Pass, Alaska

CESIUM ISOTOPES Cs-137/content of tissues of man, effects of age, diet, and environment locale on

IODINE ISOTOPES I-131/content of thyroid gland of man, effects of age, diet, and environment locale on

UNITED STATES/iodine-131 content of thyroid gland of human children in, effects of nuclear testing on

DIET/effects on cesium-137 and iodine-131 content of tissues of man
AGE/effects on cesium-137 and iodine-131 content of tissues of man
Subject Codes (NSA): N28410* Life Sciences--Health Physics & Safety--Radioactive Contamination & Decontamination

10/5/110 (Item 110 from file: 109)
472321 NSA-22-025800
ENVIRONMENTAL RADIATION.
California Univ., Los Angeles. Lab. of Nuclear Medicine and Radiation Biology
Corp. Source Code: 1704000
Primary Report No.: UCLA--12-668
Report No., Pages: UCLA--12-668, pp 37-58
Note: UNCL
Journal Announcement: NSA22
Document Type: Report
Language: English
Subfile: NSA (Nuclear Science Abstracts)
Descriptors: ABUNDANCE; ANIMALS; ARTHROPODS; BARLEY; BEANS; BONES; CEREALS; CERIUM 144; CESIUM 137; CLINOPTILOLITE; DESERT; DEUTERIUM; ENVIRONMENT; EVAPORATION; FECES; FISSION PRODUCTS; FOOD; GAMMA RADIATION; GERMINATION; INSECTS; ION EXCHANGE MATERIALS; LIFE SPAN; LIFETIME; MAMMALS; METABOLISM; MILK; NEUTRONS; NEVADA; NEVADA TEST SITE; NORTH AMERICA; OXYGEN 18; PLANTS; POPULATIONS; POTASSIUM; RADIATION EFFECTS; RADIUM 226; RAIN; REPTILES; RODENTS; RUBIDIUM 86; SEEDS; SOILS; SOLUTIONS; STRONTIUM 85; STRONTIUM 90; SURVIVAL TIME; TESTING; USA; VEGETABLES; WATER; ZIRCONIUM 95
Subject Headings/Modifiers: INSECTA/Cryptoglossa verrucosa, radiation effects on, at Nevada Test Site
ANGIOSPERMIDAE/Phaseolus sp., radioisotope uptake by, cesium-137 and rubidium-86

GAMMA RADIATION/effects on germination of seeds of Salsola

MILK/potassium transfer coefficient of

Pettitt, B.E.
Air Materiel Command. Air Installations Div., Wright-Patterson AFB, Ohio ; Illinois Inst. of Tech., Chicago. Armour Research Foundation
Publication Date: Mar. 1951 102 p.
Primary Report No.: WT-59
Note: Operation GREENHOUSE
Journal Announcement: NSA16
Document Type: Report
Language: English
The loading problem is to predict the forces imposed on an isolated structure which is struck by a given blast wave moving across the structure in a direction normal to one of its faces, and the net horizontal and vertical forces as function of time are found for the period during which the structure is immersed in the wave. The development of the loading method was accomplished by a study of known theory and existing experimental data. Data obtained by shock tube studies were combined with theory to produce a set of fundamental parameter plots and a rational load-computation method. Equations of motion, used in the prediction of response, are discussed and possible alternate methods of solutions are given. (C.H.)
Descriptors: CONFIGURATION; DIAGRAMS; EQUATIONS; MOTION; NUCLEAR EXPLOSIONS; REACTOR FUELING; SHOCK WAVES; TUBES
Subject Codes (NSA): GENERAL AND MISCELLANEOUS

10/5/161 (Item 161 from file: 109)
187314 NSA-16-011358
U.S. AIR FORCE STRUCTURES. ANNEX 3.3 OF SCIENTIFIC DIRECTOR'S REPORT OF ATOMIC WEAPON TESTS AT ENIWETOK, 1951
Pettitt, B.E.
Air Materiel Command. Air Installations Div., Wright-Patterson AFB, Ohio
Publication Date: Aug. 1951 416 p.
Primary Report No.: WT-29
Note: Operation GREENHOUSE
Journal Announcement: NSA16
Document Type: Report
Language: English
Results are reported in an investigation of the relationship of blast to structural-response damage. Methods for computing blast loading and response from basic blast data were developed and applied to the selected test structures to predict their behavior. Theoretical results are compared with test results to determine the validity of the analytical methods, the model relationships, and the magnitude and regimen of the several parameters. Instruments used in measuring the effects of blasts on the structures are described. Results of the tests indicate that the structures behaved as expected. It was concluded that pretest analytical methods are satisfactory, that there exists a definite scale relation of loading between small-scale models and prototypes, and that the basic parameters can be applied to other structures. (C.H.)
Descriptors: CONFIGURATION; INSTRUMENTS; MEASURED VALUES; NUCLEAR EXPLOSIONS; REACTOR FUELING; SHOCK WAVES
Subject Codes (NSA): GENERAL AND MISCELLANEOUS

10/5/162 (Item 162 from file: 109)
187313 NSA-16-011357
CONTROL STUDIES PERFORMED IN THE UNITED STATES AND AT ENIWETOK. PARTS I, II, IV, AND VI. ANNEX 2.2 OF SCIENTIFIC DIRECTOR'S REPORT OF ATOMIC WEAPON TESTS AT ENIWETOK, 1951
Los Alamos Scientific Lab., N. Mex.; Naval Medical Research Inst., Bethesda, Md.; Naval Radiological Defense Lab., San Francisco; Oak Ridge National Lab., Tenn.
Publication Date: 1951 171 p.
Primary Report No.: WT-18
Note: Operation GREENHOUSE
Journal Announcement: NSA16
Document Type: Report
Language: English

A high degree of correlation was found between the thymic weight loss in mice and the dosage of x radiation over the range of 75 to 900 r. Splenic weight loss proved satisfactory as a biological indicator over the range of 150 to 600 r. The response of mice splenic and thymic net weight to the mixed radiation in a thermal neutron columm was found to be qualitatively the same as that seen following exposure to x radiation. The relationship of chromosome breakage frequency to radiation dose in the flowering plant Tradescantia (spiderwort) was determined for three experiments designed to simulate anticipated field conditions for atomic explosions. Studies are reported which were made to provide control x-ray dose-mortality data for comparison with field montality data obtained from mice exposed to atomic bomb nuclear radiations. Mean survival times and the pattern of deaths as a function of dose and time are presented and discussed. Lethal dose curves established for 110 to 160 lb swine exposed to 2,000 kvp total-body x radiaation at 2 m indicate that bilateral (one-half the total dose to each lateral aspect) irradiation is more lethal than unilateral (total dose to one lateral aspect) irradiation. The dependence of dose distribution on method of x radiation and wave length, the importance of uniform dose distribution, and the difficulties encountered in obtaining uniform dose distribution in a subject 28 cm thick are discussed. From a study of the effects of exposure of swine to tropical conditions for a period of several hours in metal containers similar to those used for exposure during Operation Greenhouse it was concluded that the confinement did not affect significantly the response of the animals to irradiation. Lethal dosage determinations and pathological effects of various doses of bilateral total-body x irradiation on dogs are reported. Data indicate that confinement of dogs for several hours in Ai cages under conditions slmilar to those used at Operation Greenhouse did not affect significantly the response of the animals to irradiation. (C.H.)

Descriptors: ALUMINUM; ANIMALS; BIOLOGY; BODY; CHROMOSOMES; DISTRIBUTION; DOGS; FREQUENCY; IRRADIATION; LETHAL DOSE; LOSSES; MICE ; NEUTRONS; NUCLEAR EXPLOSIONS; PLANNING; PLANTS; RADIATION DOSES; RADIATION INJURIES; SWINE; THICKNESS; THYMUS; VESSELS; WEIGHT; X RADIATION

Subject Codes (NSA): GENERAL AND MISCELLANEOUS

10/5/163 (Item 163 from file: 109)
187312 NSA-16-011356

PART 1. INSTRUMENTATION FOR STRUCTURES PROGRAM. ANNEX 3.4 OF SCIENTIFIC DIRECTOR'S REPORT OF ATOMIC WEAPON TESTS AT ENIWETOK, 1951

Northrop, P.A.

Sandia Corp., Albuquerque, N. Mex.

Publication Date: Jan. 1951 144 p.

Primary Report No.: WT-1

Note: Operation GREENHOUSE

Journal Announcement: NSA16

Document Type: Report

Language: English

Instruments are described which were used to measure the blast effects on the structures during Operation Greenhouse. Measurements made on buildings included air pressure, acceleration, displacement, strain, earth pressure, footing pressure, and time-of-break measurements. In additson Stimascope (sound-time-in-materials), tests, Whittemore strain gage tests, surveying measurements, and natural period of vibration measurements, were made before, and repeated after, the blast. The magnitude of the task limited the type of end measurements to the simplest that would give adequate information. Availability, cost, and ease wlth which gage responses could be remotely recorded on magnetic tape, were also controlling factors in the selection of the instruments used. A list of the equipment, photographs, diagrammatic drawings and wiring circuits, and data from preliminary tests of the equipment are included. (C.H.)

Descriptors: AIR; BUILDINGS; CIRCUITS; CONFIGURATION; DEFORMATION; EARTH; ECONOMICS; ELECTRONICS; GAGES; INSTRUMENTS; MEASURED VALUES; PHOTOGRAPHY; PRESSURE; RECORDING SYSTEMS; SHOCK WAVES; SOUND; TESTING; VELOCITY; VIBRATIONS

Subject Codes (NSA): GENERAL AND MISCELLANEOUS

10/5/164 (Item 164 from file: 109)
186289 NSA-16-010332
OCCURRENCE OF BISMUTH-207 AT ENIWETOK ATOLL
Lowman, F.G.; Palumbo, R.F.
Univ. of Washington, Seattle
Nature v 193.
Publication Date: Feb. 24, 1962 796-7 p.
Journal Announcement: NSA16
Document Type: Journal Article
Language: English
Alga samples collected at Eniwetok Atoll in March 1961 were subjected to numerous spectral, chemical, and chromatographic tests for Bi/sup 207/. All tests were positive. (D.L.C.)
Descriptors: ALGAE; BISMUTH 207; CHROMATOGRAPHY; EFFICIENCY; ENIWETOK; QUALITATIVE ANALYSIS; SAMPLING; SPECTROSCOPY
Subject Codes (NSA): HEALTH AND SAFETY

10/5/165 (Item 165 from file: 109)
183326 NSA-16-007365
CLINICAL EVALUATION OF LATE RADIATION EFFECTS IN A HUMAN POPULATION-WITH SPECIAL REFERENCE TO POSSIBLE CARDIOVASCULAR SYSTEM CHANGES. Clinical Aspects of Nuclear Medicine
Lewis, W.H.
Brookhaven National Lab., Upton, N.Y.; and Sloan Kettering Cancer Center, New York
Publication Date: 1961 142-59 p.
Publ: Westdeutscher Verlag
Journal Announcement: NSA16
Document Type: Book Analytic
Language: English
The late radiation effects resulting from the accidental event of radioactive fall-out in the MarshaIl lslands in March 1954, during experiments on a thermonuclear device, are reported. The purpose of the article is to point out some of the complexities associated with a population study of this type, the approach to the problem, and the organiza tion and planning that are unique to this type of operation. Emphasis is placed on a detailed consideration of the cardiovascular findings five years after the accident for possible late effects of radiation exposure. The group of Marshallese people studied did not show an unusual degree of cardiovascular disease. The types of cardiovascular abnormalities present are described. In an analysis of the amount of aging associated with arteriosclerosis, no changes different from those in more northerly situated people appeared. There were no significant differences in type and degree of cardiovascular abnormalities on comparison of exposed and control adult population groups. The exposure of this population to acute radiation from the fallout has not induced, according to clinical observations made 5 years after the exposure, new or unusual cardiovascular abnormalities. The exposed persons displayed less cardiovascular disease than a comparable control group of unexposed persons. (J.S.R.)
Descriptors: ACCIDENTS; AGE; BLOOD CIRCULATION; BLOOD VESSELS; FALLOUT; HEART; MAN; MARSHALL ISLANDS; POPULATIONS; RADIATION EFFECTS
Subject Codes (NSA): BIOLOGY AND MEDICINE

10/5/166 (Item 166 from file: 109)
181085 NSA-16-005124
Effects of Atomic Explosions on Man
(AUSWIRKUNGEN ATOMARER DETONATIONEN AUF DEN MENSCHEN)
Messerschmidt, O.
Publication Date: 1960 306 p.
Publ: Verlag Karl Thiemig
Journal Announcement: NSA16
Document Type: Book
Language: English
Acute, subacute, and chronic injuries in Hiroshima and Nagasaki are discussed. Topics covered include a general survey of the nature and extent

of the damages. burns as a result of the thermal radiation; injuries as a result of the pressure wave; injuries as a result of the initial radiation; course of the first, second, and third stages of the radiation sickness; clinical symptoms of radiation sickness- hematology of radiation sickness. therapeutic measures of the Japanese doctors; and pathological anatomy of the atomic bomb injuries. Ascertainable injuries among the population years later include organic injuries and functional disorders, leukemia and carcinoma formation, development disturbances and illnesses of irradiated children inclusive of the in utero exposed, and genetic problems. Results of the Bikini fall-out are also described. Topics discussed include the radioactive fall-out, its distribution, and the radiation originating from it; the clinical and pathologicalanatomical state of the Bikini fishermen and the inhabitants of the Marshall Islands; radiation injuries as a result of the deposition of fission products on the skin and in the body; and results of additional investigations on the Marshall Island population 3 and 4 years after the rain of ashes. (M.C.G.)
Subject Codes (NSA): BIOLOGY AND MEDICINE

10/5/167 (Item 167 from file: 109)
178805 NSA-16-002841
SOME CHARACTERISTICS OF SURFACE WAVES IN THE SEA PRODUCED BY NUCLEAR EXPLOSIONS
Van Dorn, W.G.
Scripps Institution of Oceanography, La Jolla, Calif.
J. Geophys. Research v 66.
Publication Date: Nov. 1961 3845-62 p.
Journal Announcement: NSA16
Document Type: Journal Article
Language: English
Low-frequency dispersive gravity waves produced by nuclear explosions at Bikini, Marshall lslands, were recorded at four distant island stations. The results of these wave measurements are compared with those predicted by linear theory, and good agreement is observed in the nature of the dispersion and the rate of amplitude decay with distance. The wave system associated with the large tsunami of March 9, 1957 is also considered. The dispersion for both typcs of disturbances was virtually identical, in agreement with the theoretical argument that the disper sion of a centered wave system is independent of the nature of the source disturbance. In analyzing the rate of amplitude decay, it was found necessary to correct the observations for enhancement due to scattering by the islands upon which the recording stations were located, showing that even relatively small islands are effective as scatterers. These experiments show rather conclusively that tide-gage records of tsunami-like disturbances are grossly misleading insofar as the characteristics of the wave systems in the open sea are concerned. (auth)
Descriptors: DECAY; DIFFRACTION; DISTANCE; DISTURBANCES; FREQUENCY; GAGES; GRAVITATION; MEASURED VALUES; NUCLEAR EXPLOSIONS; OSCILLATIONS; SCATTERING; SEA; SURFACES
Subject Codes (NSA): GENERAL AND MISCELLANEOUS

10/5/168 (Item 168 from file: 109)
176377 NSA-16-000410
PACIFIC CRATERS AND SCALING LAWS
Vaile, R.B. Jr.
Stanford Research Inst., Menlo Park, Calif.
J. Geophys. Research v 66.
Publication Date: Oct. 1961 3413-38 p.
Journal Announcement: NSA16
Document Type: Journal Article
Language: English
Crater measurements from two near-surface nuclear explosions detonated at Bikini atoll in 1954 are tabulated. On the basis of the crater data from nuclear detonations, an extrapolation procedure was developed by which crater diameters can be predicted. This procedure is based on an empirical determination of the scaling exponent, m, as a function of soil type, using R = CW/sup 1/m, where R is radius, C is a constant related to the soil

type, and W is the energy release. The range of uncertainty in the prediction of crater radius by this method is believed to be larger than a factor of 2. (auth)
Descriptors: BIKINI; CONFIGURATION; CRATERS; DEFORMATION; ENERGY; EQUATIONS; MEASURED VALUES; MOTION; NUCLEAR EXPLOSIONS; QUANTITATIVE ANALYSIS; ROCKS; SOILS; SURFACES; TRANSPORT
Subject Codes (NSA): GEOLOGY, MINERALOGY, AND METEOROLOGY

10/5/169 (Item 169 from file: 109)
175299 NSA-15-032395
REPORT ON OTHER PERSONNEL EXPOSED
Shipman, T.L.
Los Alamos Scientific Lab., N. Mex.
J. Occupational Med. v 3: No. 3, Special Suppl..
Publication Date: Mar. 1961 188-90 p.
Journal Announcement: NSA15
Document Type: Journal Article
Language: English
A number of individuals received measurable overexposures to radiation from a critical excursion in a Pu processing plant. Details of pathological findings are presented for two individuals exposed to doses of 130 rads and 35 rads of primarily gamma exposure. The only significant findings in both cases consisted of alterations in the blood counts. Findings are compared with changes observed in the Rongelap natives and Oak Ridge workers exposed to high level radiation doses. (C.H.)
Descriptors: ACCIDENTS; BLOOD; COUNTERS; DISEASES; GAMMA RADIATION; MEASURED VALUES; PERSONNEL; PLUTONIUM; QUANTITY RATIO; RADIATION DOSES; RADIATION EFFECTS; REPROCESSING; VARIATIONS
Subject Codes (NSA): HEALTH AND SAFETY

10/5/170 (Item 170 from file: 109)
164945 NSA-15-022024
DISTURBANCES OF SPERMATOGENESIS DUE TO RADIATION BY ATOMIC BOMB EXPLOSION AND FALL-OUT IN HIROSHIMA AND BIKINI
Murakami, N.
Tokyo Univ.
Geka no Ryoiki v 7.
Publication Date: 1959 1070-83 p.
Journal Announcement: NSA15
Document Type: Journal Article
Language: English
Fifteen persons exposed to the atomic bomb in Hiroshima and 18 exposed to fall-out contamination in the Bikini area were examined for spermatogenesis. Three of the 15 Hiroshima cases showed aspermia and were believed not to have recovered, but all of the 18 Bikini cases showed complete recovery of spermatogenesis. Moat of the Bikini cases recovered in 9 to 20 months, but those which received 500 to 600 r of radiation took 30 months to recover. The physicochemical character of the sperm showed no great change in any of the cases. The function of the prostate was normal. (Abstr. Japan Med., 1: No. 2, 1960)
Descriptors: ATOMIC EXPLOSIONS; BIKINI; CONTAMINATION; FALLOUT; GONADS; HIROSHIMA; MAN; RADIATION DOSES; RECOVERY
Subject Codes (NSA): BIOLOGY AND MEDICINE

10/5/171 (Item 171 from file: 109)
163897 NSA-15-020975
THE MECHANISM OF SURGE DISSIPATION
Pyne, H.W.
Gt. Brit. Armament Research Establishment, Fort Halstead, Kent, England
Publication Date: nd 1-31 p.
Primary Report No.: NP-10264
Journal Announcement: NSA15
Document Type: Report Analytic
Language: English
In the underwater nuclear explosion at Bikini (test Baker), a heavy mist or base surge spread rapidly from the base of an opaque vertical column of

fine water drops , thrown from the point of explosion. Rain was observed to - fall from the bottom of the surge at -3 min after explosion, and the spreading slowed down and finally stopped after another 2 min. The mechanism of rain fall-out from the surge is discussed. Theoretical studies of the problem indicate that the fine water droplets should have coagulated to large raindrops by a time which agrees well with that at which rain was observed tn the bottom of the surge. The early stages of droplet growth appear to be controlled by evaporation and condensation of water vapor, but most of the growth is subsequently caused by collisions of droplets of different size. (D.L.C.)

Descriptors: CONFIGURATION; CONTROL; DISPERSIONS; EVAPORATION; FALLOUT; LIQUEFYING; NUCLEAR EXPLOSIONS; PARTICLES; RAIN; SEA; STEAM; SURFACES; WATER

Subject Codes (NSA): HEALTH AND SAFETY

10/5/172 (Item 172 from file: 109)

162608 NSA-15-019684

THE ROLE OF WHOLE BODY COUNTERS IN THE EVALUATION OF HAZARDS. Radioactivity in Man

Eisenbud, M.; Meneely, G.R. ed.

New York Univ., Bellevue Medical Center, New York

Publication Date: 1961 323-33 p.

Publ: Charles C Thomas

Journal Announcement: NSA15

Document Type: Book Analytic

Language: English

Applications of whole-body counting techniques in estimating radiation hazards from internally-deposited radioisotopes are discussed. It is pointed out that whole-body measurements of human radioactivity provide the most accurate method of evaluating hazards from radioactive materials. The status of the Japanese fishermen on the Lucky Dragon and the natives of Rongelap Island exposed to acute fall-out from the thermonuclear explosion of March 1, 1954, are reviewed. Data on internal contamination obtained by analysis of urine are compared with later data obtained on the Marshall Islanders by whole-body counting. It is pointed out that it is not practical to use a whole-body counter immediately following exposure to a massive release of radioactivity, and that whole-body counting should be done only after an extensive period for decontamination and after short-lived radionuclides are no longer dominant. The radioisotopes which present a potential human risk include natural and enriched U Pu>s2/sup >>,/o>s2/sup >>,/a>s2/sup >>,/ Th>s2/sup >>,/nd Sr>s9/sup >./ Most of these radionuclides, with the exception of Ra, do not lend themselves to convenient in vivo determination because the radiations they emit are not sufficiently penetrating. It is concluded that the greatest contribution of the whole-body counter in hazards evaluation lies in studies on the rates and routes by which radionuclides are excreted. (C.H.)

Descriptors: ADSORPTION; BODY; CONTAMINATION; COUNTERS; DECONTAMINATION; DETECTION; EFFICIENCY; ENRICHMENT; EXCRETION; FALLOUT ; FISSION PRODUCTS; HALF-LIFE; IN VIVO; MAN; MEASURED VALUES; NUCLEAR EXPLOSIONS; PLUTONIUM 239; POLONIUM 210; QUANTITY RATIO; RADIATION EFFECTS; RADIOACTIVITY; RADIOISOTOPES; RADIUM; RADIUM 226; STRONTIUM 90; THORIUM 232; URANIUM; URINE; USES

Subject Codes (NSA): HEALTH AND SAFETY

10/5/173 (Item 173 from file: 109)

162607 NSA-15-019683

THE BIOLOGICAL HAZARDS OF A FALLOUT FIELD. Radioactivity in Man

Conard, R.A.; Meneely, G.R. ed.

Brookhaven National Lab., Upton, N.Y.

Publication Date: 1961 249-65 p.

Publ: Charles C Thomas

Secondary Report No.: BNL-4720

Note: BNL-4720

Journal Announcement: NSA15

Document Type: Book Analytic

Language: English

5003581

The biological hazards from an acute fall-out exposure are discussed. Results are reviewed from a number of studies on the people of Rongelap Atoll in the Marshall Islands who were accidentally exposed to an acute fall-out situation in 1954. Annual medical surveys have been carried out and data collected through 1960 are included. A steel room with 4-in. thick walls was constructed for use in carrying out whoel-body gamma spectroscopy measurements on the exposed people. It is concluded that the most serious hazard associated with acute fall-out comes from penetrating gamma exposure which may result in acute radiation syndromes. Beta burns of the skin may be moderately incapacitating but the hazard is not considered serious. The hazard from internal absorption through ingestion or inhalation is not considered serious during the period of acute exposure. The Marshalese people received near maximum permissible levels of some isotopes early, but there was rapid excretion. Chronic and late effects include questionable effects on metabolism as suggested by temporary weight loss, a slight lag in growth and development of exposed children, and increased incidence of miscarriages and stillbirths in exposed women. (C.H.)

Descriptors: ACCIDENTS; ADSORPTION; AGE; BETA PARTICLES; BIOLOGY; BODY; EXCRETION; FALLOUT; FISSION PRODUCTS; GAMMA RADIATION; GAMMA SPECTROMETERS; INGESTION; INHALATION; INSPECTION; IRRADIATION; LUNGS; MAN; MEASURED VALUES; MEDICINE; METABOLISM; POPULATIONS; PREGNANCY; RADIATION EFFECTS; RADIATION INJURIES; RADIOACTIVITY; SAFETY; SEX; SHELLS; SKIN; SPECTROSCOPY; STANDARDS; STEELS; STOMACH; SURFACES; THICKNESS; URINE; WEIGHT

Subject Codes (NSA): HEALTH AND SAFETY

10/5/174 (Item 174 from file: 109)

157515 NSA-15-014582

DETERMINING THE PROTECTION VALUE OF BUILDINGS AGAINST FALL-OUT RADIATION

Rudloff, A.

Bundesamt fur Zivilen Bevolkerungsschutz, Bad Godesberg, Ger.

Atompraxis (West Germany) Incorporated in Kerntechnik published from Jan. 1971 as Kerntechnik Incorporating Atompraxis v 7.

Publication Date: Jan. 1961 11-15 p.

Coden: ATPXA

Note: 0571-8198

Journal Announcement: NSA15

Document Type: Journal Article

Language: German

A method is described for determining the protection afforded by rooms and basements against gamma radiation from fall-out. The method is explained by means of practical examples. Particular attention is paid to the scattered radiation descending from the ground floor to the basement; as an example shows, this radiation must not be ignored, since it may form the main share of the total radiation in underground rooms. In conclusion, the data issued on the Bikini test of March 1, 1954, are used as a basis for estimating the dosages which accumulate in a basement room during stays of various lengths. (auth)

Descriptors: BUILDINGS; EFFICIENCY; FALLOUT; GAMMA RADIATION; NUCLEAR EXPLOSIONS; QUANTITATIVE ANALYSIS; QUANTITY RATIO; RADIATION DOSES; RADIATION PROTECTION; RADIATIONS; SCATTERING; SHELTERS

Subject Codes (NSA): HEALTH AND SAFETY

10/5/175 (Item 175 from file: 109)

157472 NSA-15-014539

STUDY ON INTENSITY OF SURFACE PRECIPITATION USING RADAR INSTRUMENTATION. Quarterly Technical Report No. 10, July 1, 1960-September 30, 1960

Mueller, E.A.; Stout, G.E.

Illinois. State Water Survey, Urbana

Publication Date: nd 42 p.

Primary Report No.: NP-9888

Journal Announcement: NSA15

Document Type: Report

Language: English

Contract No.: DA-36-039-SC-75055

The utility of radar equipment in measuring surface precipitation was investigated. A summary of the operation of raindrop cameras is given. Satisfactory operations of one year of raindrop cameras at Miami, Florida; Corvallis, Oregon; Majuro, Marshall Islands; and Woody Island, Alaska were obtained. The means of reducing raindrop data is reviewed. An automatic means of transferring measurements from the projection table to IBM cards was built. Preliminary analysis of the drop data is reviewed. Some results are given from the Miami data. A summary of the problem of rainout is discussed. (auth)

Descriptors: CAMERAS; COMPUTERS; EFFICIENCY; INSTRUMENTS; MEASURED VALUES; RADAR; RAIN; RECORDING SYSTEMS; SERVOMECHANISMS

Subject Codes (NSA): GEOLOGY, MINERALOGY, AND METEOROLOGY

10/5/176 (Item 176 from file: 109)

157053 NSA-15-014118

RADIOBIOLOGICAL STUDIES AT THE ENIWETOK TEST SITE AND ADJACENT AREAS OF THE WESTERN PACIFIC. Transactions of the Second Seminar on Biological Problems in Water Pollution, April 20-24, 1959

Donaldson, L.R.

Univ. of Washington, Seattle

Publication Date: 1959 7 p.

Publ: Robert A. Taft Sanitary Engineering Center

Journal Announcement: NSA15

Document Type: Book Analytic

Language: English

The results of successive studies over a period of twelve years have shown that biological activity is often of greater importance than physical factors in the distribution and localization of radioactive products in a marine environment. Certain organisms, notably algal and planktonic forms, remove minerals from the water within hours. Much of the uptake is by absorption. The amount of uptake by inventebrates and fish is primarily dependent on feeding habit, indicating the impontarce of food chains in the distribution of radioactive materials. Biological effects directly attributable to the injurious effects of radioactive contamination have not been evident. Competition is so severe that any injured individuals are lixely to be eliminated and replaced before they are observed. It is clear from the rapidity of uptake of radioisotopes that there is a great thirst for minerals by organisms in the marine environment. The practical implication, therefore, is that fertilization of specific areas with mineral products could overcome one of the limiting factors to biological productivity. Under some conditions suitable isotopes could be used as an index of the efficiency of such fertilization. (auth)

Descriptors: ALGAE; CONTAMINATION; ENVIRONMENT; FISH; FOOD; MINERALS; PLANKTON; RADIATION INJURIES; RADIOBIOLOGY; RADIOISOTOPES; SEA

Subject Codes (NSA): BIOLOGY AND MEDICINE

10/5/177 (Item 177 from file: 109)

155651 NSA-15-012713

MEDICAL SURVEY OF RONGELAP PEOPLE FIVE AND SIX YEARS AFTER EXPOSURE TO FALLOUT (WITH AN ADDENDUM ON VEGETATION)

Conard, R.A.; Macdonald, H.E. et al.

Brookhaven National Lab., Upton, N.Y.

Publication Date: Sept. 1960 86 p.

Primary Report No.: BNL-609

Journal Announcement: NSA15

Document Type: Report

Language: English

Annual medical surveys of the people of Rongelap Island were carried out in March 1959 and March 1960, 5 and 6 years after their accidental exposure to fall-out. During the 1959 survey 76 exposed adults (and their children) and 166 unexposed persons, who served as a comparison population, were examined. In addition, groups of children at nearby atolls were examined as controls for the growth and development studies on the exposed Rongelap children. In 1960 only the exposed people were examined. As a result of their exposure in 1954, many of the Rongelap people experienced early

symptoms related to the gastrointestinal tract and skink. Later they developed a significant depression of their peripheral blood elements commensurate with the 175 and 69 r calculated dose of gamma radiation. Beta burns of the skin and spotty epilation also were found. Radiochemical analysis of urine samples showed that they had acquired a low-level body bunden of radionuclides. Certain othsr findings possibly related to radiation exposure included loss of weight in adults and a slight lag in growth and development of the children. No deaths occurred that could be related to their radiation exposure, and no specific therapy was given. The 5- and 6-year postexposure surveys were aimed primarily at evaluating the general medical status of the people in relation to that of the unexposed comparison population. Resuits are summanized from surveys on mortality rats; birth rate; physical examinations; growth and development studies; cardiovascular, ophthalmological, deatail, and hematological surveys; measurements of the various parameters usually associated with aging; and possible genetic effects. Body burdens of gamma -emitting fission products, such as Cs/sup 137/ and Zn/sup 65/, we re measured in a whole-body counter and checked by radiochemical analysis of urine specimens. Body bundens of Sr/sup 90/ were estimated from urinary excretion as determined by radiochemical analyses. This study of the internal contamination of the Marshallese provided information on the movement of Cs/sup 137/, Zn/sup 65/, and Sr/sup 90/ from the environme nt to man, on the rate of equilibration of these isotopes with the environment, and on the discrimination factors between food and man. Data are included on changes in the vegetutien of Rongelap Atoll which may be due to radioactive fallout. Tabulated data are appended. 57 references. (C.H.)

Descriptors: BLOOD CESIUM 137 CONTAMINATION FALLOUT FISSION PRODUCTS FOOD GAMMA RADIATION GAMMA SOURCES INTESTINE MAN MEDICINE POPULATIONS QUALITATIVE ANALYSIS RADIATION DETECTORS RADIATION EFFECTS SKIN STOMACH STRONTIUM 90 URINE ZINC 65; BETA PARTICLES BLOOD BLOOD VESSELS EYES FALLOUT GENETICS HEART LIFETIME MAN MEDICINE POPULATIONS QUALITATIVE ANALYSIS RADIATION INJURIES RADIOISOTOPES THERAPY URINE; ENVIRONMENT FALLOUT PLANTS RADIATION EFFECTS

Subject Codes (NSA): BIOLOGY AND MEDICINE

10/5/178 (Item 178 from file: 109)
155643 NSA-15-012705

RADIOBIOLOGICAL STUDIES AT THE ENIWETOK TEST SITE AND ADJACENT AREAS OF THE WESTERN PACIFIC

Donaldson, L.R.
Washington. Univ., Seattle. Lab. of Radiation Biology

Publication Date: Apr. 15, 1959 19 p.
Primary Report No.: TID-5967
Journal Announcement: NSA15
Document Type: Report
Language: English

Studies with the radioactive materials resulting from the weapons testh and deposited in the sea and on the islands at Bixiri and Eniwetok Atolls in the Marshall Islands have made it possible to follow the biological cycling of these materials even where they have become diluted to infinitesimal quamtities. Extensive investigations have answered many questions relating to the economy of the sea, have opened up new knowledge of the life zonss of coral atolls, and have reshaped in important ways some of the basic concepts of biological science. The physical and geographic characteristics of the region are described, and the ecology is discussed. A penfect economy of use of substances essential to life has been demonstrated in this region. Little or no time is lost between steps in the biological cycling of materials, for there is not only an abundance of organisms but also a wide variety of species. Availabls substances are rapidly taken up by the bioth. Plankton and some of the algae, which are the key organisms in the food chain, may concentrate within themselves more than a thousand times the amount of radioactive substances found in the sea water. The passage of fission products through the plants and animals of the region is traced. By following the pattern of gross radioactivity, it has been possible to delineate the broad trends in the distribution of radioactive material in an atoll and its surrounding area. Experience in

the Pacific has permitted biologists to develop rew techniques of investigation and his suggested other areas in which the techniques may be tested and applied. (C.H.)
Descriptors: ALGAE; ANIMALS; ATOMIC EXPLOSIONS; ENVIRONMENT; FALLOUT; FISSION PRODUCTS; FOOD; NUCLEAR EXPLOSIONS; PLANKTON; PLANTS; RADIOACTIVITY; RADIOBIOLOGY; SEA
Subject Codes (NSA): BIOLOGY AND MEDICINE

10/5/179 (Item 179 from file: 109)
153665 NSA-15-010726
AN ATTEMPT TO QUANTIFY SOME CLINICAL CRITERIA OF AGING
Conard, R.A.
Brookhaven National Lab., Upton, N.Y.
Journal of Gerontology (U.S.) v 15.
Publication Date: Oct. 1960 358-63 p.
Coden: JOGEA
Secondary Report No.: BNL-4835
Note: BNL-4835
Note: 0022-1422
Journal Announcement: NSA15
Document Type: Journal Article
Language: English
In order to study possible premature aging effects of radiation in the people of Rongelap in the Marshall Islands, a series of measurable criteria generally associated with aging were recorded during the 1959 annual medical survey (5-year postexposure) on 42 people who had been exposed to radiation and 84 unexposed Marshallese. The criteria were chosen on the basis of ease of assessment under field conditions considering time limitation and language barrier. Some criteria were assessed on obsevation by scoring on a 0 through 4+ and percentage basis (senile skin changes, graying of hair, baldness, arcus senilis, peripheral arteriosclerosis, retinal arteriosclerosis), The other criteria were measured directly and also expressed on a percentage basis (skin looseness, skin elasticity, accommodation of the eyes, visual acuity, hearing by audiometry, blood pressure, neuromuscular function, and hand strength). A skin caliper used for measuring skin looseness and elasticity was de scribed. Since no differences were readily apparent between the exposed and unexposed people, the data were pooled and presented at this time to describe the methodology, trend of criteria changes with age, and attempt to assess biological age. Curves of the plotted data drawn by eye shohwed varying degrees of age-associated change with different criteria. The measured criteria were generally best correlated with age, particularly accommodation of the eyes, visual acuity, skin elasticity, and hand strength, although some of the observational criteria, such as arcus serilis and graying of the hair, seemed also to be fairly well correlated. A plot of the average percentage scores for individuals by age (biological age score) showed generally increasing scores with ages and less scatter than was noted with individual criteria. It is hoped that this approach may prove helpful in assessing aging in human beings and may offer a clue to possible radiation-induced aging. (auth)
Descriptors: AGING; BLOOD VESSELS; DISEASES; ELASTICITY; EYES; HAIR; MAN; MEDICINE; MUSCLES; NERVOUS SYSTEM; POPULATIONS; RADIATION EFFECTS; SKIN
Subject Codes (NSA): BIOLOGY AND MEDICINE

10/5/180 (Item 180 from file: 109)
147853 NSA-15-004899
FLORA OF ENIWETOK ATOLL
St. John, H.
Chatham Coll., Pittsburgh
Pacific Sci. v 14.
Publication Date: (1960) Oct. 313-36 p.
Journal Announcement: NSA15
Document Type: Journal Article
Language: English
Descriptors: ATOMIC EXPLOSIONS; ENVIRONMENT; NUCLEAR EXPLOSIONS;

5003585

PLANTS
Subject Codes (NSA): BIOLOGY AND MEDICINE

10/5/181 (Item 181 from file: 109)
146702 NSA-15-003746
MARINE BIOLOGICAL INVESTIGATIONS AT THE ENIWETOK TEST SITE. "Disposal of Radioactive Wastes. Conference Proceedings, Monaco, 16-21 November 1959. Vol. 2"
Lowman, F.G.
Univ. of Washington, Seattle
Publication Date: nd 105-38 p.
Journal Announcement: NSA15
Document Type: Book Analytic
Language: English
The results of marine biological investigations conducted at the Eniwetok Test Site since 1952 are summarized. Radioisotopes introduced into the sea from the tests at various times since then include fission products and other radioisotopes (U/sup 237/, Np/sup 239/, Mn/sup 54/,Fe/sup 55,59/,Co/sup 57,58,60/,Zn/sup 65/ ,and W/sup 185/). taken 4 days to 6 weeks after contamination are reported and the distribution of the radioactivity between plankton and water is given. Grazing fishes contained Zn/sup 65/, Fe/sup 55/, Co/sup 57,58,60/,and Mn/sup 54/. Carnivorous fishes contained mostly Fe/sup 55/ and Zn/sup 65/. (auth)
Descriptors: BIOLOGY; COBALT 57; COBALT 58; COBALT 60; DISTRIBUTION ; FISH; IRON 55; IRON 59; MANGANESE 54; NEPTUNIUM 239; PLANKTON; RADIOACTIVITY; SAMPLING; SEA; TUNGSTEN 185; URANIUM 237; ZINC 65
Subject Codes (NSA): WASTE DISPOSAL AND PROCESSING

10/5/182 (Item 182 from file: 109)
145871 NSA-15-002914
FURTHER CONTRIBUTIONS ON GROSS BETA RADIOACTIVITY OF BIOLOGICAL AND RELATED SAMPLES AT THE ENIWETOK PROVING GROUND, 1952-1958. SECTION I. PHYSICAL DECAY OF SAMPLES FROM ENIWETOK ATOLL IN 1952.SECTION II. FURTHER CONTRIBUTIONS ON GROSS BETA RADIOACTIVITY OF PLANKTON AND BOTTOM SAMPLES AT RONGELAP ATOLL, 1954-1958. SECTION III. FURTHER CONTRIBUTIONS ON GROSS BETA RADIOACTIVITY OF FI
Bonham, K.
Washington. Univ., Seattle. Lab. of Radiation Biology
Publication Date: Dec. 4, 1959 47 p.
Primary Report No.: UWFL-63
Journal Announcement: NSA15
Availability: NTIS
Document Type: Report
Language: English
Contract No.: AT(45-1)-540
Descriptors: ALGAE; ANIMALS; BETA PARTICLES; BIOLOGY; BONES; CESIUM 137; FISH; KIDNEYS; LIVER; MUSCLES; PLANKTON; RADIOACTIVITY; RATS; SAMPLING; TISSUES
Subject Codes (NSA): HEALTH AND SAFETY

10/5/183 (Item 183 from file: 109)
145385 NSA-15-002428
THE LETHAL DOSE OF TOTAL BODY X-RAY IRRADIATION IN SWINE. Report No. 3
Tullis, J.L.; Tessmer, C.F.; Cronkite, E.P.; Chambers, F.W. Jr.
Naval Medical Research Inst., Bethesda, Md.
Publication Date: Dec. 22, 1947 11 p.
Primary Report No.: NP-9245; NM-007 039
Secondary Report No.: NM-007 039
Journal Announcement: NSA15
Document Type: Report
Language: English
For correlation with radiation-injury data obtained at Bikini, experiments were conducted on the x-ray dose for whole-body exposure of swine to kill 50% of exposed animals within 30 days (LD /sub 50/30/). Groups of eight (four male and four female) healthy hybrid swine were exposed using a 1000-kv 3-ma machine. A value of 275 r was obtained.

(T.R.H.)
Descriptors: ANIMALS; LETHAL DOSE; LIFETIME; RADIATION EFFECTS; X RADIATION
Subject Codes (NSA): BIOLOGY AND MEDICINE

10/5/184 (Item 184 from file: 109)
144561 NSA-15-001604
SEISMIC WAVES FROM HIGH-ALTITUDE NUCLEAR EXPLOSIONS
Pomeroy, P.; Oliver, J.
Lamont Geological Observatory, Palisades, N.Y.
J. Geophys. Research v 65.
Publication Date: (1960) Oct. 3445-57 p.
Journal Announcement: NSA15
Document Type: Journal Article
Language: English
Seismic waves of long period were well recorded at epicentral distances as great as 9300 km from two highaltitude nuclear explosions, Teak and Orange, which were fired in the Johnston Island area on August 1 and 11, 1958, respectively. Seismic waves recorded at Honolulu, at a distance of approximately 1300 km, may be divided into three types: (1) a normally dispersed, oceanic Rayleigh wave train in which the wave periods decrease from about 35 to 14 sec as the corresponding velocities decrease from about 4.1 to 1.6 km/sec; (2) an inversely dispersed, oceanic Rayleigh wave train in which the wave periods increase from ahout 6 to 10 sec as the corresponding velocities decrease from about 1.3 to 1.0 km/sec; (3) a T-phase consisting of waves with periods less than about 0.5 sec and corresponding to a velocity of 1.47 km/sec. From the normally dispersed train, group velocities of waves in the 35- to 14-sec period range were computed for the two paths, hoth of which traverse primarily a typical deep oceanic basin. These group-velocity data plus possible corresponding phase-velocity data are compared with theoretical values for oceanic structures. The inversely dispersed train, although predicted by classical theory, has not been observed in seismograms from (natural) earthquakes. Surface waves of long period were recorded at Palisades, New York, from both of the highaltitude nuclear explosions, and these waves have amplitudes comparable to those generated by the larger of the near-surface explosions in the Marshall Islands. Special instruments at Palisades, not operated for Teak, indicate that amplitudes for the long-period body waves from Orange are comparable to those from the Marshall Islands ahots. In contrast, seismic body waves of short period are apparently generated much more efficiently by near-surface explosions than by high-altitude explosions. (auth)
Descriptors: ATOMIC EXPLOSIONS; LEVELS; NUCLEAR EXPLOSIONS; PACIFIC OCEAN; SEA; SEISMOLOGY; SHOCK WAVES; VELOCITY
Subject Codes (NSA): GEOLOGY, MINERALOGY, AND METEOROLOGY

10/5/185 (Item 185 from file: 109)
144318 NSA-15-001361
RADIOCHEMICAL ANALYSIS OF INDIVIDUAL FALL-OUT PARTICLES
Mackin, J.; Zigman, P.; Love, D.; MacDonald, D.; Sam, D.
Naval Radiological Defense Lab., San Francisco
J. Inorg. & Nuclear Chem. v 15.
Publication Date: (1960) Sept. 20-36 p.
Journal Announcement: NSA15
Document Type: Journal Article
Language: English
Quantitative measurements were made of the radioactivity of individual fall-out particles from a nuclear detonation at the Eniwetok Proving Grounds. These measurements were possible since individual particles that represented approximately 10/sup 10/ or more fissions were obtained. Although several types of particles were observed, the data were generally resolved as being derived from two major particle classes depending upon whether or not the coral had undergone an obvious physical alteration such as melting. A number of individual particles were radiochemically analyzed for the nuclides Mo/sup 99/, Ba/sup 140/ - La/sup 140/, Sr/sup 89/, and Np/sup 239/. The data obtained, together with gamma -spectral and decay

measurememts, indicate that fractionation of radionuclides was prominent in the fall-out particles. Measured R values for Ba/sup 140/ and Sr/sup 89/ based on Mo/sup 99/ were over an order of magnitude lower in the altered particles The fissions/gram values of altered particles averaged the two classes of particles taken from H + 50 to H + 10,000 hr showed marked dissimilarities. (auth)

Descriptors: BARIUM 140; BETA DECAY; FALLOUT; FISSION PRODUCTS; GAMMA DETECTION; LANTHANUM 140; MOLYBDENUM ISOTOPES; MOLYBDENUM 99; NEPTUNIUM 239; PARTICLES; QUALITATIVE ANALYSIS; RADIOACTIVITY; RADIOCHEMISTRY; STRONTIUM 89

Subject Codes (NSA): CHEMISTRY

10/5/186 (Item 186 from file: 109)
141785 NSA-14-025340

MEDICAL STATUS OF MARSHALL ISLANDERS IN 1959, FIVE YEARS AFTER EXPOSURE TO FALLOUT RADIATION

Conard, R.A.; Meyer, L.M.; Sutow, W.W.; Blumberg, B.S.; Lowery, A.; Cohn, S.H.; Lewis, W.H. Jr.; Hollingsworth, W.; Lyon, H.W.

Brookhaven National Lab., Upton, N.Y.

Nuclear-Med. v 1.

Publication Date: 1960 314-30 p.

Journal Announcement: NSA14

Document Type: Journal Article

Language: English

A medical survey of the Marshallese people in March 1959, five years after exposure to fallout radiation, showed that the people had recovered from the acute effects of their radiation exposure and appeared to be generally in good health. No illnesses or diseases were found that could be directly associated with acute radiation effects. One case of cancer and three deaths had occurred, but with no direct relation to radiation effects. Fertility did not appear to be affected. The incidence of miscarriages and stillbirths appeared to be somewhat higher than in the unexposed Marshallese, but a deficiency of vital statistics precluded definite conclusions as to whether or not this is a radiation effect. Suggestive evidence of slight lag in growth and development of exposed children noted previously was re-evaluated on the basis of better age data obtained during the latest survey. Blood platelet levels were within the normal range but somewhat below that for the unexposed population. Only 11 cases showed residual changes in the skin from beta burns. None ~howed any evidence of cancerous change. Possible late effects of radiation such as shortening of life span, premature aging, increased incidence of leukemia and malignancies, increased incidence of degenerative diseases, opacities of the lens of the eyes, and genetic changes were not detected. The original body burdens of internally absorbed fission products appeared to be too low to have produced any acute or long-term effects. The return of the people to the slightly contaminated island of Rongelap resulted in some increase in body burdens of Cs/sup 137/, Zn/sup 65/, and Sr/sup 90/. However, the levels were far below the accepted maximum permissible limits, and it is not believed any detrimental effects will result. (auth)

Descriptors: AGE; BETA DECAY; BLOOD CELLS; CONTAMINATION; EMBRYOS; ENVIRONMENT; FALLOUT; FETUSES; FISSION PRODUCTS; MAN; MARSHALL ISLANDS; NUCLEAR EXPLOSIONS; PACIFIC OCEAN; PLATELETS; POPULATIONS; QUANTITY RATIO; RADIATION INJURIES; RADIATION SICKNESS; RECOVERY; REPRODUCTION; SKIN; STATISTICS

Subject Codes (NSA): BIOLOGY AND MEDICINE

10/5/187 (Item 187 from file: 109)
140855 NSA-14-024410

RADIOISOTOPES AND ENVIRONMENTAL CIRCUMSTANCES: THE INTERNAL RADIOACTIVE CONTAMINATION OF A PACIFIC ISLAND COMMUNITY EXPOSED TO LOCAL FALLOUT. A Symposium on Radioisotopes in the Biosphere

Cohn, S.H.; Robertson, J.S.; Conard, R.A.; Caldecott, R.S.; Snyder, L.A. eds.

Brookhaven National Lab., Upton, N.Y. 5003588

Publication Date: 1960 306-30 p.

Publ: University of Minnesota

Journal Announcement: NSA14
Document Type: Book Analytic
Language: English

A unique opportunity for the study of the internal radiation hazard associated with the contamination of an inhabited land mass by local fall-out was afforded when several of the Marshall Islands were accidently contaminated to varying degrees as a consequence of the nuclear detonation of March 1. 1954. Two hundred and thirty-nine Marshallese persons were exposed to levels of gamma radiation ranging from 14 r on Utirik to 175 r on Rongelap. The inhabitants of Rongelap and Utirik were also subjected to an acute inhalation and ingestion exposure during the 48-hr period that elapsed prior to evacuation. Initial body burdens of internal emitters were estimated from analysis of urine and also from data obtained on animals simultaneously exposed. These data indicate that the acute hazard from the internal emitters was very small as compared to the concomitant external dose. Medical surveys have been made yearly during the five-year pericd since the accident in order to follow up the recovery progress of the exposed people. The most comprehensive studies were made at the end of one and two years following the accident. Data were obtained on the residual activity in soil and on the uptake and retention of fall-out material by plaats and land and marine animals. These data form the basis for an estimate of the radiation hazard associated with both acute and chronic exposure to local fall-out. During the early period of time following the contaminating accident Sr/sup 89/, Ba/sup 140/, I/sup 131/ the short-lived iodine isotopes, and some of the rare-earth elements contributed the major portion of the internal dose. After the first year, Sr/sup 90/ contributed the greatest dose and was the most critical fission product in regard to interral hazard. Cs/sup 137/ and Zr/sup 65/ were also found in tissues in small amounts. Body burdens of gamma -emitting fission products, measured by use of a whole-body counter, agreed closely with estimates made by radiochemical analysis of urine specimens. Transitory changes in blood-cell levels are the only pathological effect which has appeared during the fiveyear period since the exposure to internally-deposited emitters from fall-out. Tabulated data are included. 29 references. (C.H.)

Descriptors: ACCIDENTS; ADSORPTION; ANIMALS; BARIUM 140; BIBLIOGRAPHY; BLOOD CELLS; BODY; CESIUM 137; CONTAMINATION; COUNTERS; DISEASES; FALLOUT; FISSION PRODUCTS; GAMMA RADIATION; HALF-LIFE; INGESTION; INHALATION; IODINE 131; LUNGS; MAN; MEASURED VALUES; MEDICINE; NUCLEAR EXPLOSIONS; PLANTS; POPULATIONS; QUALITATIVE ANALYSIS; QUANTITY RATIO; RADIATION DOSES; RADIATION EFFECTS; RADIOACTIVITY; RADIOCHEMISTRY; RARE EARTHS; RECOVERY; SOILS; STOMACH; STRONTIUM 89; STRONTIUM 90; TABLES; TISSUES; URINE; VARIATIONS; ZIRCONIUM 95

Subject Codes (NSA): HEALTH AND SAFETY

10/5/188 (Item 188 from file: 109)
139561 NSA-14-023116

BEHAVIOR OF RADIOACTIVE FALLOUT AND AIR-MASSES AROUND JAPAN
Koike, R.
Japan Meteorological Agency, Tokyo
Papers Meteorol. and Geophys. (Tokyo) v 11, No. 1.
Publication Date: 1960 5 p.
Journal Announcement: NSA14
Document Type: Journal Article
Language: English

By analyzing the air masses covering Japan, the origin and the movement of radioactive fall-out were determined. The fall-outs originating at Bikini and in the Arctics were transported with the Ogasawara air mass and the Siberia air mass, respectively. The fall-out in Southwest Siberia was transported from the north with the Siberia air mass or from the west with the strong westerlies. The fall-out discharged in the troposphere spreads over a large area in the atmosphere after about three months travel from its original site. (auth)

Subject Codes (NSA): GEOLOGY, MINERALOGY, AND METEOROLOGY

10/5/189 (Item 189 from file: 109)
138226 NSA-14-021780

COMPARISON OF SPECTRA OF AN EARTHQUAKE T-PHASE WITH SIMILAR SIGNALS FROM NUCLEAR EXPLOSIONS
Milne, A.R.
Bulletin of the Seismological Society of America (U.S.) v 49.
Publication Date: (1959) Oct. 317-29 p.
Coden: BSSAA
Note: 0037-1106
Journal Announcement: NSA14
Document Type: Journal Article
Language: English
Hydrophones from a surface vessel in 1,300 fathoms of water off Juan de Fuca 9trait detected, in the course of the ""Hardtack"" series of tests in the Marshall Islands, 3 acoustic signals which had peaks in their energy spectra at frequencies less than 20 cps. Two of these appear to have originated from nuclear explosions; the third, though having a similar energy spectrum, was apparently a T-phase from an earthquake near Cape Mendocino with its epicenter at 40 deg 16 deg N., 124 deg 12 deg W., and an original time of 23: 04:46 on May 24, 1958. Travel-time measurements and signal spectra indicate that the nuclear explosions originated within Eniwetok Atoll. The coupling of their signals to the water path apparently was similar in nature to that of the earthquake T-phase, but the duration of the signals from the nuclear explosions was considerably less. (Geoscience Abstr. 2, No. I, 1960)
Descriptors: DETECTION; EARTHQUAKES; ENERGY; FREQUENCY; MEASURED VALUES ; NUCLEAR EXPLOSIONS; RECORDING SYSTEMS; SEISMOLOGY; SHIPS; SOUND; SPECTRA; TESTING; VELOCITY
Subject Codes (NSA): GEOLOGY, MINERALOGY, AND METEOROLOGY

10/5/190 (Item 190 from file: 109)
137800 NSA-14-021354
Problems Posed by Radiation Sickness at Hiroshima, Nagasaki, and Bikini after H-bomb Experiments
(PROBLEMES POSES PAR LA MALADIE DUE AUX RAYONNEMENTS A HIROSHIMA, NAGASAKI ET BIKINI APRES L'ESSAI DE LA BOMBE H)
Keim, H.
Publication Date: nd 38 p.
Primary Report No.: CEA-tr-A-625
Note: Translated into French from Atomkernenergie 4, 313-22(1959); This paper was previously abstracted from the original language and appears in NSA, Vol. 13, as abstract No. 18816
Journal Announcement: NSA14
Document Type: Journal Translation
Language: English
This paper was previously abstracted from the original language and appears in NSA, Vol. 13, as abstract No.
Subject Codes (NSA): BIOLOGY AND MEDICINE

10/5/191 (Item 191 from file: 109)
137714 NSA-14-021268
POTASSIUM AND CESIUM-137 IN BIRGUS LATRO (COCONUT CRAB) MUSCLE COLLECTED AT RONGELAP ATOLL
Chakravarti, D.; Held, E.E.
Washington. Univ., Seattle. Lab. of Radiation Biology
Publication Date: Jan. 15, 1960 14 p.
Primary Report No.: UWFL-64
Journal Announcement: NSA14
Availability: NTIS
Document Type: Report
Language: English
Contract No.: AT(45-1)-540
Radiocesium and stable potassium levels were determined in samples of muscle tissue of Birgus latro, the coconut crab, collected at Rongelap Atoll, Marshall Islands, during March and August 1958 and March 1959, and at Utirik Atoll in March 1959. Levels of cesium-137 ranged betwoen 731 d/m/g dry weight at Kabelle Island, Rongelap Atoll, and 28 d/m/g dry weight at Utirik Island, Utirik Atoll. The average potassium value for all samples

was 13.05 mg/g dry weight with a standard deviation of 3.66. No significant correlation between cesium-137 and potassium levels was found. There wse no significant difference in the average levels of cesium-137 in crabs collected at different times at the same island. (auth)
Descriptors: ANIMALS; CESIUM 137; MARSHALL ISLANDS; MUSCLES; PACIFIC OCEAN; POTASSIUM; QUANTITATIVE ANALYSIS; QUANTITY RATIO; SAMPLING; USA
Subject Codes (NSA): BIOLOGY AND MEDICINE

10/5/192 (Item 192 from file: 109)
137713 NSA-14-021267
STRONTIUM-90 AND GROSS BETA ACTIVITY IN THE FAT AND NON-FAT FRACTIONS OF COCONUT CRAB (Birgus latro) LIVER COLLECTED AT RONGELAP ATOLL DURING MARCH 1958
Chakravarti, D.; Eisler, R.
Washington. Univ., Seattle. Lab. of Radiation Biology
Publication Date: Mar. 1959 13 p.
Primary Report No.: UWFL-29
Journal Announcement: NSA14
Availability: NTIS
Document Type: Report
Language: English
Contract No.: AT(45-1)-540
The values for strontium-90 and gross beta activity in the fat and non-fat fractions from the livers of twelve coconut crabs (Birgus latro) collected at Rongelap Atoll during March 1958 are presented. Although fat constituted an average of 47 percent by weight on a wet weight basis (74 percent on a dry weight basis), gross beta activity of the fat fraction amounted to less than 0.5 percent of the total activity on a wet weight basis. Fat content on a wet weight basis had a range of 31 percent to 65 percent. There is a linear relationship between strontium-90 activity and gross beta activity. Since the fat content of coconut crab liver is variable and the fat fraction contains practically no radioactivity, it is suggested that the radioactivity (and mineral content) of liver samples be compared on the basis of the non-fat solids. (auth)
Descriptors: ANIMALS; BETA PARTICLES; ISLANDS; LIVER; ORGANIC ACIDS; PACIFIC OCEAN; RADIOACTIVITY; STRONTIUM 90
Subject Codes (NSA): BIOLOGY AND MEDICINE

10/5/193 (Item 193 from file: 109)
137708 NSA-14-021262
RADIO-NUCLIDES IN TISSUES AND ORGANS OF THE PACIFIC TUNAS
Kawabata, T.
Japan. National Inst. of Health, Tokyo
Publication Date: nd 3-8 p.
Primary Report No.: NP-8862
Journal Announcement: NSA14
Document Type: Report Analytic
Language: English
Radiochemical analyses were made of contaminated marine organisms collected from the Pacific Ocean between 1954 and 1958. The presence of zirconium-65, iron-55. iron-59, cobalt-57, cobalt-58, cobalt-60, cadmium-113, and other nuclides was confirmed. Data are tabulated. Results are related to nuclear weapons tests in the Bikini region. (C.H.)
Subject Codes (NSA): BIOLOGY AND MEDICINE

10/5/194 (Item 194 from file: 109)
132525 NSA-14-016073
A STATISTICAL TECHNIQUE FOR PREDICTING A TWO DIMENSIONAL VECTOR WITH APPLICATION
Vogel, R.E.
Los Alamos Scientific Lab., N. Mex.
Publication Date: Feb. 1960 91 p.
Primary Report No.: LA-2380
Journal Announcement: NSA14
Availability: NTIS
Document Type: Report

Language: English
Contract No.: W-7405-ENG-36
The problem of multiple regression analysis where the dependent and independent variables are components of a two dimensional vector is discussed, and a complete statistical development of the solution of estimators for the parameters in the model is given. The theory regarding predictions and confidence statements about such predictions is also developed. A computer code was written for the IBM 704 computer which solves the above problem and a description of the code is given. The statistical model was applied to a meteorological problem in wind forecasting at the Eniwetok Proving Ground, and prediction equations were developed and evaluated. (auth)
Descriptors: COMPUTERS; MATHEMATICS; METEOROLOGY; NUMERICALS; PROGRAMMING; STATISTICS; VECTORS; WIND
Subject Codes (NSA): PHYSICS

10/5/195 (Item 195 from file: 109)
132292 NSA-14-015839
LONGITUDINAL AND TRANSVERSE WAVE TRAVEL TIMES CALCULATED ACCORDING TO THE DATA ON NUCLEAR EXPLOSIONS IN MARSHALL ISLANDS
Kogan, S.D.
Inst. of Geophysics, Academy of Sciences, USSR
Izvest. Akad. Nauk S.S.S.R., Ser. Geofiz. v No. 3.
Publication Date: (1960) Mar. 371-80 p.
Journal Announcement: NSA14
Document Type: Journal Article
Language: Russian
>The true wave travel times in the western region of the Pacific are 2 sec less for P waves. 5 sec less for P P waves. and 3 sec less for PcP waves than those given by the Jeffreys-Bullen hodograph. The travel times of transverse waves are 4 to 5 sec higher. The corrections for longitadinal waves are based on the absence of a granite layer in the Pacific Ocean, while for the transverse wave it must be related to the value of the travel rate of S waves in the upper layer. (R.V.J.)
Descriptors: MEASURED VALUES; NUCLEAR EXPLOSIONS; QUANTITATIVE ANALYSIS ; SHOCK WAVES; VELOCITY
Subject Codes (NSA): GEOLOGY, MINERALOGY, AND METEOROLOGY

10/5/196 (Item 196 from file: 109)
128891 NSA-14-012436
GROSS BETA RADIOACTIVITY OF THE ALGAE AT ENIWETOK ATOLL, 1954-1956
Palumbo, R.F.
Washington. Univ., Seattle. Lab. of Radiation Biology
Publication Date: Aug. 31, 1959 36 p.
Primary Report No.: UWFL-61(Del.)
Note: Decl. with deletions Jan. 14, 1960
Journal Announcement: NSA14
Availability: NTIS
Document Type: Report
Language: English
Contract No.: AT(45-1)-540
A study was made to determine the amounts of radioactivity in marine algae, water, and lagoon bottom sand collected at Eniwetok Atoll during the period April 1954 to April 1956. The highest levels of beta radioactivity of algae collected after the detonation of a nuclear device (Nectar) were in algae from those islands closest to the site of detonation and in the downwind path of the fallout. With time after detonation, the decline of radioactivity in the algae at Belle Island was faster than can be accounted for on the basis of physical decay alone. In March 1955, algae and bottom sand collected in the deeper waters (20 to 140 feet) of the lagoon, one half to two miles offshore, contained as much or more radioactivity than samples collected in the shallow water near shore. The radioactive decay rates of algae samples collected from Leroy and Henry Islands were greater than those of algae from other islands, indicating that there was less residual contamination from previous detonations at these two islands. Study of the radioactive decay rates of the algae at Belle Island showed

that the radioactivity was decaying at a relatively low rate, which became slower with samples collected late in the survey. These observations indicate that the longer-lived isotopes were being taken up by the algae. (auth)
Descriptors: ABSORPTION; ALGAE; BETA DECAY; CONTAMINATION; DECAY; ENIWETOK; FALLOUT; FISSION PRODUCTS; LIFETIME; MARSHALL ISLANDS; NUCLEAR EXPLOSIONS; PACIFIC OCEAN; QUANTITATIVE ANALYSIS; RADIOACTIVITY; RADIOISOTOPES; SAMPLING; SAND; SEA; VARIATIONS; WATER
Subject Codes (NSA): BIOLOGY AND MEDICINE

10/5/197 (Item 197 from file: 109)
127935 NSA-14-011476
MEDICAL STATUS OF RONGELAP PEOPLE 5 YEARS AFTER EXPOSURE TO FALLOUT RADIATION. "Biological and Environmental Effects on Nuclear War. Hearings Before the Special Subcommittee on Radiation of the Joint Committee on Atomic Energy, Congress of the United States, Eighty-Sixth Congress, First Session, June 22-26, 1959. Part I"
Brookhaven National Lab., Upton, N.Y.
Publication Date: nd 430-32 p.
Journal Announcement: NSA14
Document Type: Book Analytic
Language: English
A medical survey of the Marshallese peoplein March 1959, five years after exposure to fall-out radiation, ahowed that the people had recovered from the acute effects of their rndiation exposure and appeared to be generally in good health. Specific findings are summarized. (C.H.)
Descriptors: FALLOUT; FISSION PRODUCTS; ISLANDS; MAN; MARSHALL ISLANDS; MEDICINE; PACIFIC OCEAN; POPULATIONS; RADIATION EFFECTS; RADIATION INJURIES; RECOVERY
Subject Codes (NSA): BIOLOGY AND MEDICINE

10/5/198 (Item 198 from file: 109)
127934 NSA-14-011475
BETA RADIATION SKIN LESIONS (BETA BURNS) FROM FALLOUT RADIATIONS. STATEMENT OF DR. VICTOR BOND. "Biological and Environmental Effects of Nuclear War. Hearings Before the Special Subcommittee on Radiation of the Joint Committee on Atomic Energy, Congress of the United States, Eighty-Sixth Congress, First Session, June 22-26, 1959. Part I"
Brookhaven National Lab., Upton, N.Y.
Publication Date: nd 373-89 p.
Journal Announcement: NSA14
Document Type: Book Analytic
Language: English
The nature and extent of skin damage which may result from exposure to large amounts of high-level radioactive fall-out are discussed. Data are reviewed on the clinical findings on the Marshallese accidentally exposed to prompt fall-out from a high yield thermonuclear device in 1954. It was estimated that these individuals received approximately 175 r of penetrating gamma radiation in addition to large doses of beta radiation to the skin. It was not possible to calculate the dose to the skin from beta radiation with any reasonable degree of accuracy. Estimates indicate that the surface of the skin probably received in the order of 5,000 or more rads. Symptoms are described which developed following exposure. The relative importance of beta and gamma radiation in fall-out materials in terms of casualty production is discussed. (C.H.)
Descriptors: ABSORPTION; BETA DECAY; BURNS; FALLOUT; FISSION PRODUCTS; GAMMA RADIATION; MAN; MARSHALL ISLANDS; MEDICINE; NUCLEAR EXPLOSIONS; POPULATIONS; RADIATION DOSES; RADIATION EFFECTS; RADIATION INJURIES; RADIATION SICKNESS; RADIOISOTOPES; SKIN
Subject Codes (NSA): BIOLOGY AND MEDICINE

10/5/199 (Item 199 from file: 109)
127162 NSA-14-010702
HEALTH PHYSICS FIELD OPERATIONS IN ATOMIC ENERGY COMMISSION WEAPONS TESTING PROGRAM
Goeke, R.H.; Weaver, C.L.

U.S. Atomic Energy Commission, Albuquerque, N. Mex.
Health Physics (England) v 2.
Publication Date: (1960) Feb. 256-60 p.
Coden: HLTPA
Note: 0017-9078
Journal Announcement: NSA14
Document Type: Journal Article
Language: English

Health physics in the support of field operations at the Nevada Test Site and Eniwetok Proving Ground is briefly discussed. At the test sites, the terms radiological safety and health physics are used interchangeably. Radiological safety requirements necessary to control radiation exposure of all participating personnel at both sites are presented. The organizational setup for health physics support services and assignment of respnnsibilities for control of radiation exposure to personnel are discussed. The necessary supporting rad-safety functions such as training of monitors, use of aircraft and instrumentation, are included. (auth).

Descriptors: AIRCRAFT; CONTROL; MONITORING; NEVADA TEST SITE; PERSONNEL ; RADIATION DETECTORS; RADIATION DOSES; RADIATION PROTECTION; SAFETY
Subject Codes (NSA): HEALTH AND SAFETY INCLUDING DOSIMETRY

10/5/200 (Item 200 from file: 109)
126127 NSA-14-009667
RADIOCHEMICAL ANALYSIS OF INDIVIDUAL FALLOUT PARTICLES
Mackin, J.L.; Zigman, P.E.; Love, D.L.; MacDonald, D.; Sam, D.
Naval Radiological Defense Lab., San Francisco
Publication Date: Sept. 17, 1958 46 p.
Primary Report No.: USNRDL-TR-386
Journal Announcement: NSA14
Document Type: Report
Language: English

Quantitative measurements were made of the radioactivity of individual fall-out particles from a nuclear detonation at the Eniwetok Proving Grounds. These measurements were possible since individual particles which represented approximately 10/sup 10/ or more fissions were obtained. Although several types of particles were observed, the data were generally resolved as being derived from two major particle classes depending upon whether the coral had undergone an obvious physical alteration such as melting. A number of individual particles was radiochemically analyzed for the nucleides Mo/sup 99/, Ba/sup 140/-La/sup 140/, Sr/sup 89/, and N/sup 239/ The data obtained, together with gamma spectral and decay measurements, indicate that fractionation of radionuclides was prominent in the fall-out particles. Measured R values for Ba/sup 140/ and Sr/sup 89/ based on Mo/sup 99/ were over an order of magnitude lower in the altered particles than in the more normal-appearing or unaltered particles. The fissions/gram values of altered particles averaged 100 times that of unaltered particles. Gamma decay curves of the two classes of particles taken from H + 50 to H + 10,000 hr showed marked dissimilarities. In addition to the established feasibility of the individual particle measurements it is postulated that the radioactive composition of fall-out at any point may be detemnined by the relative numbers of the two major classes of particles observed. (auth)

Descriptors: BARIUM 140; DECAY; DIAGRAMS; FALLOUT; GAMMA SPECTROMETERS; LANTHANUM 140; MEASURED VALUES; MELTING; MOLYBDENUM 99; NEPTUNIUM 239; NUCLEAR EXPLOSIONS; PARTICLES; QUALITATIVE ANALYSIS; QUANTITATIVE ANALYSIS; RADIOACTIVITY; RADIOCHEMISTRY; SOILS; STRONTIUM 89
Subject Codes (NSA): HEALTH AND SAFETY INCLUDING DOSIMETRY

10/5/201 (Item 201 from file: 109)
125762 NSA-14-009302
FALLOUT IN THE OCEANS. "Fallout from Nuclear Weapons Tests. Hearings Before the Special Subcommittee on Radiation of the Joint Committee on Atomic Energy, Congress of the United States, Eighty-Sixth Congress, First Session on Fallout from Nuclear Weapons Tests, May 5,6,7, and 8, 1959. Volume 3"
Seymour, A.

Univ. of Washington, Seattle
Publication Date: 1959 1976-89 p.
Publ: Joint Committee on Atomic Energy
Journal Announcement: NSA14
Document Type: Book Analytic
Language: English
The widespread use of nuclear energy for peaceful or military purposes necessitates studies to determine the effects of radioactive contamination upon the oceans and the life therein. The effects of local fall-out, or fall-out occurring during the first two days following the detonation of a nuclear device and within a few hundred miles of ground zero, on the abundance of fission products and the radioisotopic composition of plankton, algae, clams, and fish are discussed. Data from studies in the vicinity of the Eniwetck test site are tabulated and discussed. Recommendations are included for a national policy for regulation of the introduction of radioactive materials in the oceans. (C.H.)
Descriptors: ALGAE; CONTROL SYSTEMS; ENIWETOK; ENVIRONMENT; FALLOUT; FISH; LEGAL ASPECTS; NUCLEAR EXPLOSIONS; PLANKTON; QUANTITY RATIO; RADIATION EFFECTS; RADIOISOTOPES; SEA; TABLES; TESTING; VARIATIONS
Subject Codes (NSA): BIOLOGY AND MEDICINE

10/5/202 (Item 202 from file: 109)
124111 NSA-14-007648
DISTRIBUTION AND INTENSITY OF FALLOUT
Stetton, R.L.; Schuert, E.A.; Perkins, W.W.; Shirasawa, T.H.; Chan, H.K.
Naval Radiological Defense Lab., San Francisco
Publication Date: Jan. 1956 94 p.
Primary Report No.: WT-915(Del.)
Note: Decl. with deletions Sept. 15, 1959; Project 2.5a of OPERATION CASTLE
Journal Announcement: NSA14
Availability: NTIS
Document Type: Report
Language: English
Data are summarized on the distribution and intensity of fall-out from Operation Castle. The data were collected at land stations, anchored lagoon stations, and free-floating sea stations located throughout the Eniwetok Proving Grounds. Characteristics of fall-out, gamma dose, and rate of arrival are discussed. (C.H.)
Descriptors: AIR; CATTLE; DISTRIBUTION; FALLOUT; GAMMA RADIATION; RADIATION DOSES; SAMPLING; VELOCITY
Subject Codes (NSA): HEALTH AND SAFETY INCLUDING DOSIMETRY

10/5/203 (Item 203 from file: 109)
123748 NSA-14-007285
THE DETERMINATION OF INTERNALLY DEPOSITED RADIOACTIVE ISOTOPES IN THE MARSHALLESE PEOPLE BY EXCRETION ANALYSIS. FALLOUT FROM NUCLEAR WEAPONS TESTS. HEARINGS BEFORE THE SPECIAL SUBCOMMITTEE ON RADIATION OF THE JOINT COMMITTEE ON ATOMIC ENERGY, CONGRESS OF THE UNITED STATES, EIGHTY-SIXTH CONGRESS, FIRST SESSION ON FALLOUT FROM NUCLEAR WEAPONS TESTS, MAY 5,6,7, and 8, 1959. Volume
Woodward, K.T.; Schrodt, A.G.; Anderson, J.E.; Claypool, H.A.; Hartgering, J.B.
Walter Reed Army Inst. of Research, Washington, D.C.
Publication Date: 1959 1329-47 p.
Publ: Joint Committee on Atomic Energy
Journal Announcement: NSA14
Availability: GPO
Document Type: Book Analytic
Language: English
Following the detonation of a thermonuclear device at the Pacific Test Site on March 1, 1954, 239 Marshallese people were exposed to sjgnificant levels of gamma radiation from fall-out. Estimated total exposures ranged from 175r on Rongelap to 14r on Utirik. These populations were evacuated to Kwajalein for decontamination and care. During the two days of fall-out exposure before evacuation was completed, the Marshallese also received

some radioactive materials internally by ingestion and inhalation. Estimates of the internal body burden from fall-out were obtained from the analysis of urine samples collected soon after exposure. These data indicated that the acute hazard from internally deposited fission fragments was quite small as compared to the whole body gamma radiation exposure. Although the radioactivity levels in the urine were low, the activity was sufficient to obtain reasonable precision and to warrant additional long term studies of the activity levels and excretion patterns of this rather large and well isolated population. The people from Alinginae and Utirik were returned to their home islands in June 1954. Radiation intensities on Rongelap, however, precluded an early return to this atoll and the Rongelap people lived on Majuro from June 1954 until July 1957. Basic data on the food crops of the Marshallese indicated that after resettlement on the contaminated atolls the intake of Sr/sup 90/ would be increased n/sup 65/, and Co/sup 60/ were dietary considerably, and that Cs/sup 137/, Zn/sup 65/ , and Co/sup 60/ were dietary constituents of island and ocean foodstuffs, and also would be assimilated. The expected increase in the trace amounts of radionucleides in the food supply of a large population would afford an opportunity to investigate the rate of equilibration and the discrimination factors operating between food supply and man. Urinary excretion levels of Cs/sup 137/ and Sr/sup 90/ were measured from March 1954 through March 1958. Zn/sup 65/ levels were first measured in 1958 samples. Data are tabulated. (C.H.)

Descriptors: BODY; CESIUM 137; COBALT 60; CONFERENCE; DECONTAMINATION; FALLOUT; FISSION PRODUCTS; FOOD; GAMMA RADIATION; ISLANDS; MAN; MARSHALL ISLANDS; METABOLISM; NUCLEAR EXPLOSIONS; PACIFIC OCEAN; POPULATIONS; QUANTITATIVE ANALYSIS; RADIATION DOSES; RADIOACTIVITY; SAMPLING; STRONTIUM 90; TESTING; URINE; USA; ZINC 65

Subject Codes (NSA): BIOLOGY AND MEDICINE

10/5/204 (Item 204 from file: 109)
122971 NSA-14-006504

ATMOSPHERIC CONDUCTIVITY. Annex 4.6 of Scientific Director's Report of Atomic Weapon Tests at Eniwetok, 1951. OPERATION GREENHOUSE

Coroniti, S.C.; Walt, G.R.; Parziale, A.J.

Air Force Cambridge Research Center, Mass.

Publication Date: Sept. 1951 83 p.

Primary Report No.: WT-71(Del.)

Journal Announcement: NSA14

Availability: NTIS

Document Type: Report

Language: English

Data are presented from measurements of air conductivity and ion content of air within an atomic cloud, and measurements of air conductivity above the shot area and adjacent terrarn. The rate and magnitude of fall-out and its relation to the direction and velocity of the wind were also measured. (C.H.)

Descriptors: AIR; ATMOSPHERE; DISTRIBUTION; ELECTRIC CONDUCTIVITY; ENVIRONMENT; FALLOUT; IONS; MEASURED VALUES; NUCLEAR EXPLOSIONS; QUANTITY RATIO; VELOCITY; WIND

Subject Codes (NSA): GEOLOGY, MINERALOGY, AND METEOROLOGY

10/5/205 (Item 205 from file: 109)
122577 NSA-14-006108

PHYSICAL FACTORS AND DOSIMETRY IN THE MARSHALL ISLAND RADIATION EXPOSURES

Sondhaus, C.A.; Bond, V.P.

Naval Radiological Defense Lab., San Francisco

Publication Date: Dec. 1955 26 p.

Primary Report No.: WT-939(Del.)

Note: Decl. with deletions Sept. 15, 1959. Addendum Report for Project 4.1 of OPERATION CASTLE

Journal Announcement: NSA14

Availability: NTIS

Document Type: Report 5003596

Language: English

The physical factors and dosimetry of the fall-out on the Marshall

Islands from the first shot of Operation CASTLE are considered. Data were summarized from field Radiological Safety surveys, fall-out radiochemical studies, and fall-out gamma spectral measurements. The influence of these and other factors on an evaluation of survey meter response and total dose estimates was considered. Estimates of fall-out duration times and energy distribution of the dose from a plane source were made and the effect of diffuse source-geometry on the depth-dose to air-dose relationship was considered. Superficial doses from soft gamma and beta radiation were also considered. Since the fall-out incident created an initial emergency during which data collection was of secondary importance, attempts to reconstruct the event have been uncertain. However, a fairly consistcnt estimate of external gamma dosage was possible, although the question of beta exposure remains mostly unanswered. It was assumed that no siginificant neutron or alpha particle exposure occurred. Internal doses from inhaled or ingested material and the biomedical aspects of the incident have been discussed in other CASTLE reports. lt was concluded that the AN/PDR39A requires a correction factor o; about plus 20% in doserate readings made under the conditions described; decay of the radioactivity of the fall-out is believed expressible by the factor of T/sup -0.83/; the external gamma dose was delivered priroarily by radiation energies of 100, 700, and 1500 kev; the beta dose was delivered by beta radiation of maximum energies of 0.3 and 1.8 Mev, mostly from fallout deposited on the skiin itself; the exposures occurred between 4 and 78 hours after the detonation, the fall-outs were probably of 12-hours duration; diffuse source geometry increased the midline dose by abcut 50% compared to the midline dose which would have resulted from a bilateral narrow beam exposure of the same air-dose; error in the estimates is believed to be less than 50%; and total air gamma doses were estimated as follows: Rongerik, 56 r; Rongelap, 182 r; Ailinginae, 81 r; and Utirik, 13 r. (auth)

Descriptors: AIR; BETA DECAY; DECAY; DISTRIBUTION; DOSEMETERS; ENERGY; ERRORS; FALLOUT; ISLANDS; MAN; MARSHALL ISLANDS; NEUTRONS; NUCLEAR EXPLOSIONS; PACIFIC OCEAN; POPULATIONS; PROJECT CASTLE; RADIATION DOSES; RADIATION SOURCES; RADIOACTIVITY; RADIOCHEMISTRY; SAFETY; SKIN; SPECTROMETERS; THERMONUCLEAR EXPLOSIONS iooooooooooooooooooooo

Subject Codes (NSA): BIOLOGY AND MEDICINE

10/5/206 (Item 206 from file: 109)
116506 NSA-14-000028

THE ARTIFICIAL RADIOACTIVITY IN RAIN WATER OBSERVED IN JAPAN FROM MAY TO AUGUST 1954

Miyake, Y.

Meteorological Research Inst., Tokyo

Papers Meteorol. and Geophys. (Tokyo) v 5.

Publication Date: (1954) Sept. 173-7 p.

Journal Announcement: NSA14

Document Type: Journal Article

Language: English

Data are summarized on levels of radioactivity in samples of air-borne dust and rain water collected in Japan following the thermonuclear weapons tests at Bikini atoll from March to May 1954. (C.H.)

Descriptors: AIR; BIKINI; DUSTS; JAPAN; NUCLEAR EXPLOSIONS; QUANTITY RATIO; RADIOACTIVITY; RAIN; SAMPLING; TESTING; THERMONUCLEAR EXPLOSIONS

Subject Codes (NSA): BIOLOGY AND MEDICINE

10/5/207 (Item 207 from file: 109)
115568 NSA-13-022235

INTERPRETATION OF SURVEY-METER DATA. ANNEX 6.5 OF SCIENTIFIC DIRECTOR'S REPORT OF ATOMIC WEAPON TESTS AT ENIWETOK, 1951. OPERATION GREENHOUSE

Tochilin, E.; Howland, P.

Naval Radiological Defense Lab., San Francisco

Publication Date: Aug. 1951 134 p.

Primary Report No.: WT-26

Note: Decl. Mar. 6, 1957

Journal Announcement: NSA13

Availability: NTIS

Document Type: Report

Language: English

Under laboratory conditions a study of surveyinstrument response to fission-product activity was made. Fission-product activity was collected on aluminum plaques which were flown through the radioactive cloud following each of four bursts. The response of various types of commercially available G-M counters and ion-chamber counters to fissionproduct beta-ray and gamma-ray fields was studied Gamma-ray energies were determined by half-valuelayer absorption measurements using narrow-beam geometric. In addition to the laboratory measurements, field determinations of residual gamma-ray energy were made in the vicinity of ground zero following Dog and Easy Shots. Changes in beta-ray energy were studied for the period from 44.6 to 215.7 hr. It was found that the beta-ray absorption curve could be reproduced by a high-energy and low-energy component of beta radiation. For early times the two components were 1.54 and 0.5 Mev, respectively, and approached a relatively constant value of about 1.41 and 0.5 Mev after 4 days. The ratio of beta dose to gamma dose on the surface of the plaques was measured for Dog and Item Shots and was found to be 156 and 157, respectively. Laboratory determination of effective gamma-ray energies using half-value-layer measurements by means of aluminum, copper, and lead filters showed the energy to be dependent upon the absorber used. (auth)

Descriptors: ABSORPTION; ALUMINUM; BEAMS; BETA PARTICLES; COPPER; ENERGY; ENERGY RANGE; FALLOUT; FILTERS; FISSION PRODUCTS; GAMMA RADIATION; GEIGER-MUELLER COUNTERS; INSTRUMENTS; IONIZATION CHAMBERS; LEAD; MEASURED VALUES; MONITORING; NUCLEAR EXPLOSIONS; PROJECT GREENHOUSE; QUANTITATIVE ANALYSIS; RADIATION DETECTORS; RADIATION DOSES; RADIOACTIVITY; SAMPLING

Subject Codes (NSA): HEALTH AND SAFETY

10/5/208 (Item 208 from file: 109)

112154 NSA-13-018816

PROBLEMS OF THE RADIATION SICKNESSES IN HIROSHIMA AND NAGASAKI AND AFTER THE H-BOMB TEST IN BIKINI

Keim, H.

Atomkernenergie (West Germany) Merged with Kerntechnik to form Atomkernenerg./Kerntech. Acta Radiol. Changed to Acta Radiol.: Oncol., Radiat. Phys. v 4.

Publication Date: (1959) July-Aug. 313-22 p.

Coden: ATKEA

Note: 0004-7147

Journal Announcement: NSA13

Document Type: Journal Article

Language: German

Geographical conditions, accommodations, disregard of the warning system, and the lack of sufficient first aid may partly account for the great total losses of lives at Hiroshima and Nagasaki. Due to the fact that the detonation happened at a height at 500 m the contamination of the surface did not reach a higher extent in the destroyed area. This is easily proved by the results of the first measurements. Cut of the 100,000 deaths, irradiation by the initial gamma rays accounts for about 20%. For the remaining 80% death is due to mechanical injuries and burns. The surviving injured had however, very often the acute radiation syndrome. Among the surviving population within the radius of 1500 m from the hypocenter late effects were proved by statistics. Some 16 cases of microcephalia in connection with low intelligence with children at a gestation age between 1 to 4 months during the time of the bombing. The significant raising of the leukemia rate up to ten times more than normal. Because of the wide spread of parasitic and toxic blood diseases certain difficulties are arising with the classification of an anemia due to a radiation late effect. Functional disturbances at the generation organs were finished 2 years later. No doubt genetic damages must be expected. However, it would be impossible to find a final judgment relating kind and frequency, especially as far as the first generation is concerned. (auth)

Descriptors: AGE; ANEMIA; BIKINI; BLOOD; CONTAMINATION; DISEASES; GAMMA RADIATION; GENETICS; GONADS; HIROSHIMA; LEUKEMIA; MALFORMATIONS; MEASURED VALUES; MICROCEPHALY; NAGASAKI; NUCLEAR EXPLOSIONS; PARASITES; PREGNANCY; RADIATION INJURIES; RADIATION SICKNESS; STATISTICS; SURVIVAL TIME; TOXICITY

Subject Codes (NSA): BIOLOGY AND MEDICINE

10/5/209 (Item 209 from file: 109)
109253 NSA-13-015907
EFFECTS OF FALLOUT RADIATION ON A HUMAN POPULATION
Conard, R.A.; Robertson, J.S.; Wolins, W.; Meyer, L.M.; Sutow, W.W.; Hechter, H.
Brookhaven National Lab., Upton, N.Y.; South Nassau Communities Hospital, New York; M.D. Anderson Hospital, Houston, Tex.; Naval Radiological Defense Lab., San Francisco
Radiation Research v Suppl. No. 1.
Publication Date: 1959 260-95 p.
Journal Announcement: NSA13
Document Type: Journal Article
Language: English
The status of 82 Marshallese people from Rongelap Atoll is reviewed four years after their accidental exposure to significant amounts of fall-out radiation. The accident occurred after the detonation of a large thermonuclear device during experiments at Bikini Atoll in the Pacific Proving Grounds in March 1954. A description of the clinical status is preceded by a brief summary of the psst findings. At four years postexposure, the only remaining evidences of the initial radiation exposure are the lag in complete recovery of certain peripheral blood elements to the levels of a compsrison population, the remaining residua of the beta-ray lesions of the skin, and evidence of low levels of radioisotopes absorbed internally. Late effects of radiation exposure were not seen. 20 references. (C.H.)
Descriptors: ACCIDENTS; BETA PARTICLES; BIBLIOGRAPHY; BIKINI; BLOOD CELLS; BODY; FALLOUT; MAN; MARSHALLESE; MEDICINE; METABOLISM; NUCLEAR EXPLOSIONS; PACIFIC OCEAN; POPULATIONS; QUANTITY RATIO; RADIATION DOSES; RADIATION EFFECTS; RADIATION INJURIES; RADIOISOTOPES; SKIN; THERMONUCLEAR DEVICES
Subject Codes (NSA): BIOLOGY AND MEDICINE

10/5/210 (Item 210 from file: 109)
106534 NSA-13-013185
PLANTS AND FALL-OUT
Fosberg, F.R.
National Research Council, Washington, D.C.
Nature v 183.
Publication Date: (1959) May 23 1448 p.
Journal Announcement: NSA13
Document Type: Journal Article
Language: English
Observations are presented on the condition of vegetation in the area of the Marshall Islands affected by fall-out from the 1954 Bikini hydrogen bomb test. Abnormal or pathological conditions were observed in a number of plant species, inereasing from islet to islet in the same order as the increase in fall-out intensity. Defoliation and die-back of twigs were conspicuous in two species on Eniwetok Islet. (C.H.)
Descriptors: BIKINI; DISTRIBUTION; FALLOUT; ISLANDS; LEAVES; MARSHALL ISLANDS; NUCLEAR EXPLOSIONS; PACIFIC OCEAN; PLANTS; RADIATION EFFECTS; RADIATION INJURIES; TESTING; TISSUES; VARIATIONS
Subject Codes (NSA): BIOLOGY AND MEDICINE

10/5/211 (Item 211 from file: 109)
106484 NSA-13-013135
MEDICAL SURVEY OF RONGELAP PEOPLE, MARCH 1958, FOUR YEARS AFTER EXPOSURE TO FALLOUT
Conard, R.A.; Robertson, J.S.; Meyer, L.M.; Sutow, W.W.; Wolins, W.; Lowrey, A.; Urschel, H.C. Jr.; Barton, J.M.; Goldman, M.; Hechter, H.; Eicher, M.; Carver, R.K.; Potter, D.W.
Brookhaven National Lab., Upton, N.Y.
Publication Date: May 1959 38 p.
Primary Report No.: BNL-534
Journal Announcement: NSA13

Availability: NTIS
Document Type: Report
Language: English
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 Rengelap 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 saniples. Thcse measurements showed an increasc 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. (For preceding period see BNL-501.) (C.H.)
Descriptor Groups (Splits): BLOOD--BLOOD FORMATION--BODY--DISTRIBUTION --FALLOUT--FOOD--GAMMA RADIATION--HALF-LIFE--ISLANDS--MAN--MEDICINE-- METABOLISM--NUCLEAR EXPLOSIONS--PACIFIC OCEAN--PLATELETS--POPULATIONS-- PROJECT CASTLE--QUANTITY RATIO--RADIATION DOSES--RADIATION EFFECTS-- RADIOISOTOPES--SEX--SOILS--TISSUES--VARIATIONS

ANTIGENS--BIOLOGY--BLOOD--BLOOD GROUPS--BODY--CESIUM 137--GAMMA RADIATION --IMMUNITY--INTESTINE--MAN--MARSHALL ISLANDS--MEASURED VALUES--PARASITES-- POPULATIONS--QUANTITATIVE ANALYSIS--QUANTITY RATIO--RADIOCHEMISTRY-- RADIOISOTOPES--SPECTROSCOPY--STRONTIUM 90--URINE--VARIATIONS--ZINC 65
Subject Codes (NSA): BIOLOGY AND MEDICINE

10/5/212 (Item 212 from file: 109)
105758 NSA-13-012407
THE RADIATION DAMAGE FROM LOCAL FALL-OUT IN THE JAPANESE FISHERMEN NEAR BIKINI WITH SPECIAL CONSIDERATION OF THE ONE FATALITY
Keim, H.
Univ. of Freiburg i. B.
Strahlentherapie (West Germany) v 108.
Publication Date: (1959) Apr. 602-8 p.
Coden: STRAA
Note: 0039-2073
Journal Announcement: NSA13
Document Type: Journal Article
Language: German
The radiation damage of the Japanese fishermen near Bikini, caused by local fall-out is described, taking into consideration the possible cause of death of the one fatal case. (auth)
Descriptors: BIKINI; CONTAMINATION; ENVIRONMENT; FALLOUT; JAPAN; MAN; NUCLEAR EXPLOSIONS; PERSONNEL; POPULATIONS; RADIATION INJURIES; SEA
Subject Codes (NSA): BIOLOGY AND MEDICINE

10/5/213 (Item 213 from file: 109)
105107 NSA-13-011756
RADIOBIOLOGICAL STUDIES AT ENIWETOK BEFORE AND AFTER MIKE SHOT
Donaldson, L.R.
Washington. Univ., Seattle. Applied Fisheries Lab.
Publication Date: June 1953 98 p.
Primary Report No.: WT-616
Note: Project 11.5 of OPERATION IVY 5003600
Journal Announcement: NSA13
Availability: NTIS

Document Type: Report
Language: English
Results of measurements arc reported of the residual radiation found in the living organisms of Eniwetok Atoll as a result of previous weapons tests in this area and a resurvey, following Mike shot, to determine the change in amounts, kinds, and distribution of radioactive materials. Specimens collected from Oct. 20 to Nov. 11, 1952, included plankton, algae, rats, birds, fish, plants, and invertebrate organisms. (W.D.M.)
Descriptors: ALGAE; ANIMALS; BIRDS; DISTRIBUTION; ENIWETOK; FISH; MEASURED VALUES; MICROORGANISMS; NUCLEAR EXPLOSIONS; PLANKTON; PLANTS; PROJECT IVY; RADIOACTIVITY; RADIOBIOLOGY; RATS; TISSUES
Subject Codes (NSA): HEALTH AND SAFETY

10/5/214 (Item 214 from file: 109)
105102 NSA-13-011751
RADIOBIOLOGICAL RESURVEY OF BIKINI ATOLL DURING THE SUMMER OF 1947
Washington. Univ., Seattle. Applied Fisheries Lab.
Publication Date: 1947 62 p.
Primary Report No.: UWFL-7
Note: Decl. Feb. 16, 1956
Journal Announcement: NSA13
Availability: NTIS
Document Type: Report
Language: English
The 1947 studies were designed to determine the presenee or absence of radiation in the various marine organisms, the distribution of radioactive substance in the plants and animals from different geographical locations, and the amounts of radioactive substances in certain tissues and organs. Most of the organisms studied were fish or marine invertebrates. Some pertinent radioautographs are presented. (W.D. M.)
Descriptors: ANIMALS; BIKINI; DISTRIBUTION; FISH; MICROORGANISMS; MONITORING; PLANTS; QUANTITATIVE ANALYSIS; RADIATIONS; RADIOACTIVITY; RADIOBIOLOGY; RADIOGRAPHY; TISSUES
Subject Codes (NSA): HEALTH AND SAFETY

10/5/215 (Item 215 from file: 109)
104426 NSA-13-011074
BIKINI RADIOBIOLOGICAL RESURVEY OF 1948
Washington. Univ., Seattle. Applied Fisheries Lab.
Publication Date: nd 51 p.
Primary Report No.: UWFL-16
Note: Decl. Mar. 5, 1957
Journal Announcement: NSA13
Availability: NTIS
Document Type: Report
Language: English
Contract No.: W-28-094-ENG-33
During the 18 days at Bikini samples of the faunal and floral systems were collected from the lagoon, the inner and outer reefs, and from the islands. A total of 1918 ashed samples werc prepared for determination of the contained radioactive materials. A survey was completed of the major islands to determine the amount of contamination with radioactive debris and drift material. Field counts were also made of the extent of contamination of the land masses, land plants and animals, etc., from the contamination of fission products found in the Lagoon. (W.D.M.)
Descriptors: ANIMALS; CONTAMINATION; FALLOUT; FISSION PRODUCTS; MONITORING; PLANTS; QUANTITATIVE ANALYSIS; RADIOACTIVITY; SOILS; TISSUES
Subject Codes (NSA): HEALTH AND SAFETY

10/5/216 (Item 216 from file: 109)
104425 NSA-13-011073
CONCENTRATION OF ACTIVE MATERIALS BY HYDROIDS IN THE BIKINI LAGOON DURING THE SUMMER OF 1947
Donaldson, L.R.; Seymour, A.H.; Welander, A.D.; Bonham, K.
Washington. Univ., Seattle. Applied Fisheries Lab.
9 p.

Primary Report No.: UWFL-11
Note: Decl. Mar. 5, 1957
Journal Announcement: NSA13
Availability: NTIS
Document Type: Report
Language: English
Contract No.: W-28-094-ENG-33
The fouling growth on a boat frame that had been moored in Bikini Lagoon from July 15 to Aug. 28, 1947, was counted for activity. This material, composed mostly of a hydroid belonging to the family Plumularidae, had concentrated active materials exceeding the activity found in the water many times. (W.D.M.)
Descriptors: ENRICHMENT; MICROORGANISMS; QUANTITY RATIO; RADIOACTIVITY; WATER
Subject Codes (NSA): HEALTH AND SAFETY

10/5/217 (Item 217 from file: 109)
104416 NSA-13-011064
ANALYSIS OF DATA OBTAINED BY JAPANESE SCIENTISTS DURING THE CRUISE OF THE SHUNKOTSU MARU
Vine, A.C.
New York Operations Office. Health and Safety Lab., AEC; Woods Hole Oceanographic Institution, Mass.
Publication Date: Mar. 28, 1955 28 p.
Primary Report No.: NYO-4627
Note: Decl. Apr. 22, 1959
Journal Announcement: NSA13
Availability: NTIS
Document Type: Report
Language: English
In June 1954 the Japanese made a comprehensive series of surface and depth measurements of the radioactivity in the Marshalls and Marianas. These measurements were at ranges up to 900 miles and decay times up to 6 to 15 weeks. Plots of the original data are shown. A few conclusions and recommendations are made. Estimates of the present strength and location of the radioactivity are presented. (auth)
Descriptors: DECAY; DIAGRAMS; HALF-LIFE; MARSHALL ISLANDS; MEASURED VALUES; RADIOACTIVITY
Subject Codes (NSA): HEALTH AND SAFETY

10/5/218 (Item 218 from file: 109)
104125 NSA-13-010772
MEDICAL MISSION TO MARSHALL ISLANDS
Meyer, L.M.
Brookhaven National Lab., Upton, N.Y.
Publication Date: July 12, 1957 5 p.
Primary Report No.: BNL-3306
Journal Announcement: NSA13
Availability: NTIS
Document Type: Report
Language: English
An account is presented of the activities of the mediin March 1954. No technical data are included. (C.H.)
Descriptors: FALLOUT; MAN; MARSHALL ISLANDS; MEDICINE; NUCLEAR EXPLOSIONS; PERSONNEL; POPULATIONS; RADIATION EFFECTS
Subject Codes (NSA): BIOLOGY AND MEDICINE

10/5/219 (Item 219 from file: 109)
103272 NSA-13-009918
EFFECTS OF FALLOUT RADIATION ON A HUMAN POPULATION
Conard, R.A.; Robertson, J.S.; Wolins, W.; Meyer, L.M.; Sutow, W.W.; Hechter, H.
Brookhaven National Lab., Upton, N.Y.; South Nassau Communities Hospital, Rockville Center, N.Y.; M.D. Anderson Hospital, Houston, Texas; Naval Radiological Defense Lab., San Francisco
Radiation Research v Suppl. 1.

Publication Date: 1959 280-95 p.
Journal Announcement: NSA13
Document Type: Journal Article
Language: English
A unpredicted shift in winds shortly after the detonation of a large thermonuclear device during Operation Castle at Bikini Atoll, Pacific Proving Grounds, on March 1, 1954, caused deposition of significant amounts of fall-out on four nearby inhabited Marshall Isands . A survey was made to determine the exposure of the island inhabitants. Twenty-eight American servicemen on Rongerik Atoll received about 70 r and 23 Japanese fishermen aboard their fishing vessel, the Lucky Dragon received significant exposure. Sixty-four away from the detonation, received an estimated dose of fall-out equivalent to 175 r whole-body r radiation and BETA -ray lesions of the skin, and slight internal absorption or radioactive material. Eighteen people on a nearby island received about 69 r. The status of 82 Marshallese people is reviwewed four years after their exposure. Extensive physical examinations were carried out during the first 3 months after exposure, an repeated at six months and yearly intervals thereafter. A brief summary of findings from these suveys is included. Three deaths have occurred in the errosed group, but none was due to radiation exposure. No abnormalities were observed in the 18 babies born to exposed parents. During the discussion of this paper, M. Tsuziki reported on the status of the 25 Japanese fishermen exposed in the same accident. Examination four weeks after exposure showed leukopenia and r function and jaundice; after 3 months, hyp- or asperima. One case was lost as a result of severel hepaitis. After 4 years, all the surviving fishermen report feeling well and appear to be good health.(C.H.)
Descriptors: ABSORPTION; ACCIDENTS; BETA PARTICLES; BIKINI; BLOOD CELLS ; BLOOD FORMATION; BODY; FALLOUT; GAMMA RADIATION; LIVER; MAN; MARSHALL ISLANDS; MEDICINE; METEOROLOGY; MONITORING; NUCLEAR EXPLOSIONS; PERSONNEL; QUANTITATIVE ANALYSIS; RADIATION DOSES; RADIATION EFFECTS; RADIOACTIVITY; SHIPS; SKIN; TESTING; THERMONUCLEAR REACTIONS; WIND
Subject Codes (NSA): HEALTH AND SAFETY

10/5/220 (Item 220 from file: 109)
103258 NSA-13-009904
RADIOLOGICAL ANALYSIS OF BIOLOGICAL SAMPLES COLLECTED AT ENIWETOK, MAY 16, 1948
Donaldson, L.R.; Seymour, A.H.; Donaldson, J.R.
Washington. Univ., Seattle. Applied Fisheries Lab.
Publication Date: nd 11 p.
Primary Report No.: UWFL-18
Note: Decl. Mar. 5, 1957
Journal Announcement: NSA13
Availability: NTIS
Document Type: Report
Language: English
Contract No.: W-28-094-ENG-33
On May 16, 1945, the day following the Runit Island test, a collection of marine organisms was made from the reef area north of the test site within the general fall-out pattern. Collecting methods, preparation of material for counting, counting methods, and data from various parts of the organisms are given. Half life of the activity was approximately 180 days and was tentatively identified as Na/sup 24/ and Ca/sup 14/. (W.D.M.)
Descriptors: BIOLOGY; CALCIUM 45; ENIWETOK; FALLOUT; HALF-LIFE; MICROORGANISMS; NUCLEAR EXPLOSIONS; QUANTITATIVE ANALYSIS; RADIOACTIVITY; SAMPLING; SODIUM 24; TESTING
Subject Codes (NSA): HEALTH AND SAFETY

10/5/221 (Item 221 from file: 109)
101018 NSA-13-007661
PROTECTION AGAINST THE GAMMA RADIATION OF THE RADIOACTIVE FALL-OUT IN ATOMIC BOMB EXPLOSIONS
Rudloff, A.
Atompraxis (West Germany) Incorporated in Kerntechnik published from Jan. 1971 as Kerntechnik Incorporating Atompraxis v 4.

Publication Date: 1958 444-48 p.
Coden: ATPXA
Note: 0571-8198
Journal Announcement: NSA13
Document Type: Journal Article
Language: German
The present study is bansd on the information which has been revealed concerning the extent of contamination in the fall-out area of a 15 megaton hydrogen bomb (Bikini test, March 1, 1954). On the basis of these data the protection afforded by bunkers and house cellars against the gamma radiation of fall-out is estimated. In addition, the optimal length of stay in shelters is calculated, i.e., the time at which the shelter and the fall-out area must be abandoned if the radiation dose is to be kept at a minimum. The results obtained point out the necessity of decontaminating traffic routes in fallout areas. (auth)
Descriptors: BUILDINGS; CONTAMINATION; DECONTAMINATION; FALLOUT; GAMMA RADIATION; HYDROGEN; NUCLEAR EXPLOSIONS; RADIATION DOSES; RADIATION PROTECTION; RADIOACTIVITY; SHELTERS
Subject Codes (NSA): HEALTH AND SAFETY

10/5/222 (Item 222 from file: 109)
096249 NSA-13-002882
THE OCCURRENCE OF ANTIMONY-125, EUROPIUM-155, IRON-55, AND OTHER RADIONUCLIDES IN RONGELAP ATOLL SOIL
Palumbo, R.F.; Lowman, F.G.
Washington. Univ., Seattle. Applied Fisheries Lab.
Publication Date: Apr. 7, 1958 27 p.
Primary Report No.: UWFL-56
Journal Announcement: NSA13
Availability: NTIs
Document Type: Report
Language: English
Contract No.: AT(45-1)540
BS> Soil samples from Rongelap Atoll were analyzed for radionuclide content. Using ion-exchange methods, a detailed study was made of a soil sample collected in a bird nesting area at Kabelle Island in July 1957. Two radioisotopes, antimony-125 and europium-155, not previously reported in samples from the Pacific Proving Ground were found and their identity was verified by radiochemical precipitation techniques. The radionuclides contributing most of the radioactivity were Ce/sup 144/-Pr/sup 144/ and Fe/sup 55/, a non-fission product. Other radionuclides present in much smaller amounts included Ru/sup 106/-Rh/sup 106/, Sr/sup 90/-Y/sup 90/, Cs/sup 137, Mn/sup 54/, Co/ sup 6 0/, Zr/sup 95/-Nb/sup 95/, Co/sup 57.(auth).
Descriptors: ANTIMONY 125; BIRDS; CERIUM 144; CESIUM 137; COBALT 57; COBALT 60; EUROPIUM 155; FISSION PRODUCTS; ION EXCHANGE; IRON 55; MANGANESE 54; NIOBIUM 95; PRECIPITATION; RADIOACTIVITY; RADIOCHEMISTRY; RUTHENIUM 106 ; SOILS; STRONTIUM 90; YTTRIUM 90; ZIRCONIUM 95
Subject Codes (NSA): HEALTH AND SAFETY

10/5/223 (Item 223 from file: 109)
096248 NSA-13-002881
RADIOBIOLOGICAL STUDIES OF THE FISH COLLECTED AT RONGELAP AND AILINGINAE ATOLLS JULY 1957
Welander, A.D.
Washington. Univ., Seattle. Applied Fisheries Lab.
Publication Date: Mar. 5, 1958 33 p.
Primary Report No.: UWFL-55
Journal Announcement: NSA13
Availability: NTIS
Document Type: Report
Language: English
Contract No.: AT(45-1)540
Radiobiological analysis of the reef fishes of Rongelap and Ailinginae Atolls indicated that a recontamination of the area occurred in 1956. Gross levels of beta activity in muscle tissue ranged from 0.016 to 0.038 mu

c/kg wet weight. The levels of radioactivity in bone and muscle tissues of fish collected during 1957 were about the same as the levels for similar tissues collected in 1955. Gamma spectra analysis and ion-exchange methods revealed the presence of Zn/sup 65/, Co/sup 57/, Co/sup 58/, Co/sup 60/, Mn/sup 54, and Fe/sup 55/. Radiostrontium was found only in small amounts (about 0.0014 mu c/kg wet weight) in the bone of fish from Kabekle Island, Rongelap Atoll. Approximately 40 per cent of the total radioactivity in the reef fishes was due to Zn/sup 65/, 28 per cent to cobalt, 26 per cent to Fe/sup 55/, and 6 per cent to other radionuclides. (auth)
Descriptors: BETA PARTICLES; BONES; COBALT 57; COBALT 58; COBALT 60; CONTAMINATION; FISH; GAMMA RADIATION; ION EXCHANGE; IRON 55; MANGANESE 54; MUSCLES; QUANTITY RATIO; RADIOACTIVITY; SPECTROMETERS; STRONTIUM 90; TISSUES; ZINC 65
Subject Codes (NSA): HEALTH AND SAFETY

10/5/224 (Item 224 from file: 109)
096247 NSA-13-002880
RADIONUCLIDES IN PLANKTON NEAR THE MARSHALL ISLANDS, 1956
Lowman, F.G.
Washington. Univ., Seattle. Applied Fisheries Lab.
Publication Date: Feb. 14, 1958 34 p.
Primary Report No.: UWFL-54
Journal Announcement: NSA13
Availability: NTIS
Document Type: Report
Language: English
Contract No.: AT(45-1)540
Radiochemical separations were made on plankton samples collected in and west of the Eniwetok Proving Ground in September 1956. Ion exchange resin column and precipitation techniques were used. Fission products, mainly Zr/sup 95/-Nb/sup 95/ and Ce/sup 144/Pr/sup 144/, contributed an average of 29% of the total radioactivity. The remaining 71% of the activity was contributed by the non-fission radioisotopes Zn/sup 65, Co /sup 57,58,60,/ and' Mn/sup 54/. Radio active zinc, cobalt, and iron acconted for averages of 24, 26, and 21%, respectively, of the total radioactivity. Mn/sup 54/ was present in trace amounts. Variations in ratio of occurrence for the different non-fission products with change in geographical location was observed. Relatively high levels of Zn/sup 65/ were centered in the area near Bikini and Eniwetok Atolls. The area of high levels of radioactive cobalt and iron in comparison to Zn/sup 65/ was located approximately 480 miles west and slightly north of Eniwetok Atoll. (auth)
Descriptors: CERIUM 144; COBALT 57; COBALT 58; COBALT 60; FISSION PRODUCTS; ION EXCHANGE; IRON 55; MANGANESE 54; MARSHALL ISLANDS; MICROORGANISMS; NIOBIUM 95; PLANKTON; PRASEODYMIUM 144; PRECIPITATION; RADIOACTIVITY; RADIOCHEMISTRY; TRACE AMOUNTS; ZIRCONIUM 95
Subject Codes (NSA): HEALTH AND SAFETY

10/5/225 (Item 225 from file: 109)
095478 NSA-13-002109
OBSERVATIONS OF RADIOACTIVE CLOUDS FROM ATOMIC TESTS IN RELATION TO ATMOSPHERIC TRANSPORT AND EXCHANGE PROBLEMS
(Beobachtungen an Radioaktiven Schwaden von Atomtechnischen Versuchen im Hinblick auf Atmospharische Transport- und Austauschprobleme)
Sittkus, A.
Publication Date: nd 13 p.
Primary Report No.: TT-776
Note: Translated by D.A. Sinclair (National Research Council of Canada) from Beitr. Physik Atmosphare 30, 200-206(1958)
Journal Announcement: NSA13
Document Type: Journal Translation
Language: English
Regular measurements have been made since 1963, at Freiburg, West Germany, of the long-lived radioactive materials contained in rain water. In 1953 when a series of atomic bomb tests took place in the Nevada desert, U.S.A., a travelling time of 10 to 20 days was determined for the resulting atomic cloud. The shortest time for arrival of an atomic cloud

SOILS/strontium-85 content of solutions of, effects of moisture tension on

NEUTRONS/effects on $beta$- and $gamma$-decay characteristics of soils

ANGIOSPERMIDAE/Hordeum vulgare, strontium-90 uptake by, reduction of, by clinoptilolite

ANGIOSPERMIDAE/Phaseolus vulgaris, strontium-90 uptake by, reduction of, by clinoptilolite

NEVADA TEST SITE/radiation effects on ecosystems of

GAMMA RADIATION/effects on natural populations of lizards at Nevada Test Site

MICE/radiation effects on life span of Perognathus sp., in Mojave desert

RATS/radiation effects on life span of Dipodomys sp., in Mojave desert

DEUTERIUM/use for tracer studies of metabolism in rodents

OXYGEN ISOTOPES O-18/use for tracer studies of metabolism in rodents

INSECTA/Centrioptera muricata, radiation effects on, at Nevada Test Site

ECOSYSTEMS/radiation effects on desert

FISSION PRODUCTS/cycling in agricultural systems

STRONTIUM ISOTOPES Sr-85/content of soil solutions, effects of moisture tension on

STRONTIUM ISOTOPES Sr-90/uptake by barley and beans, effects of clinoptilolite on reduction of

ECOSYSTEMS/radiation effects on, at Nevada Test Site

SOILS/radioisotope analysis of, at Eniwetok

REPTILIA/Uta stansburiana, radiation effects on natural populations of,

REPTILIA/lizards, activity ranges of, analysis of variation in

NEVADA TEST SITE/radioecology of arthropods at

CESIUM ISOTOPES Cs-137/uptake by bush bean plants

RUBIDIUM ISOTOPES Rb-86/uptake by bush bean plants

CALCIUM/effects on micronutrients of plants

ANGIOSPERMIDAE/Salsola kali, radiation effects on germination of seeds of,

RADIOISOTOPES/content of bones, feces, plants, soils, and water

SEED/radiation effects on germination of Salsola

BONES/radioisotope content of, cerium-144, cesium-137, radium-226, strontium-90, zirconium-95

PLANTS/radioisotope content of, cerium-144, cesium-137, radium-226, strontium-90, zirconium-95

FECES/radioisotope content of, cerium-144, cesium-137, radium-226, strontium-90, zirconium-95

SOILS/radioisotope content of, cerium-144, cesium-137, radium-226, strontium-90, zirconium-95

SURFACE WATERS/radioisotope content of, cerium-144, cesium-137, radium-226, strontium-90, zirconium-95

ANGIOSPERMIDAE/survival of winter annual, in Northern Mojave Desert
Subject Codes (NSA): N28220* Life Sciences--Ecology--Radiation Effects

10/5/111 (Item 111 from file: 109)
465891 NSA-22-019363
LATE EFFECTS OF RADIOACTIVE IODINE IN FALLOUT: COMBINED CLINICAL STAFF CONFERENCE AT THE NATIONAL INSTITUTES OF HEALTH.
Robbins, J. ; Rall, J.E.; Conard, R.A.
National Inst. of Arthritis and Metabolic Diseases, Bethesda, Md.
Ann. Intern. Med., 66: 1214-42(June 1967).
Publication Date: 1967
Secondary Report No.: BNL--11679
Journal Announcement: NSA22
Document Type: Journal Article
Language: English
Subfile: NSA (Nuclear Science Abstracts)
Descriptors: ABUNDANCE; AGE; CHILDREN; DISEASES; GROWTH; HORMONES; HYPOTHYROIDISM; IODINE ISOTOPES; ISLANDS; MAN; MARSHALL ISLANDS; MARSHALLESE; PACIFIC OCEAN; POPULATIONS; PROTEINS; RADIATION EFFECTS; SEA; THERAPY; THYROID; TSH; TUMORS
Subject Headings/Modifiers: GROWTH/radiation effects on, of human population of Marshall Islands exposed to fallout, iodine-131 $beta$ and

THYROID GLAND/radiation effects on, of Marshall Islanders exposed to fallout, late pathological iodine-131 $beta$ and
HORMONES, PITUITARY/thyrotropin, effects on hypothyroidism in human population of Marshall Islands

GAMMA RADIATION/effects on growth and thyroid gland of human population of Marshall Islands exposed to fallout, late pathological iodine-131

MAN/radiation effects on thyroid glands of, in Marshall Islands exposed to fallout late pathological iodine-131 $beta$ and

BETA PARTICLES/effects on growth and thyroid gland of human population of Marshall Islands exposed to fallout, late pathological iodine-131

DISEASES, NEOPLASTIC/benign, radioinduced, in thyroid of man in Marshall Islands, iodine-131 $beta$ and

DISEASES, PHYSIOLOGICAL/hypothyroidism, radioinduced, in human population of Marshall Islands following exposure to fallout

MARSHALL ISLANDS/radioinduced thyroid disorders in human children in, iodine-131 $beta$ and
Subject Codes (NSA): N28550* Life Sciences--Medicine--Blast & Thermal Effects

10/5/112 (Item 112 from file: 109)
465882 NSA-22-019354
LATE EFFECTS OF RADIOACTIVE FALLOUT ON THE THYROID GLAND IN A MARSHALLESE POPULATION.
Conard, R.A.
Brookhaven National Lab., Upton, N. Y.
Corp. Source Code: 1401000
Publication Date: 1967 10 p.
Primary Report No.: BNL--11999
Secondary Report No.: CONF-671208-
Note: From 134th Annual Meeting of the American Association for the Advancement of Science, New York.

Note: UNCL
Journal Announcement: NSA22
Availability: Dep. CFSTI.
Document Type: Report
Language: English
Subfile: NSA (Nuclear Science Abstracts)
Descriptors: AGE; DISEASES; FALLOUT; GAMMA RADIATION; GROWTH; HORMONES; HYPOTHYROIDISM; IODINE 131; IODINE 132; IODINE 133; IODINE 135; MAN; NUCLEAR EXPLOSIONS; RADIATION EFFECTS; RADIATION INJURIES; THERAPY; THERMONUCLEAR EXPLOSIONS; THERMONUCLEAR REACTIONS; THYROID; TUMORS
Subject Headings/Modifiers: MAN/radioinduced thyroid nodules in, exposed to fallout in Marshall Islands

IODINE ISOTOPES I-132/uptake by human population exposed to fallout on Marshall Islands in 1954, radiation dose to thyroid from

IODINE ISOTOPES I-135/uptake by human population exposed to fallout on Marshall Islands in 1954, radiation dose to thyroid from

AGE/effects on incidence of radioinduced thyroid nodules in human population of Marshall Islands

GAMMA RADIATION/effects on development of thyroid nodules in human population of Marshall Islands exposed to fallout

IODINE ISOTOPES I-133/uptake by human population exposed to fallout on Marshall Islands in 1954, radiation dose to thyroid from

DISEASES, NEOPLASTIC/benign, incidence in thyroid of human children exposed to fallout in Marshall Islands in 1954

DISEASES, PHYSIOLOGICAL/hypothyroidism, incidence in human children of Marshall Islands exposed to fallout in 1954
IODINE ISOTOPES I-131/uptake by human population exposed to fallout on Marshall Islands in 1954, radiation dose to thyroid from

THYROID GLAND/radioinduced tumors of, in human population of Marshall Islands exposed to fallout during 1954

FALLOUT/effects on thyroid of human population of Marshall Islands
Subject Codes (NSA): N28550* Life Sciences--Medicine--Blast & Thermal Effects

10/5/113 (Item 113 from file: 109)
461584 NSA-22-015049
ABNORMAL FORMATION OF VISUAL ORGANS OF AMPHIBIAN LARVAE INDUCED BY RADIOACTIVE RAINWATER.
Nishimura, K.
Mie Prefectural Univ., Tsu, Japan
Mie Med. J., 16: 263-7(Jan. 1967).
Publication Date: 1967
Journal Announcement: NSA22
Document Type: Journal Article
Language: English
Subfile: NSA (Nuclear Science Abstracts)
Work Location: Japan
Descriptors: AMPHIBIANS; ANIMALS; BIKINI ATOLL; CALCIUM 45; EMBRYOS; EYES; FISSION PRODUCTS; ISLANDS; LARVAE; NEVADA; NEVADA TEST SITE; NORTH AMERICA; NUCLEAR EXPLOSIONS; PACIFIC OCEAN; RADIATION EFFECTS; RADIOACTIVITY; RAIN; SEA; TESTING; USA; WATER
Subject Headings/Modifiers: AMPHIBIA/Rana nigromaculata, radioinduced abnormalities in larvae of, at Bikini and Nevada Test Site

EYES/radioinduced abnormalities in, of amphibian larvae at Bikini and Nevada Test Site
FISSION PRODUCTS/effects on development of amphibian embryos

NUCLEAR EXPLOSIONS, ATMOSPHERIC/effects on development of amphibian larvae at Bikini and Nevada Test Site, teratogenic

NEVADA TEST SITE/radioinduced abnormalities in amphibian larvae at, following nuclear tests

RAINWATER/amphibian larvae development in radioactive, at Bikini and Nevada Test Site

LARVAE/radioinduced abnormalities in amphibian, at Bikini and Nevada Test Site

CALCIUM ISOTOPES Ca-45/effects on development of amphibian embryos

BIKINI ATOLL/radioinduced abnormalities in amphibian larvae at, following nuclear weapons testing
Subject Codes (NSA): N28550* Life Sciences--Medicine--Blast & Thermal Effects

10/5/114 (Item 114 from file: 109)
461441 NSA-22-014906
MEDICAL RESEARCH.
Brookhaven National Lab., Upton, N. Y.
Corp. Source Code: 1401000
Primary Report No.: BNL--50057
Report No., Pages: BNL--50057, pp 123-37
Note: UNCL
Journal Announcement: NSA22
Document Type: Report
Language: English
Subfile: NSA (Nuclear Science Abstracts)
Descriptor Groups (Splits): ACCIDENTS--ANALYSIS--FALLOUT--ISLANDS--MAN --MARSHALL ISLANDS--PACIFIC OCEAN--POPULATIONS--RADIATION EFFECTS--SEA

BIOLOGY--DETERMINATION--EFFICIENCY--MEDICINE--MESONS--USES

DIAGNOSIS--DISEASES--RADIOGRAPHY--RADIOISOTOPES--USES

CALCIUM--CALCIUM 47--DETERMINATION--MAN--METABOLISM--STRONTIUM--STRONTIUM 85--TRACER TECHNIQUES--USES

DISEASES--EFFICIENCY--ELEMENTS--MAN--METABOLISM--TRACE AMOUNTS
BLOOD--BODY--COBALT 60--EFFICIENCY--EXTRACORPOREAL--GAMMA RADIATION--IRRADIATION--LEUKEMIA--MAN--PRODUCTION--RADIOTHERAPY--VARIATIONS

BLOOD CIRCULATION--DETERMINATION--GENETICS--HYPERTENSION--RATS--USES

NO KEYWORDS

AMINO ACIDS--DETERMINATION--DISEASES--EFFICIENCY--MAN--METABOLISM--PRODUCTION--TRACER TECHNIQUES--TRYPTOPHAN--USES--VARIATIONS

BODY--EFFICIENCY--EXTRACORPOREAL--IMMUNITY--IRRADIATION--LYMPHOCYTES--PRODUCTION--RADIATION EFFECTS--SKIN--TRANSPLANTS--VARIATIONS

AGGLUTININS--ANIMAL CELLS--ANTIBODIES--EFFICIENCY--HEMAGGLUTININS--LYMPHOCYTES--MITOSIS--PRODUCTION--VARIATIONS

ABUNDANCE--BIOSYNTHESIS--DETERMINATION--HORMONES--INSULIN

FREE RADICALS--METABOLISM--OXIDATION--PRODUCTION--RADIATION EFFECTS

NO KEYWORDS
AMINO ACIDS--BIOSYNTHESIS--EFFICIENCY--PRODUCTION--PROTEINS--VARIATIONS

MONKEYS--NERVOUS SYSTEM--RADIATION INJURIES--RATS--X RADIATION

EYES--MICE--RADIATION INJURIES--X RADIATION

ALGAE--CHLOROPHYLL--CHLOROPLASTS--DRUGS--EFFICIENCY--EUGLENA--NALIDIXIC ACID--PRODUCTION--PROTOZOA--VARIATIONS

ANTIBIOTICS--DAUNOMYCIN--INTERACTIONS--NUCLEIC ACIDS

CONFIGURATION--DETERMINATION--LIVER--PERFORMANCE--RIBONUCLEIC ACID--RIBOSOMES

ANIMAL CELLS--ANIMALS--BLOOD FORMATION--DESIGN--DETERMINATION--MAMMALS--MOCKUP--RADIATION EFFECTS--SURVIVAL TIME

ANTIGENS--BIOCHEMISTRY--CONFIGURATION--EFFICIENCY--LEUCOCYTES--PRODUCTION--VARIATIONS

ANTIBODIES--EFFICIENCY--LYMPH SYSTEM--PRODUCTION--REPRODUCTION--TISSUES--VARIATIONS

Subject Headings/Modifiers: X RADIATION/effects on central nervous system of monkeys and rats

MAN/trace element metabolism in, in relation to pathogenesis and treatment of disease

MAMMALIA/radiation effects on hematopoietic system in, development of cell-survival model for determination of acute

RADIATION/effects on hematopoietic system in mammals, development of cell-survival model for determination of acute

NERVOUS SYSTEM/radiation effects on central, of monkeys and rats, x

MONKEYS/radiation effects on central nervous system of, x

RATS/radiation effects on central nervous system of, x

HEMATOPOIETIC SYSTEM/radiation effects on, in mammals, development of cell-survival model for determination of acute

X RADIATION/effects on lens of eyes in mice

EYES/radiation effects on lens of, in mice, x

MICE/radiation effects on lens of eyes in, x

MESONS ($pi$$sup -$)/uses in biology and medicine, evaluation of

MEDICINE/mesons in, uses of

MARSHALL ISLANDS/pathology of human population of, exposed to fallout from nuclear explosions in 1954

FALLOUT/radiation dose to human population of Marshall Islands accidentally exposed during 1954

POPULATIONS/radiation dose to human, on Marshall Islands accidentally exposed to fallout from nuclear explosions in 1954

GAMMA RADIATION/effects on leukemia in man, effects of extracorporeal exposure of blood on therapeutic cobalt-60

DISEASES, NEOPLASTIC/leukemia, radiotherapy in man, use of cobalt-60 extracorporeal irradiation of blood for

MAN/radiotherapy of leukemia in, use of extracorporeal exposure of blood for cobalt-60

BLOOD/radiation effects on, for therapy of human leukemia, effects of extracorporeal exposure on cobalt-60

RATS/hypertension in, genetic study of

CHLOROPLASTS/replication in Euglena gracilis, effects of nalidixic acid on

EUGLENOPHYTA/Euglena gracilis, replication of chloroplasts in, effects of nalidixic acid on

NALIDIXIC ACID/effects on replication of chloroplasts in Euglena gracilis

LYMPHOCYTES/transformation of sensitized, effects of treatment with homologous antigen on

ANTIGENS/effects on transformation of sensitized lymphocytes

TISSUES/reproduction kinetics in lymph, in relation to secondary antibody response

ANTIBODIES/secondary response to, in relation to kinetics of reproduction of lymph tissue

RADIATION/effects on immunological response to skin allografts, effects of extracorporeal lymph exposure on

TRYPTOPHAN/metabolism in man, tracer study of effects of disease on

PHYTOHEMAGGLUTININ/effects on cell division in lymphocyte cultures
Subject Codes (NSA): N28110* Life Sciences--Biochemistry, Physiology, & Molecular Biology--Basic Processes

10/5/115 (Item 115 from file: 109)
457362 NSA-22-010818
SURVEY OF RADIATION EFFECTS IN EXPOSED ISLANDERS.
Kumatori, T.
Nagasaki Igakkai Zasshi, 40: 702-3(Aug. 1965).
Publication Date: 1965
Journal Announcement: NSA22
Document Type: Journal Article
Language: Japanese
Subfile: NSA (Nuclear Science Abstracts)
Work Location: Japan
Descriptors: ABUNDANCE; BETA PARTICLES; CESIUM 137; DISEASES; FALLOUT; GAMMA RADIATION; LEUCOCYTES; LYMPHOCYTES; MAN; NUCLEAR EXPLOSIONS; RADIATION DOSES; RADIATION INJURIES; SKIN; TESTING; THYROID; ZINC 65
Subject Headings/Modifiers: SKIN/radioinduced diseases in, of man following accidental exposure to fallout from nuclear explosions,

DISEASES, PHYSIOLOGICAL/radioinduced, in skin of man following accidental exposure to fallout from testing of nuclear weapons

DISEASES, PHYSIOLOGICAL/neutropenia, radioinduced, in man following accidental exposure to fallout from testing of nuclear weapons
LYMPHOCYTES/radioinduced decrease in count of, in man following accidental exposure to fallout from testing of nuclear weapons

THYROID GLAND/radioinduced disturbances of, in female human children exposed to fallout from testing of nuclear explosions

CESIUM ISOTOPES Cs-137/content of man exposed to fallout from testing of nuclear weapons

FALLOUT/effects on Japanese fishermen following exposure from Bikini

nuclear tests of 1954

ZINC ISOTOPES Zn-65/content of man exposed to fallout from testing of nuclear weapons

RADIATION/effects on man following exposure to fallout from testing of nuclear weapons

DISEASES, TRAUMATIC/radiation injuries, development in man following exposure to fallout from testing of nuclear weapons

GAMMA RADIATION/dose to man following accidental exposure to fallout from testing of nuclear explosions

BETA PARTICLES/dose to man following accidental exposure to fallout from testing of nuclear explosions
Subject Codes (NSA): N28550* Life Sciences--Medicine--Blast & Thermal Effects

10/5/116 (Item 116 from file: 109)
456960 NSA-22-010413
P TIMES TO AUSTRALIAN STATIONS FROM NUCLEAR EXPLOSIONS.
Cleary, J.
Australian National Univ., Canberra
Bull. Seismol. Soc. Amer., 57: 773-81(Aug. 1967).
Publication Date: 1967
Journal Announcement: NSA22
Document Type: Journal Article
Language: English
Subfile: NSA (Nuclear Science Abstracts)
Work Location: AU
Descriptors: AUSTRALIA; EARTHQUAKES; NUCLEAR EXPLOSIONS; SEISMOLOGY; TIME; WAVE PROPAGATION
Subject Headings/Modifiers: NUCLEAR EXPLOSIONS, UNDERGROUND/detection of, seismological investigation of P times to Australian stations for

SEISMIC WAVES/P times to Australian stations from nuclear explosions at Bikini and Eniwetok
Subject Codes (NSA): N22510* Environmental & Earth Sciences--Nuclear Explosions--Nuclear Explosion Detection

10/5/117 (Item 117 from file: 109)
454782 NSA-22-008235
TRAVEL TIMES FROM CENTRAL PACIFIC NUCLEAR EXPLOSIONS.
Gogna, M.L.
Cambridge Univ., Eng.
Geophys. J., 13: 503-27(Nov. 1967).
Publication Date: 1967
Journal Announcement: NSA22
Document Type: Journal Article
Language: English
Subfile: NSA (Nuclear Science Abstracts)
Work Location: United Kingdom
Descriptors: ANALYSIS; NUCLEAR EXPLOSIONS; SEISMOLOGY; SHOCK WAVES; TIME; TRANSPORT
Subject Headings/Modifiers: SEISMIC WAVES/travel times of P, from Bikini and Eniwetok nuclear explosions

NUCLEAR EXPLOSIONS, SURFACE/seismic waves from Bikini and Eniwetok, analysis of travel times of
Subject Codes (NSA): N22510* Environmental & Earth Sciences--Nuclear Explosions--Nuclear Explosion Detection

10/5/118 (Item 118 from file: 109)
447056 NSA-22-000495
RADIOLOGICAL SOIL ANALYSIS: PACIFIC, NOVEMBER 1952.

5003612

Mork, H.M.
California Univ., Los Angeles. Lab. of Nuclear Medicine and Radiation Biology
Corp. Source Code: 1704000
Publication Date: 1967 23 p.
Primary Report No.: UCLA--12-654
Note: UNCL
Journal Announcement: NSA22
Availability: Dep. CFSTI.
Document Type: Report
Language: English
Subfile: NSA (Nuclear Science Abstracts)
Contract No.: AT(04-1)-GEN-12.
Descriptors: CONTAMINATION; ENIWETOK; FALLOUT; ISLANDS; MEASUREMENT; PACIFIC OCEAN; SEA; SOILS
Subject Headings/Modifiers: SOILS/radioactivity measurements in, from Eniwetok Atoll during 1952, fallout

ENIWETOK ATOLL/radioactivity measurements in soil samples from, during 1952, fallout
RADIOACTIVE CONTAMINATION/survey of soil samples from Eniwetok Atoll during 1952
Subject Codes (NSA): N28410* Life Sciences--Health Physics & Safety--Radioactive Contamination & Decontamination

10/5/119 (Item 119 from file: 109)
363770 NSA-20-018198
BIOLOGICAL, MEDICAL, AND ENVIRONMENTAL RESEARCH. Fundamental Nuclear Energy Research
Publication Date: 1965 105-214 p.
Publ: U.S. Atomic Energy Commission
Journal Announcement: NSA20
Document Type: Book Analytic
Language: English
Descriptors: BETA DECAY HALF-LIFE MEDICINE RADIOISOTOPES USES; BIOCHEMISTRY ELECTRONIC EQUIPMENT ENZYMES ERYTHROCYTES PRODUCTION QUANTITATIVE ANALYSIS TRACER TECHNIQUES VOLUME; BODY CONTROL SYSTEMS FOOD METABOLISM SUGARS TRACER TECHNIQUES VOLUME; BODY CARBON 14 DISTRIBUTION METABOLISM QUANTITATIVE ANALYSIS TISSUES; INSECTS PESTICIDES PLANTS PRODUCTION RADIATION EFFECTS RADIATIONS SUGARS; BLOOD CANCER IRRADIATION LEUKEMIA RADIOTHERAPY; CANCER DETECTION DIAGNOSIS IODINE 130 IODINE 131 RADIOTHERAPY THYROID; FALLOUT MAN MARSHALL ISLANDS NUCLEAR EXPLOSIONS POPULATIONS RADIATION EFFECTS; ANIMALS CATTLE IRRADIATION RADIATION EFFECTS SHEEP SWINE TESTING; INDUCTION IRRADIATION LEUKEMIA MICE TRANSPORT VIRUSES; BILE ACIDS INTESTINE IRRADIATION METABOLISM ORGANIC ACIDS RADIATION EFFECTS STOMACH; ALBUMINS BLOOD IRRADIATION RADIATION EFFECTS TESTING; ANIMAL CELLS ANIMALS EYES IRRADIATION KIDNEYS LIFETIME MAST CELLS PLANT CELLS RADIATION INJURIES TESTING; ANIMALS CHROMOSOMES GAMMA RADIATION GENETICS INDUCTION IRRADIATION MUTATIONS NEUTRONS PLANTS RADIATION EFFECTS RADIATION INJURIES TESTING X RADIATION; ABSORPTION BETA SPECTROMETERS CALORIMETERS DOSEMETERS MEASURED VALUES RADIATIONS; ACTIVATION HAIR MAN NEUTRONS PHOSPHORUS 32 PRODUCTION QUANTITATIVE ANALYSIS RADIATION DOSES; PERSONNEL PRODUCTION SAVANNAH RIVER PLANT TRITIUM URINE; PERFORMANCE PLANNING RADIATION DETECTORS RESOLUTION SEMICONDUCTORS TESTING; ANIMALS MAN METABOLISM PLUTONIUM 239 RADIOISOTOPES RADIUM STRONTIUM 90 TOXICITY; ABSORPTION ANIMALS BLOOD FORMATION BONES RADIATION EFFECTS STRONTIUM 90 TISSUES TUMORS ; ABSORPTION ANIMALS INDUCTION IODINE 131 MAN METABOLISM MILK THYROID TRANSPORT TUMORS; ABSORPTION CESIUM 137 MAN METABOLISM TOXICITY; ABSORPTION ANIMALS CHEMICAL REACTIONS MAN RADIATION EFFECTS RADIOISOTOPES SKIN; ALPHA PARTICLES BETA PARTICLES EMISSION INTESTINE IRRADIATION METABOLISM RADIATION EFFECTS RADIOISOTOPES RATS STOMACH; ABSORPTION ANIMALS FISSION PRODUCTS LUNGS MAN PLUTONIUM RADIATION EFFECTS RADON 222 URANIUM; ALGAE CURRENTS DISTRIBUTION DYES ENVIRONMENT FISH FOOD GEOLOGY MIXING POPULATIONS RADIATION EFFECTS RADIOISOTOPES SEA TRACER TECHNIQUES TRANSPORT; ABSORPTION AEROSOLS ARGONNE NATIONAL LABORATORY ATMOSPHERE BROOKHAVEN NATIONAL LABORATOR CESIUM 137 DEPOSITS DIFFUSION FALLOUT FLOW MODELS IODINE 131

METEOROLOGY MILK MONITORING OAK RIDGE NATIONAL LABORATORY RADIOACTIVITY SAMPLING SOILS STRATOSPHERE TRACER TECHNIQUES TRANSPORT; ABSORPTION AGE DIET FOOD MAN MARSHALL ISLANDS POPULATIONS RADIOISOTOPES STRONTIUM 90 URINE USA
Subject Codes (NSA): BIOLOGY AND MEDICINE; General

10/5/120 (Item 120 from file: 109)
363757 NSA-20-018185
MEDICAL RESEARCH
Brookhaven National Lab., Upton, N.Y.
Publication Date: nd 126-47 p.
Primary Report No.: BNL-929
Journal Announcement: NSA20
Document Type: Report Analytic
Language: English
Descriptors: BLOOD IRRADIATION MEDICINE RADIATION EFFECTS RADIOTHERAPY USES; ANIMAL CELLS BLOOD FORMATION DIFFUSION IRRADIATION MICE PRODUCTION RADIATION EFFECTS; ABSORPTION EYES LENSES LIGHT MICE RADIATION EFFECTS X RADIATION; ENERGY RANGE GEV RANGE IRRADIATION LETHAL DOSE MICE PROTON BEAMS RADIATION EFFECTS; IRRADIATION PIONS PIONS-MINUS RADIATION EFFECTS RADIOTHERAPY TISSUES; EPITHERMAL NEUTRONS IRRADIATION MEASURED VALUES MOCKUP RADIATION DOSES; ANIMALS CYTOLOGY IRRADIATION RADIATION EFFECTS SKIN SWINE; CALCIUM MAN METABOLISM REACTION KINETICS STRONTIUM; ANTIBODIES MICE RADIOSENSITIVITY SPECTROSCOPY; BEHAVIOR DOGS INTESTINE LIVER RADIATION EFFECTS STOMACH TISSUES; BEHAVIOR BIOLOGY ENERGY FOOD FREE RADICALS METABOLISM REACTION KINETICS; AMINO ACIDS CHEMICAL REACTIONS COLLAGEN HYDROXIDES PROTEINS REACTION KINETICS; DNA GENETICS NUCLEIC ACIDS RIBONUCLEIC ACID STORAGE TRANSPORT; ACTIVATION ANALYSIS ISOTOPIC EXCHANGE METALS PHYSIOLOGY QUANTITATIVE ANALYSIS TRACE AMOUNTS; BEHAVIOR BIOCHEMISTRY CEMENTS HORMONES INSULIN MUSCLES PREPARATION; CARBOHYDRATES DIABETES DISEASES LABELLED COMPOUNDS METABOLISM TRACER TECHNIQUES; BEHAVIOR GLANDS HORMONES NERVOUS SYSTEM PHYSIOLOGY PROTEINS; BEHAVIOR BLOOD CIRCULATION GENETICS PRESSURE RATS SODIUM CHLORIDES; AMINO ACIDS BACTERIA CARBON 14 CONVERSION CYANIDES GLYCINE LABELLED COMPOUNDS METABOLISM TRACER TECHNIQUES; AGE ANIMAL CELLS BEHAVIOR CULTURES MITOSIS; ANIMAL CELLS DNA LIFETIME LOSSES METABOLISM MICE NUCLEIC ACIDS; AGE ANIMALS BONES LIFETIME MAINTENANCE RADIOAUTOGRAPHY; CHEMICAL REACTIONS DNA LABELLED COMPOUNDS LIFETIME MICE NUCLEIC ACIDS RADIATION EFFECTS THYMIDINE TRITIUM; FALLOUT MAN MARSHALL ISLANDS POPULATIONS RADIATION EFFECTS; BEHAVIOR BLOOD BLOOD SERUM CYTOLOGY DISEASES MAN TRANSPORT; ANIMALS BODY NEUTRON BEAMS RADIOGRAPHY TISSUES USES; CULTURES EMISSION GAMMA RADIATION INSPECTION LYMPH SYSTEM PERFORMANCE RETICULOENDOTHELIAL SYSTEM TECHNETIUM 99 USES; COMPUTERS DATA PROCESSING MEDICINE RADIATION DOSES TRACER TECHNIQUES USES; BEAMS BONES BRAIN MAN PERFORMANCE POSITRONS RADIOGRAPHY
Subject Codes (NSA): BIOLOGY AND MEDICINE; General

10/5/121 (Item 121 from file: 109)
358589 NSA-20-013011
GROWTH STATUS OF CHILDREN EXPOSED TO FALLOUT RADIATION ON MARSHALL ISLANDS
Sutow, W.W.; Conard, R.A.; Griffith, K.M.
Univ. of Texas M.D. Anderson Hospital and Tumor Inst., Houston
Pediatrics (U.S.) v 36.
Publication Date: Nov. 1965 721-31 p.
Coden: PEDIA
Secondary Report No.: BNL-8656
Note: BNL-8656
Note: 0031-4005
Journal Announcement: NSA20
Document Type: Journal Article
Language: English
Descriptors: AGE; BONES; CONTAMINATION; EXPANSION; FALLOUT; FISSION PRODUCTS; GAMMA RADIATION; ISLANDS; MAN; MARSHALL ISLANDS; METABOLISM; NUCLEAR EXPLOSIONS; PACIFIC OCEAN; POPULATIONS; RADIATION EFFECTS; RADIOISOTOPES; SEA; SEX; STRONTIUM 90; TESTING; THERMONUCLEAR REACTIONS; VARIATIONS; WEIGHT

Subject Codes (NSA): HEALTH AND SAFETY

10/5/122 (Item 122 from file: 109)
352879 NSA-20-007296
MEDICAL SURVEY OF THE PEOPLE OF RONGELAP ISLAND, ELEVEN YEARS AFTER EXPOSURE TO FALLOUT RADIATION (MARCH 1965)
Conard, R.A.; Meyer, L.M.; Sutow, W.W.; (and others)
Brookhaven National Lab., Upton, N.Y.
Publication Date: 1965 35 p.
Primary Report No.: BNL-9698
Journal Announcement: NSA20
Availability: NTIS
Document Type: Report
Language: English
Contract No.: AT(30-2)-GEN-16
Subject Codes (NSA): HEALTH AND SAFETY

10/5/123 (Item 123 from file: 109)
345687 NSA-20-000090
MEDICAL FINDINGS IN MARSHALLESE PEOPLE EXPOSED TO FALLOUT RADIATION: RESULTS FROM A TEN-YEAR STUDY
Conard, R.A.; Hicking, A.
Brookhaven National Lab., Upton, N.Y.
J. Am. Med. Assoc. v 192.
Publication Date: May 10, 1965 457-9 p.
Journal Announcement: NSA20
Document Type: Journal Article
Language: English
Descriptors: AGE; BLOOD CELLS; BONES; CONTAMINATION; DISEASES; EXPANSION; FALLOUT; FISSION PRODUCTS; GENETICS; GROWTH; LEUCOCYTES; LEUKEMIA; MALFORMATIONS; MAN; MARSHALL ISLANDS; MPD; PACIFIC OCEAN; PHYSIOLOGY; PIGMENTS; PLATELETS; POPULATIONS; QUALITATIVE ANALYSIS; QUANTITY RATIO; RADIATION DOSES; RADIATION EFFECTS; RADIOISOTOPES; REPRODUCTION; SKIN; STANDARDS; THYROID; TUMORS; URINE
Subject Codes (NSA): BIOLOGY AND MEDICINE; Radiation Effects on Tissues

10/5/124 (Item 124 from file: 109)
327408 NSA-19-029895
MEDICAL SURVEY OF THE PEOPLE OF RONGELAP AND UTIRIK ISLANDS NINE AND TEN YEARS AFTER EXPOSURE TO FALLOUT RADIATION (MARCH 1963 AND MARCH 1964)
Conard, R.A.; Meyer, L.M.; Sutow, W.W. et al
Brookhaven National Lab., Upton, N.Y.
Publication Date: May 1965 174 p.
Primary Report No.: BNL-908
Journal Announcement: NSA19
Availability: NTIS
Document Type: Report
Language: English
Contract No.: AT(30-2)-GEN-16
Descriptors: ACCIDENTS; BODY; BONE MARROW; CONTAMINATION; FALLOUT; FISSION PRODUCTS; GAMMA SOURCES; GROWTH; INHIBITION; IRRADIATION; MAN; MARSHALL ISLANDS; NUCLEAR EXPLOSIONS; PACIFIC OCEAN; POPULATIONS; RADIATION DOSES; RADIATION INJURIES; TABLES; TESTING; THYROID
Subject Codes (NSA): BIOLOGY AND MEDICINE; Radiation Effects

10/5/125 (Item 125 from file: 109)
322245 NSA-19-024720
EVALUATION OF RADIOACTIVITY IN THE MARINE ENVIRONMENT OF THE PACIFIC PROVING GROUND. Nuclear Detonations and Marine Radioactivity
Donaldson, L.R.
Univ. of Washington, Seattle
Publication Date: 1963 73-83 p.
Publ: Norwegian Defence Research Establishment
Journal Announcement: NSA19
Document Type: Book Analytic
Language: English

Descriptors: ALGAE; ANIMALS; BIKINI; CONFERENCE; CONTAMINATION; ENIWETOK; FALLOUT; FISH; FISSION PRODUCTS; INVERTEBRATES; METABOLISM; MONITORING; NORWAY; NUCLEAR EXPLOSIONS; OCEANOGRAPHY; PACIFIC OCEAN; PLANKTON; RADIOBIOLOGY; RADIOISOTOPES; SEA
Subject Codes (NSA): GEOLOGY AND MINERALOGY; Natural Radioactivity and Fallout

10/5/126 (Item 126 from file: 109)
319343 NSA-19-021817
LIFE SCIENCES
Brookhaven National Lab., Upton, N.Y.
Publication Date: nd 119-50 p.
Primary Report No.: BNL-867
Journal Announcement: NSA19
Document Type: Report Analytic
Language: English
Descriptors: ANIMAL CELLS ANIMALS BIOCHEMISTRY BLOOD DIAGNOSIS ENVIRONMENT GENETICS PHYSIOLOGY PLANTS RADIATION EFFECTS RADIATION INJURIES RADIOISOTOPES USES; MAN MEDICINE RADIATION INJURIES RADIOGRAPHY RADIOTHERAPY; ALPHA PARTICLES ANIMALS BETA PARTICLES BIOLOGY EFFICIENCY FAST NEUTRONS MAMMALS NEUTRONS PROTONS RADIATION DOSES RADIATION INJURIES RBE; MAN MEASURED VALUES QUANTITY RATIO RADIOISOTOPES; AMINO ACIDS ANIMAL CELLS CHEMICAL REACTIONS COLLAGEN NUCLEIC ACIDS PLANT CELLS PROTEINS REACTION KINETICS; AMINO ACIDS CANCER METABOLISM TISSUES TUMORS VITAMINS; BODY CARBOHYDRATES DIABETES DISEASES GLUCOSE MEDICINE OBESITY SUGARS THERAPY USES WEIGHT; AMINO ACIDS CHEMICAL REACTIONS MEMBRANES NERVOUS SYSTEM PEPTIDES REACTION KINETICS; BIOLOGY CHEMICAL REACTIONS FREE RADICALS REACTION KINETICS TISSUES; AGE AGING BONES EXPANSION GROWTH RECOVERY; ANIMAL CELLS DOGS LYMPH SYSTEM LYMPHOCYTES PHYSIOLOGY; AGE GRANULOCYTES LEUCOCYTES MAN PHYSIOLOGY; ANEMIA ANIMALS IRON QUANTITY RATIO; ANIMALS ELEMENTS METABOLISM METALS PHYSIOLOGY PLANTS TRACE AMOUNTS; ANIMALS BLOOD DISEASES GENETICS REACTION KINETICS SODIUM; FALLOUT FISSION PRODUCTS MAN MARSHALL ISLANDS NUCLEAR EXPLOSIONS PACIFIC OCEAN POPULATIONS RADIATION INJURIES TESTING
Subject Codes (NSA): BIOLOGY AND MEDICINE; Metabolism, Tissue Distribution, and Toxicology

10/5/127 (Item 127 from file: 109)
312739 NSA-19-015212
FALLOUT RADIATION: EFFECTS ON THE SKIN. $sub 4$Atomic Medicine. Fourth Edition$sub 4$
Conrad, R.A.; Cronkite, E.P.; Bond, V.P.
Publication Date: 1964 281-302 p.
Publ: Williams and Wilkins Co.
Journal Announcement: NSA19
Document Type: Book Analytic
Language: English
Descriptors: ACCIDENTS BETA DECAY FALLOUT FISSION PRODUCTS IRRADIATION MAN MARSHALL ISLANDS NUCLEAR EXPLOSIONS PACIFIC OCEAN POPULATIONS QUANTITY RATIO RADIATION INJURIES SEA SKIN TESTING; CHEMICAL REACTIONS FALLOUT FISSION PRODUCTS RADIATION SOURCES RADIATIONS; BETA DECAY FALLOUT MAN QUANTITATIVE ANALYSIS RADIATION DOSES RADIATION INJURIES RADIATION PROTECTION SAFETY SKIN
Subject Codes (NSA): BIOLOGY AND MEDICINE; Radiation Effects

10/5/128 (Item 128 from file: 109)
306901 NSA-19-009363
THE SOILS OF RONGELAP ATOLL, MARSHALL ISLANDS (thesis)
Kenady, R.M.
Washington. Univ., Seattle
Publication Date: 1962 99 p.
Primary Report No.: TID-21432
Journal Announcement: NSA19
Availability: NTIS
Document Type: Report
Language: English

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Contract No.: AT(45-1)-1385
Descriptors: ENVIRONMENT; ISLANDS; MARSHALL ISLANDS; PACIFIC OCEAN; SOILS
Subject Codes (NSA): GEOLOGY AND MINERALOGY; General

10/5/129 (Item 129 from file: 109)
306275 NSA-19-008737
CESIUM-137 AND STRONTIUM-90 RETENTION FOLLOWING AN ACUTE INGESTION OF RONGELAP FOOD
Hardy, E.P. Jr.; Rivera, J.; Conard, R.A.
New York Operations Office. Health and Safety Lab., AEC; Brookhaven National Lab., Upton, N.Y.
Publication Date: 1964 24 p.
Primary Report No.: BNL-8657
Secondary Report No.: CONF-765-7
Note: CONF-765-7
Journal Announcement: NSA19
Availability: NTIS
Document Type: Report
Language: English
Contract No.: AT-30-2-GEN-16
Descriptors: ACCIDENTS; BIOLOGY; BODY; CESIUM 137; CONTAMINATION; COUNTERS; DIET; FALLOUT; FECES; FISSION PRODUCTS; FOOD; HALF-LIFE; MAN; MARSHALL ISLANDS; MEASURED VALUES; MEDICINE; METABOLISM; PACIFIC OCEAN; PLANTS; POPULATIONS; QUANTITY RATIO; RADIOGRAPHY; RADIOISOTOPES ; SAMPLING; SEA; STRONTIUM 90; URINE; USA
Subject Codes (NSA): BIOLOGY AND MEDICINE; Metabolism, Tissue Distribution, and Toxicology

10/5/130 (Item 130 from file: 109)
297719 NSA-19-000177
FALLOUT RADIATION: EFFECTS ON THE SKIN. Atomic Medicine
Conard, R.A.; Cronkite, E.P.; Bond, V.P.
Brookhaven National Lab., Upton, N.Y.
Publication Date: 1964 259-79 p.
Publ: The Williams and Wilkins Co.
Secondary Report No.: BNL-6727
Note: BNL-6727
Journal Announcement: NSA19
Document Type: Book Analytic
Language: English
Descriptors: ACCIDENTS; CARCINOGENESIS; DISEASES; FALLOUT; IRRADIATION; MAN; MARSHALL ISLANDS; QUANTITATIVE ANALYSIS; RADIATION INJURIES; SKIN; TISSUES; VARIATIONS
Subject Codes (NSA): BIOLOGY AND MEDICINE; Radiation Effects

10/5/131 (Item 131 from file: 109)
247395 NSA-17-037371
CHEMICAL AND RADIOCHEMICAL COMPOSITION OF THE RONGELAPESE DIET
Chakravarti, D.; Held, E.E.
Univ. of Washington, Seattle
Journal of Food Science (U.S.) v 28.
Publication Date: Mar.-Apr. 1963 221-8 p.
Coden: JFDSA
Note: 0022-1147
Journal Announcement: NSA17
Document Type: Journal Article
Language: English
The gross chemical composition of the Rongelapese diet indicates that it is low in fat, protein, and ash but fairly high in carbohydrate. The variation in gross chemical composition of the diets examined may be accounted for hy the broad variability of the different diets. The habitat of the Rongelapese probably does not demand a high-energy diet, which may partially justify the lower fat intake. Levels of calcium and phosphorus seem below the minimum required for maintenance of a proper calciura-phosphorus balance. The diet seems adequate in magnesium and

potassium but slightly low in sodium. The nickel, cobalt, and copper contents seem high in the Rongelap rations, manganese content is low, and iron and zinc compare favorably with minimum daily requirements. High levels of Co/sup 60/ and Zn/sup 65/ are associated with each other and with rations containing local fish. The higher levels of Sr/sup 90/ and Cs/sup 137/ are found where local fruit was consumed. Coconut contributes little Sn/sup 90/, and pandanus the most. Rations with higher Zn/sup 65/ also contain higher levels of stable zinc, indicating that local sea foods may be the main source of zinc in the diet. Cs/sup 137/, Sr/sup 90, and Co/sup 60/ show no definite correlation with stable potassium, calcium, and cobalt, respectively. There is probably a net addition of minerals to Rongelap soils from imported foods. (Public Health Eng. Abstr., vol. 43: Sept. 1963)

Descriptors: CALCIUM; CARBOHYDRATES; CESIUM 137; COBALT; COBALT 60; COPPER; DIET; ESTERS; FISH; FRUIT; IRON; MAGNESIUM; MANGANESE; METABOLISM; MINERALS; NICKEL; PHOSPHORUS; POTASSIUM; PROTEINS; QUALITATIVE ANALYSIS; SEA; SODIUM; SOILS; STRONTIUM 90; ZINC; ZINC 65

Subject Codes (NSA): HEALTH AND SAFETY

10/5/132 (Item 132 from file: 109)

247137 NSA-17-037113

RADIOEPIDEMIOLOGY--A SEARCH FOR HUMAN STUDY MATERIAL

Shilling, C.W.

Atomic Energy Commission, Washington, D.C.

Rass. Intern. Elettron. Nucl., 7 5 Congr. Nucl., Rome v 3.

Publication Date: 1960 143-65 p.

Journal Announcement: NSA17

Document Type: Journal Article

Language: English

Since the use of human beings in research likely to be deleterious is prohibited, biomedical experiments must be carried out on various types of animals. It is interesting to note that in a recent census taken in USAEC laboratories, 319,535 fish, foul, and mammals of 25 different kinds were used. Yet in spite of the very best type of animal experimentation, there still remains the problem of translating results obtained in animals to the human, and frequently this is a big step. However, in searching for cases of human exposure to radiation, it was found that a great many radiation experiments have already been accomplished either by nature, industrial activity, medical practice, accidents or incidents of war. The use of radiation in medical practice furnished the largest number of sublects for study----x-ray irradiation on the thymus in young chridren; x-ray pelvimetry in the first trimester of pregnancy; radium salts injected intravenously for mental disease; radium salts injected intravenously for arthritis; use of thorotrast. Industry added the radium chal painters; surveillance fluoroscopy of employees; and accidents involving exposure to radiation. Accidents in testing nuclear weapons resulted in exposure of Japanese fishermen and the natives of Rongelap Atoll. Dropping atomic bombs on Hiroshima and Nagasaki exposed many Japanese. From analysis of human exposure to radiation and from the experimental animal work, it was found that the effects of ionizing radiation may vary from no measurable signs or symptoms, through acute symptoms which may eventuate in death. There also may be chronic sequelae, and there is ample evidence that radiation is a mutagenic agent. More information on the effects of radiation on human populations is needed. There must be many other experiments in other parts of the world that are available for the scientist to study. The monazite sands in India, the Yugoslav reactor accident, the radiation treatment of ankylosing spondylitis in England are examples of studies either completed or contemplated. Instigation of a human radiation exposure year is suggested. (auth)

Descriptors: DIAL PAINTERS FLUORESCENCE INDUSTRY PERSONNEL RADIOGRAPHY SAFETY; ACCIDENTS MAN PERSONNEL RADIATION INJURIES REACTORS YUGOSLAVIA; ACCIDENTS ENVIRONMENT FALLOUT HIROSHIMA ISLANDS MAN NAGASAKI NUCLEAR EXPLOSIONS PACIFIC OCEAN POPULATIONS; ENVIRONMENT INDIA MONAZITES RADIOACTIVITY SAND SOILS

Subject Codes (NSA): BIOLOGY AND MEDICINE

10/5/133 (Item 133 from file: 109)
243783 NSA-17-033757
EFFECT OF ACUTE FALLOUT RADIATION ON A MARSHALL ISLAND POPULATION
Conard, R.A.
Brookhaven National Lab., Upton, N.Y.
Publication Date: 1963 33 p.
Primary Report No.: BNL-7145; CONF-150-1
Secondary Report No.: CONF-150-1
Note: From Congress of Science on Humans, 2nd Annual Conference, New York, June 1963
Journal Announcement: NSA17
Document Type: Report
Language: English
Contract No.: AT-30-2-GEN-16
The acute and residual effects of a localized fallout exposure on the people of Rongelap Island are summarized for the 8-yr period subsequent to their accidental exposure on March 1, 1954. The accident occurred following the detonation of a high-yield nuclear device at the Pacific Proving Grounds. Twenty-three Japanese fishermen aboard the Lucky Dragon were also exposed. The 64 inhabitants of the island, located 105 nautical miles from the detonation, received an estimated dose of 175 r of whole-body gamma radiation, contamination of the skin sufficient to result in BETA burns, and slight internal absorption of radioactive materials through inhalation and ingestion. The fallout resembled a light snowfall. The exposed people were evacuated about 2 days after the accident and received extensive examinations for the following 3 mo. Annual medical surveys have revealed only minimal residual effects in the exposed population. (C.H.)
Descriptors: BETA DECAY; BODY; CONTAMINATION; ENVIRONMENT; FALLOUT; FISSION PRODUCTS; GAMMA RADIATION; INTESTINE; LUNGS; MAN; MARSHALL ISLANDS; MEDICINE; NUCLEAR EXPLOSIONS; POPULATIONS; RADIATION INJURIES; RADIATION SICKNESS; RADIOISOTOPES; SKIN
Subject Codes (NSA): BIOLOGY AND MEDICINE

10/5/134 (Item 134 from file: 109)
243613 NSA-17-033587
AN EXPLORATORY STUDY OF RADIATION DAMAGE IN THE THYROIDS OF CORAL REEF FISHES FROM THE ENIWETOK ATOLI. "Radioecology"
Gorbman, A.; James, M.S.
Columbia Univ., New York
Publication Date: 1963 385-99 p.
Publ: Reinhold Publishing Corporation; Washington, D.C., The American Institute of Biological Sciences
Journal Announcement: NSA17
Document Type: Book Analytic
Language: English
Three series of coral reef fishes, totaling 175 specimens and representing 79 species and 25 families, were collected at Eniwetok Atoll in the Marshall Islands at one-month and eight-month intervals after a nuclear explosion. Two of the series included fishes from both a near and a distant site within the atoll, relative to the explosions. Serial sections of the thyroid regions revealed varying amounts of necrotic alteration in many specimens, suggesting a thyrotoxic level of iodins-131 in the environment. Using a rough scoring system, it was possible to estimate the relative degree and extent of thyroid damage and to express it numerically for comparison with other individuals. Histopathologic changes observed are described. (C.H.)
Descriptors: CONFERENCE; CONTAMINATION; ENIWETOK; ENVIRONMENT; FALLOUT; FISH; IODINE 131; MARSHALL ISLANDS; NUCLEAR EXPLOSIONS; RADIATION INJURIES; SEA; THYROID; TISSUES; TOXICITY
Subject Codes (NSA): BIOLOGY AND MEDICINE

10/5/135 (Item 135 from file: 109)
243586 NSA-17-033560
QUALITATIVE DISTRIBUTION OF RADIONUCLIDES AT RONGELAP ATOLI. "RadioecologY"
Held, E.E.

Univ. of Washington, Seattle
Publication Date: 1963 167-9 p.
Publ: Reinhold Publishing Corporation; Washington, D.C., The American Institute of Biological Sciences
Journal Announcement: NSA17
Document Type: Book Analytic
Language: English

The qualitative distribution of radionuclides at Rongelap Atoll as determined approximately five years after contamination by fallout from a thermonuclear device indicates distinct differences between the terrestrial and marine environments. The levels of radioactivity are low, the concentrations being less than the maximum permissible concentration for radionuclides in food or drinking water of man. Of the wide spectrum of radionuclides concentrated in the surface layers of the soil, strontium-90, antimony125, and cesium-137 are the principal nuclides entering into the soil solution. The principal nuclides in the land plants and plant-eating animals such as coconut crabs and the indigenous rats are cesium-137 and, to a lesser degree, strontium-90. Bottom sediments contain mainly strontium-90 and europium-155. The radionuclides in the lagoon water have not been detected but are probably present in minute amounts. Planktonic organisms contain traces of manganese-54, cobalt-57, 60, zinc-65, zirconium95, ruthenium-106, and cerium-144. The principal nuclide found in the marine algae is cerium-144. In the marine invertebrates cobalt-60 and zinc-65 occur most commonly. Corals and coralline algae contain some strontium-90, while the fish and sea birds are found to contain mostly zinc-65. The presence of zinc-65, cesium-137, and strontium-90 in the body of the natives reflects a diet of both marine and terrestrial origin. (auth)

Descriptors: ALGAE ANIMALS BIRDS CALCIUM CARBONATES CONFERENCE CONTAMINATION CORALS CRABS DEPOSITS DIET DISTRIBUTION ENVIRONMENT FALLOUT FISH FOOD ISLANDS MAN MICROORGANISMS NUCLEAR EXPLOSIONS PACIFIC OCEAN PLANKTON PLANTS RADIOACTIVITY RATS SEA SOILS WATER; ANTIMONY 125 CERIUM 144 CESIUM 137 COBALT 57 COBALT 60 EUROPIUM 155 MANGANESE 54 RUTHENIUM 106 STRONTIUM 90 ZINC 65 ZIRCONIUM 95
Subject Codes (NSA): BIOLOGY AND MEDICINE

10/5/136 (Item 136 from file: 109)
243583 NSA-17-033557
RADIOACTIVITY OF MARINE ORGANISMS FROM GUAM, PALAU AND THE GULF OF SIAM, 1958-1959. "Radioecology"
Seymour, A.H.
Univ. of Washington, Seattle
Publication Date: 1963 151-7 p.
Publ: Reinhold Publishing Corporation; Washington, D.C., The American Institute of Biological Sciences
Journal Announcement: NSA17
Document Type: Book Analytic
Language: English

Following the Hardtack weapons test series at Bikini and Eniwetok in 1958, samples of fish, crabs, lobsters, snails, clams, algae, and plankton were collected at Guam, Palau, and in the Gulf of Siam for radiological analyses. The collecting areas were 1,200, 1,950, and 4,250 miles, respectively, west of the test site. The gross beta activity was determined for all samples and the gamma-emitting nuclides were identified in selected samples. The rate of westward transport of local fallout from the Hardtack series by the North Equatorial Current was estimated at eight miles per day between the test site and Guam and Palau. The criterion for the arrival of the fallout at the collecting area was a significant increase in the gross beta count of certain biological samples. The levels of radioactivity were considerably different for samples from the three collecting areas: the counts of samples from Guam were notably higher than those from Palau, which in turn were very much higher than those from the Gulf of Siam, which were essentially at background level for all collections. The gross beta counts of fish muscle from all areas and from all collections were constant and less than seven micromicrocuries per gram of wet weight. The samples with the highest gross beta counts were clam kidney and spider snail liver,

with maximums of 204 and 356 micromicrocuries per gram, respectively. Gross beta counts of some Guam and Palau samples prior to the arrival of the Hardtack fallout indicate the presence of radionuclides from prior test series. Gamma-emitting nuclides other than naturally occurring potassium-40 included, in order of abundance, cobalt-57, cobalt-60, manganese-54, cerium144, zinc-65, and silver-110m. The greatest value was 2,300 micromicrocuries per gram of wet weight for clam kidney (Tridacna). The occurrence of silver-110m in the liver of the spiny lobster was of special interest because it is a previously unreported fallout nuclide and so far has been detected only in spiny lobster. (auth)

Descriptors: ALGAE ANIMALS BACKGROUND BETA DETECTION CLAMS CONFERENCE CONTAMINATION CRABS ENVIRONMENT FALLOUT FISH KIDNEYS LIVER LOBSTERS MEASURED VALUES MICROORGANISMS MONITORING MUSCLES NUCLEAR EXPLOSIONS PLANKTON RADIOACTIVITY SAMPLING SNAILS; ANIMALS CERIUM 144 COBALT 57 COBALT 60 CONTAMINATION FALLOUT GAMMA DETECTION LOBSTERS MANGANESE 54 NICKEL ALLOYS PACIFIC OCEAN PALAU PALLADIUM ALLOYS PLATINUM ALLOYS POTASSIUM 40 SEA SILVER 110 VANADIUM ALLOYS ZINC 65

Subject Codes (NSA): BIOLOGY AND MEDICINE

10/5/137 (Item 137 from file: 109)
240315 NSA-17-030288

MATHEMATICAL MODELLING FOR THE MORTALITY EFFECTS OF VARIOUS RADIATION DOSAGE SCHEDULES. First Report

Iberall, A.S.

Rand Development Corp., Cleveland

Publication Date: July 1963 82 p.

Primary Report No.: TID-19010

Journal Announcement: NSA17

Document Type: Report

Language: English

Contract No.: AT(11-1)-1254

Data on the biological effects of radiation were accruod from laboratory and field animal tests, clinical therapy, radiation accidents, the accidental exposure of the Marshallese population, and the exposure of the populations of Hiroshima and Nagasaki to radiation. Symptoms and effects studied includod chromosome damage causing hereditary changes, induction of cancer, debilitating effects, and shortening of the life span. The data will be used in the preparation of a mathematical model of the effects of radiation dose rate on life span. (C.H.)

Descriptors: ACCIDENTS; AGE; ANIMALS; CARCINOGENESIS; CHROMOSOMES; CONTAMINATION; ENVIRONMENT; FALLOUT; GENETICS; HIROSHIMA; MAN; MARSHALL ISLANDS; MATHEMATICS; MEDICINE; NAGASAKI; NUCLEAR EXPLOSIONS; PHYSIOLOGY; POPULATIONS; RADIATION DOSES; RADIATION EFFECTS; RADIOBIOLOGY; SURVIVAL TIME; TESTING

Subject Codes (NSA): BIOLOGY AND MEDICINE

10/5/138 (Item 138 from file: 109)
235505 NSA-17-025473

MEDICAL SURVEY OF RONGELAP PEOPLE EIGHT YEARS AFTER EXPOSURE TO FALLOUT

Conrad, R.A.; Meyer, L.M.; Sutow, W.W.; Moloney, W.C.; Lowrey, A.; Hicking, A.; Riklon, E.

Brookhaven National Lab., Upton, N.Y.

Publication Date: Jan. 1963 76 p.

Primary Report No.: BNL-780; BNL-T-296

Secondary Report No.: BNL-T-296

Journal Announcement: NSA17

Document Type: Report

Language: English

Contract No.: AT(30-2)-GEN-16

Results are presented of a medical survey of the people of Rongelap in the Marshall Islands, carried out in March 1962 at 8 years after accidental exposure to fallout from a high yield thermonuclear device during Castle Operation in the Pacific Proving Grounds in March 1954. Sixty-four inhabitants of Rongelap, 105 nautical miles from the detonation, received an estimated dose of 175 r of whole-body radiation, contamination of the skin sufficient to result in beta burns, and slight internal absorption

of radioactive materials through inhalation and ingestion. Eighteen Rongelap people on a nearby island received an external dose of about 69 r, and 157 Marshallese on Utirik Island received an estimated dose of 14 r whole-body radiation. The fallout was not visible on this island and no skin effects developed. Findings are summarized of surveys made during the preceding 7 years. Findings are compared with those on comparison populations of Marshallese people. Data are presented from physical examinations, a cancer detection and leukemia survey, growth and development studies in children, ophthalmological examinations, studies on residual beta burns, a dental survey, studies of aging criteria, and estimation of body burden of Sr/sup 90/. Findings persisting in the exposed population include incomplete recovery of certain blood elements to levels found in the unexposed people, retardation of growth and development in some of the irradiated children, and pigmented changes at the sites of radiation burns of the sknn. (C.H.)

Descriptors: ABSORPTION; ACCIDENTS; ADSORPTION; AGE; BETA PARTICLES ; BLOOD CELLS; BODY; BONES; CANCER; CONTAMINATION; DETECTION; EYES; FALLOUT; FISSION PRODUCTS; GAMMA RADIATION; INSPECTION; IRRADIATION; LEUKEMIA; LUNGS; MAN; MEDICINE; MONITORING; NUCLEAR EXPLOSIONS; PIGMENTS; POPULATIONS; RADIATION DOSES; RADIATION INJURIES; RECOVERY; SKIN; STOMACH; VARIATIONS

Subject Codes (NSA): HEALTH AND SAFETY

10/5/139 (Item 139 from file: 109)
233615 NSA-17-023580

NUCLEAR SAFETY IN FALLOUT SITUATIONS. "Nuclear Safety. Vol. 4, No. 3"

Dunning, G.M.

Publication Date: nd 69-77 p.

Journal Announcement: NSA17

Document Type: Book Analytic

Language: English

A review is given of three fallout incidents in which countermeasures were taken. These incidents were: (1) the multimegaton shot BRAVO in Bikini Atoll, after which some islanders were evacuated; (2) the 32-kt HARRY shot at the Nevada Test Site, after which the inhabitants of St. George, Utah, were asked to remain indoors for 2 hr; and (3) the increase in I/sup 131/ in milk in Salt Jake City after the SEDAN shot, in which case the milk industry took steps to reduce the I/sup 131/ content. The reasons for each countermeasure are outlined. It is shown that the actions undertaken on the milk in Salt Lake City were in iarge measure unnecessary, as the Federation Radiation Council figures prompting the actions are very conservative and were to serve only as guides. (D.L.C.)

Descriptors: ACCIDENTS; BIKINI; FALLOUT; IODINE 131; MEASURED VALUES; MILK; NEVADA TEST SITE; NUCLEAR EXPLOSIONS; POPULATIONS; PROJECT SEDAN; RADIATION PROTECTION; RADIOACTIVITY; SAFETY; STANDARDS; UNDERGROUND EXPLOSIONS

Subject Codes (NSA): HEALTH AND SAFETY

10/5/140 (Item 140 from file: 109)
233261 NSA-17-023225

RADIATION INJURIES BY NUCLEAR WEAPONS

Pace, F.C.; Waters, W.R.

Dept. of National Health and Welfare, Ottawa

Med. Serv. J. (Can.) v 17.

Publication Date: July-Aug. 1961 437-47 p.

Journal Announcement: NSA17

Document Type: Journal Article

Language: English

Various types of injury of humans from thermonuclear detonations are discussed, including those resulting from blast, heat, and radiation. The characteristics of early fallout are described, and the symptoms, pathology, and treatment of the acute radiation syndrome occurring in response to exposure to fallout are outlined and discussed. Skin injuries from fallout are considered, especially with reference in the Marshall Islanders and Japanese fishermen exposed in 1954. The internal radiation hazard, resulting from inhalation or ingestion of fission products, is

discussed. It was concluded that in no situation in nuclear warfare would it be possible to inhale enough fallout material to injure the respiratory or gastrointestinal tracts. On physical grounds, the acute hazards offered by BETA and gamma emanation to skin and to the organism as a whole are at least 1000 times greater than the inhalation hazards. On physioiogical grounds (the defense mechanisms of the respiratory tract) there is an additional protective factor of 10; the particles of the early fallout are too large to reach the pulmonary alveoli. The probability of internal contamination by the respiratory route appears to be remote, and can be ignored in the early period after attack. (H.H.D.)

Descriptors: BETA DECAY; BODY; CONTAMINATION; FALLOUT; FISH; FISSION PRODUCTS; GAMMA RADIATION; INTESTINE; JAPAN; LUNGS; MAN; MARSHALL ISLANDS; MEDICINE; NUCLEAR EXPLOSIONS; POPULATIONS; QUANTITY RATIO; RADIATION INJURIES; RADIATION PROTECTION; SHOCK WAVES; SKIN; THERMAL RADIATION; THERMONUCLEAR REACTIONS

Subject Codes (NSA): BIOLOGY AND MEDICINE

10/5/141 (Item 141 from file: 109)
224131 NSA-17-014086

RESPONSE OF MAMMALIAN SYSTEMS TO NONUNIFORM SPACE RADIATION DOSE. Lectures in Aerospace Medicine, Jan. 8-12, 1962

Sondhaus, C.A.

Publication Date: nd 211-40 p.

Journal Announcement: NSA17

Document Type: Book Analytic

Language: English

Discussion is given on the spatial distribution of radiation as well as its nature and energy throughout the body tissues during space flight, in particular, the geometrical aspect of tissue dose and non-uniform pattern of dose deposition, and its effect on response. A brief summary is given of conclusions derived from the accidental exposure of human being to fallout radiation on March 1, 1954, in the Marshall Islands. (P.C.H.)

Descriptors: ABSORPTION; BODY; DISTRIBUTION; ENERGY; ENVIRONMENT; FALLOUT; MAN; MARSHALL ISLANDS; RADIATION DOSES; RADIATION EFFECTS; RADIATIONS; SPACE FLIGHT; TISSUES

Subject Codes (NSA): BIOLOGY AND MEDICINE

10/5/142 (Item 142 from file: 109)
222515 NSA-17-012467

TRAVEL TIMES TO AUSTRALIAN STATION FROM PACIFIC NUCLEAR EXPLOSIONS IN 1958

Doyle, H.A.; Webb. J.P.

Australian National Univ., Canberra

Journal of Geophysical Research (U.S.) v 68.

Publication Date: Feb. 15, 1963 1115-20 p.

Coden: JGREA

Note: 0022-1406

Journal Announcement: NSA17

Document Type: Journal Article

Language: English

Travel times from the 1958 series of nuclear expolsions near Bikini and Eniwetok islands to Australian seismic stations are studied. For stations at distances between 25 deg and 63 deg the mean residuai for P from the Jeffreys-Bullen times for a surface focus is -1.6 plus or minus 0.7 sec, agreeing with traveltime determinations to other continents. Times to Rabaul (19 deg and 21 deg) strongly suggest a sharp bend in the P curve near 17 , corresponding to the ''20 deg discontinuity.'' There is aiso a possible bend near 25 deg to 26, but this wouid be less marked. Data are given. (auth)

Descriptors: DEFORMATION; NUCLEAR EXPLOSIONS; QUANTITATIVE ANALYSIS; SEISMOLOGY; SHOCK WAVES; VELOCITY

Subject Codes (NSA): GEOLOGY, MINERALOGY, AND METEOROLOGY

5003b23

10/5/143 (Item 143 from file: 109)
217959 NSA-17-007906

PATHOGENESIS AND REGENERATION OF RADIATION INDUCED BONE MARROW INJURY,

AND THERAPEUTIC IMPLICATIONS
Fliedner, T.M.; Cronkite, E.P.; Bond, V.P.
Brookhaven National Lab., Upton, N.Y.
Publication Date: 1962 34 p.
Primary Report No.: BNL-6018
Journal Announcement: NSA17
Document Type: Report
Language: English
Contract No.: AT-30-2-GEN-16

The hematological data of patients of 4 radiation accidents, Rongelap 1954, Oak Ridge 1958, Vinca 1958, and Lockport 1960, are reviewed and compared. The blood cell curves appear to show three phases. An initial phase at about 8 to 10 days, a phase of transient or abortive regenerations, and a phase of final effective recovery were demonstrated. These phases in the blood are preceded and caused by particular events in the bone marrow. Evidence was brought forward that transient rises in leukocytes and reticulocytes associated with a delayed platelet disappearance curve are associated with a marrow capable of spontaneous recovery. In patients with inhomogenous total--body irradiation, the transient rise may iead directly to effective recovery. Immediate decline of all blood cell elements without evidence of further, even abortive attempts of marrow regeneration must be considered as evidence for a iethal bone marrow dose and extremeiy serious complications may be expected. The clinical implications of these analyses are outlined and the diagnostic possibilities described. (auth)

Descriptors: ACCIDENTS; BLOOD CELLS; BLOOD FORMATION; BONE MARROW; DIAGNOSIS; LETHAL DOSE; LEUCOCYTES; MAN; MEDICINE; PERSONNEL; PLATELETS; QUANTITY RATIO; RADIATION INJURIES; RECOVERY; REGENERATION
Subject Codes (NSA): BIOLOGY AND MEDICINE

10/5/144 (Item 144 from file: 109)
216404 NSA-17-006350
STATEMENT ON THE HAZARDS OF RADIOACTIVE FALLOUT
Farr, L.E.
Pediatrics (U.S.) v 29.
Publication Date: May 1962 845-7 p.
Coden: PEDIA
Note: 0031-4005
Journal Announcement: NSA17
Document Type: Journal Article
Language: English

In a meeting on January 22 and 23, 1962 the Committee on Environmental Hazards considered the problems posed for pediatricians by fallout by radioactive materials on the United States. It reviewed data on the duration, amounts, and hazards of radioactive I/sup 131/ and Sr/sup 90/ in fallout, data and reports of new processes for removal of Sr/sup 90/ from milk, as well as reports on long-term studies of Japanese survivors of Hiroshima and Nagasaki and people of the Marshall Islands who were exposed to fallout from nuclear weapons testing. It concluded that the present Sr/sup 90/ content of milk is less than that which is capable of inducing recognizable deleterious effects in infant, child, or adult during average lifetimes. Laboratory methods for the removal of Sr/sup 90/ from milk are now being tested, and if it becomes necessary, these can probably be developed through pilot stages to commercially applicable procedures. About 80% of Sr/sup 90/ ingested will be immediately excreted so that the body burden increases more slowly than does the environmental contamination. The cow thus eliminates 80% of environmental Sr from its milk. The present level of I/sup 131/ in foods, liquids, and atmosphere is also well below the levels at which alerting of the population is required by governmental standards, which are very conservative. Blocking doses of stable I are not at this time necessary. Prophylactic administration of carrier I as a blocking agent presents the probability of developing iodism in large numbers of children by well-intentioned but uniformed practitioners. Should I/sup 131/ or Sr/sup 90/ in the environmental significantly increase, those agencies charged with protection of the population will inform these groups responsible for the development of appropriate recommendations and

procedures. (H.H.D.)
Descriptors: ADSORPTION; AGE; ATMOSPHERE; BIBLIOGRAPHY; BODY; CATTLE; CONTAMINATION; DECONTAMINATION; ENVIRONMENT; EXCRETION; FALLOUT; FOOD; HIROSHIMA; INGESTION; IODINE 131; LIQUIDS; MAN; MARSHALL ISLANDS; MEDICINE; MILK; MONITORING; NAGASAKI; NUCLEAR EXPLOSIONS; POPULATIONS; QUANTITY RATIO; RADIATION DOSES; RADIATION EFFECTS; RADIATION PROTECTION; REVIEW; SAFETY; STANDARDS; STOMACH; STRONTIUM 90; TOXICITY; URINE
Subject Codes (NSA): HEALTH AND SAFETY

10/5/145 (Item 145 from file: 109)
215753 NSA-17-005699
METABOLISM OF FISSION PRODUCTS IN MAN: MARSHALLESE EXPERIENCE
Cohn, S.H.
Brookhaven National Lab., Upton, N.Y.
Publication Date: 1962 27 p.
Primary Report No.: BNL-6503
Journal Announcement: NSA17
Document Type: Report
Language: English
Contract No.: AT(30-2)-GEN-16
The medical study of the Marshallese accidentally exposed to local fallout in 1954 is unique in that, along with the study of the Japanese fishermen, it provides the only data existing on the metabolism of mixed fission products in a human population. Early diagnosis of the internal radioactive contamination was made by radiochemical analysis of the excreta of the exposed people and by radiochemical analysis of the tissues and excreta of animals simultaneously exposed. Initially, Sr/sup 89/, Ba/sup 140/, I/sup 131/ and its shorter-lived daughters and a number of rare-earth elements contributed the major portion of the internal radiation dose. After a year, the principal radioisotopes were Sr/sup 90/, Cs/sup 137/, and Zn/sup 65/. Subsequently these radionuclides and, more recently, Co/sup 60/ as well, have been measured periodically. Since 1958 the gamma spectra of a number of Marshallese have been obtained with a whole-body counter. The findings of these studies for the past eight years are discussed. The results of an early attempt to alter the rate of removal of the mixed fission products in the Marshallese with Ca-disodium EDTA are presented. The metabolism of the radionuclides and their relationship to levels present in the environment is also discussed. (auth)
Descriptors: ACCIDENTS ANIMALS BODY CONTAMINATION DECONTAMINATION DIAGNOSIS EDTA ENVIRONMENT FALLOUT FISSION PRODUCTS GAMMA SPECTROMETERS MAN MARSHALL ISLANDS METABOLISM POPULATIONS RADIATION DETECTORS RADIOCHEMISTRY TISSUES URINE; BARIUM 140 CESIUM 137 COBALT 60 ENVIRONMENT FALLOUT FISSION PRODUCTS IODINE 131 MAN MARSHALL ISLANDS MEASURED VALUES METABOLISM POPULATIONS QUANTITY RATIO STRONTIUM 89 STRONTIUM 90 ZINC 65
Subject Codes (NSA): BIOLOGY AND MEDICINE

10/5/146 (Item 146 from file: 109)
215150 NSA-17-005096
ANOMALOUS U$sup 234$ U$sup 238$ IN NATURE
Thurber, D.L.
Columbia Univ., Palisades, N.Y.
Journal of Geophysical Research (U.S.) v 67.
Publication Date: Oct. 1962 4518-20 p.
Coden: JGREA
Note: 0022-1406
Journal Announcement: NSA17
Document Type: Journal Article
Language: English
Recently, several workers, reported radioactive disequilibrium in nature between U/sup 234/ and its parent U/sup 238/. This anomaly may be used as a geochemical tool in the study of the behavior of U in rocks, soils, and natural waters. Samples of unraninite and Mississippian limestone in which U/sup 234/ was expected to be in equilibrium with U/sup 238/ were analyzed. Preliminary values for the oceans are given. Several samples from Eniwetok and Lake Bonneville were analyzed. (W.D.M.)

Descriptors: GEOLOGY; RADIOACTIVITY; ROCKS; SEA; SOILS; URANINITES ; URANIUM 234; URANIUM 238; WATER
Subject Codes (NSA): PHYSICS

10/5/147 (Item 147 from file: 109)
214772 NSA-17-004718
NATURAL VARIATIONS IN THE RATIO OF U$sup 234$ TO U$sup 23$$sup 8$
Thurber, D.L.
Columbia Univ., Palisades, N.Y. Lamont Geological Observatory
Publication Date: nd 11 p.
Note: IAEA Preprint SM-33/12; TID-17377f For presentation at the IAEA Symposium on Radioactive Dating, held at Athens, Greece, November 19-23, 1962
Journal Announcement: NSA17
Document Type: Book
Language: English
For presentati on at the IAEA Symposium on Radioactive Dating, held at Athens, Greece, November 19-23, 1962. Although U/sup 234/ has a good half life (250,000 years) for Pleistocene dating, it was previously ignored because no reasonable mechanism for separation from its parent, U/sup 238/ seemed to exist. The report of enrichment of U/sup 234/ in ground waters and secondary minerals by several Russian workers suggests that this possible chronometer be seriously considered. Using alpha spectrometry the U/sup 234//U/sup 238/ activity ratios of carbonate deposits from two glacial lake basins and a few selected marine samples were measured. Modern ocean water has an A/sup U/sup 234//A/sup U/sup 238/ ratio of 1.15 based on four samples from the Pacific and Atlantic. Since the experimental error on these measurements is about two per cent, the residual anomaly should be detectable in samples up to one million years old, providing a dating method through a period of time not heretofore covered by physical means. Unrecrystalized coral from an Eniwetok drill hole gave ages based on U/sup 234/U/sup 238/ ratios in agreement with other methods. The oldest sample, dated as Miocene by paleontologists, was in radioactive equilibrium. Thus the method appears valid in at least one case. Six samples from the Lake Lahontan basin have a U/sup 234//sup 238/ ratio of about 1.5, and six from Lake Bonneville have values of about 2.0. This anomaly should be detectable in samples less than 1.5 million years old. Although the available data on these two glacial lake basins suggest some variations in the ratio with different lake levels owing to changing drainage patterns, the system does not appear complicated. It appears therefore that the anomalous A/sup U/sup 234//A/sup U/sup 238/ ratios in integrating basins such as the ocean, and playa lakes, provide a very promising geologic dating method for the period from 100,000 years to 1,000,000 years in both continental and marine systems. (auth)
Descriptors: AGE ESTIMATION; ALPHA SPECTROMETERS; CARBONATES; DEPOSITS; DISTRIBUTION; ENRICHMENT; ERRORS; GEOLOGY; GROUND WATER; HALF-LIFE; MEASURED VALUES; MINERALS; QUANTITY RATIO; SEA; URANIUM 234 ; URANIUM 238; VARIATIONS; WATER
Subject Codes (NSA): GEOLOGY, MINERALOGY, AND METEOROLOGY

10/5/148 (Item 148 from file: 109)
213260 NSA-17-003202
USE OF A PORTABLE WHOLE-BODY COUNTER TO MEASURE INTERNAL CONTAMINATION IN A FALLOUT-EXPOSED POPULATION
Cohn, S.H.; Conard, R.A.; Gusmano, E.A.; Robertson, J.S.
Brookhaven National Lab., Upton, N.Y.
Publication Date: 1961 25 p.
Primary Report No.: BNL-5974
Journal Announcement: NSA17
Document Type: Report
Language: English
The Marshallese people of Rongelap Atoll, who were accidentally exposed to fallout in 1954, were the subject of a large scale survey for evaluating radionuclide body burdens in 1961. Experience is described in the use of a portable whole-body gamma counter, with details on measurements made, methods used, and automatic data-handling technlques developed for

recording and analyzing the survey data. (R.J.S.)
Descriptors: ADSORPTION; BODY; CONTAMINATION; COUNTERS; FALLOUT; FISSION PRODUCTS; GAMMA RADIATION; MAN; MEASURED VALUES; MONITORING; PERFORMANCE; PLANNING; POPULATIONS; RECORDING SYSTEMS
Subject Codes (NSA): HEALTH AND SAFETY

10/5/149 (Item 149 from file: 109)
212951 NSA-17-002893
RADIOCESIUM IN PLANTS GROWN ON RONGELAP ATOLL SOILS. "Recent Advances in Botany"
Walker, R.B.; Held, E.E.; Gessel, S.P.
Univ. of Washington, Seattle
Publication Date: 1961 1363-7 p.
Publ: University of Toronto Press
Journal Announcement: NSA17
Document Type: Book Analytic
Language: English
Tomato and squash plants were grown in greenhouse pot cultures using soil from Rongelap Atoll, which received faliout contamination in 1954. The treatments involved various combinations of N, P, and K. All fertilizer treatments markedly reduced the content of Cs-137 in the tissue. Also reported are the results of a field experiment on Rongelap Island in which fertilization with KCl at least temporarily reduced the content of Cs-137 in a native grass. Potassium and Cs-137 contents of foliar samples of several woody species collected on Rongelap Island are also included. In the most common pattern, K and Cs-137 contents of the upper foilage were higher than those of the lower leaves, but one species consistently showed higher K but lower Cs-137 in the upper foilage. Low K status of the soil and differences in mobility within the plant may explain these patterns. (auth)
Descriptors: CESIUM 137; CONTAMINATION; FALLOUT; FERTILIZERS; ISLANDS; LEAVES; NITROGEN; PACIFIC OCEAN; PHOSPHORUS; PLANTS; POTASSIUM CHLORIDES; QUANTITY RATIO; SOILS
Subject Codes (NSA): BIOLOGY AND MEDICINE

10/5/150 (Item 150 from file: 109)
197835 NSA-16-021901
MEDICAL SURVEY OF RONGELAP PEOPLE SEVEN YEARS AFTER EXPOSURE TO FALLOUT
Conard, R.A.; MacDonald, H.E.; Meyer, L.M.; Cohn, S.; Sutow, W.W.; Karnofsky, D.; Jaffe, A.A.; Riklon, E.
Brookhaven National Lab., Upton, N.Y.
Publication Date: May 1962 93 p.
Primary Report No.: BNL-727
Journal Announcement: NSA16
Document Type: Report
Language: English
Contract No.: AT(30-2)-GEN-16
Results of a medical survey of the people of Rongelap in the Marshall Islands, carried out in March 1961, 7 years after the accident, are presented. A total of 267 people was examined, most of them on Rongelap Island and some at Kwajalein and Majuro Atolls. Physical examinations showed no acute illnesses present nor any diseases which could be directly associated with radiation effects. However, lt was noted that several of the older people, particularly in the exposed group, were becoming quite feeble and helpless. Residual skin changes in areas previously showing lesions from fall-out were present with certainty in about 10 people. Dental examinations revealed no differences between the exposed and unexposed group. Examinations for the detection of such late effects of radiation as cancer and leukemia revealed no evidence of malignancies in any of the people, exposed or unexposed. Results of growth and development in children and hematological studies are also given. (P.C.H.)
Descriptors: ACCIDENTS; AGE; BLOOD; CANCER; ENVIRONMENT; FALLOUT; LEUKEMIA; MAN; MARSHALL ISLANDS; MEDICINE; POPULATIONS; RADIATION EFFECTS; SKIN
Subject Codes (NSA): BIOLOGY AND MEDICINE

10/5/151 (Item 151 from file: 109)
188888 NSA-16-012934
RECOVERY OF THE LAND PLANTS AT ENIWETOK ATOLL FOLLOWING A NUCLEAR DETONATION
Palumbo, R.F.
Univ. of Washington, Seattle
Radiation Botany v 1.
Publication Date: Jan. 1962 182-9 p.
Journal Announcement: NSA16
Document Type: Journal Article
Language: English
S>A long-term investigation was conducted at Eniwetok Atoll during 1954-57 to determine the rate of recovery of land plants damaged by the radiation, shock, and heat blast of the Nectar detonation in 1954. At Belle Island seven plant species were tagged, measured, and photographed before the detonation. At approximately monthly intervals after the detonation for a period of ten months, and again after an interval of six months, the plants were observed and photographed. The first indication of recovery was observed on the eighth day, at which time buds were noticeable on stems of Scaevola and Messerschmidia plants. In a month's time, most of the plants had formed new leaves and some had produced flowers and fruits. In six months, the general condition of the vegetation was similar to that which existed before the detonation. Two plants, Guettarda and Portulaca, which were unhealthy at ten months, had improved by the sixteenth month. Photographs of the recovery of some of the plants are included, as well as a discussion of agents other than radiation which have been reported to cause similar damage to plants of the coral atolls of the Pacifie Ocean. (auth)
Descriptors: ATOMIC EXPLOSIONS; FRUIT; LEAVES; NUCLEAR EXPLOSIONS; PHOTOGRAPHY; PLANTS; RADIATION INJURIES; RECOVERY
Subject Codes (NSA): BIOLOGY AND MEDICINE

10/5/152 (Item 152 from file: 109)
188763 NSA-16-012809
U.S. NAVY STRUCTURES. ANNEX 3.2 OF SCIENTIFIC DIRECTOR'S REPORT OF ATOMIC WEAPON TESTS AT ENIWETOK, 1951
Hayen, C.L.
Bureau of Yards and Docks
Publication Date: June 1952 303 p.
Primary Report No.: WT-91
Note: Operation GREENHOUSE
Journal Announcement: NSA16
Document Type: Report
Language: English
Structures are subjected to a 50-kt blast, in order to obtain fundamental data on structures subjected to blast loading, to observe the response of the structures under this loading, and to determine the relative blast-resistance merits of several structural types. Modes of failure are determined. Shaped structures are found to be superdor to rectangular structures. Earth cover for the structures is also found to increase the blast resistance. It is found that standard Navy heavy bomb-proof structures with modifications can withstand a near-surface atomic burst at ground zero. (T.F.H.)
Descriptors: CONFIGURATION; EARTH; FAILURES; NUCLEAR EXPLOSIONS; QUANTITATIVE ANALYSIS; REACTOR FUELING; SHOCK WAVES; SURFACES
Subject Codes (NSA): GENERAL AND MISCELLANEOUS

10/5/153 (Item 153 from file: 109)
188762 NSA-16-012808
U.S. ARMY STRUCTURES. APPENDIX 2. AS-BUILT CONSTRUCTION. ANNEX 3.1 OF SCIENTIFIC DIRECTOR'S REPORT OF ATOMIC WEAPON TESTS AT ENIWETOK, 1951
Ammann and Whitney, New York
Publication Date: Nov. 1951 143 p.
Primary Report No.: WT-60(REF)Pt.III
Note: Operation GREENHOUSE
Journal Announcement: NSA16

Document Type: Report
Language: English
Subject Codes (NSA): GENERAL AND MISCELLANEOUS

10/5/154 (Item 154 from file: 109)
188761 NSA-16-012807
U.S. ARMY STRUCTURES. APPENDIX 2. AS-BUILT CONSTRUCTION. ANNEX 3.1 OF SCIENTIFIC DIRECTOR'S REPORT OF ATOMIC WEAPON TESTS AT ENIWETOK, 1951
Ammann and Whitney, New York
Publication Date: Nov. 1951 115 p.
Primary Report No.: WT-60(REF)Pt.II
Note: Operation GREENHOUSE
Journal Announcement: NSA16
Document Type: Report
Language: English
No abstract.<><DSN>16:012808<ABS>No abstract.
Descriptors: NUCLEAR EXPLOSIONS; TESTING
Subject Codes (NSA): GENERAL AND MISCELLANEOUS

10/5/155 (Item 155 from file: 109)
188760 NSA-16-012806
U.S. ARMY STRUCTURES. APPENDIX 2. AS-BUILT CONSTRUCTION. ANNEX 3.1 OF SCIENTIFIC DIRECTOR'S REPORT OF ATOMIC WEAPON TESTS AT ENIWETOK, 1951
Ammann and Whitney, New York
Publication Date: Nov. 1951 168 p.
Primary Report No.: WT-60(REF)Pt.I
Note: Operation GREENHOUSE
Journal Announcement: NSA16
Document Type: Report
Language: English
Construction drawings and specifications for Greenhouse Operation test structures, along with major as-built deviations from these specifications, are listed. (T.E.H)
Descriptors: CONFIGURATION; NUCLEAR EXPLOSIONS; TESTING
Subject Codes (NSA): GENERAL AND MISCELLANEOUS

10/5/156 (Item 156 from file: 109)
188759 NSA-16-012805
JAPTAN ISLAND DEVELOPMENT AND ANIMAL PRODUCTION. Annex 2.1 of SCIENTIFIC DIRECTOR'S REPORT OF ATOMIC WEAPON TESTS AT ENIWETOK, 1951. Part I. FACILITIES. Part II. ANIMAL COLONY
Leroy, G.V.; Veenstra, R.J.
Army Veterinary Corps
Publication Date: nd 43 p.
Primary Report No.: WT-2
Note: Operation GREENHOUSE
Journal Announcement: NSA16
Document Type: Report
Language: English
Since rats, goats, and pigs used in the Bikini test showed almost as much change in behavior and blood picture due to environmental changes as from the actual test itself, it was decided to establish colonies of mice, dogs, and swine on Japtan lsland in preparation for Operation Greenhouse. The animal quarters, special handling equipment, laboratory, shop, and living quarters for personnel are described. Procedures which were used in breeding, cleaning and sterilizing of equipment, record keeping, marking of animals, feeding, veterinary care, and shipping are given. A history of the entire program is included. (auth)
Descriptors: ANIMALS; BLOOD; BREEDING; CLEANING; DOGS; ENVIRONMENT ; FOOD; GOATS; MICE; NUCLEAR EXPLOSIONS; PERSONNEL; PIGS; RATS; SHIPS; STERILIZATION; SWINE; TRANSPORT
Subject Codes (NSA): GENERAL AND MISCELLANEOUS

10/5/157 (Item 157 from file: 109)
187318 NSA-16-011362
5003629
U.S. ARMY STRUCTURES. APPENDIX 3. MATERIALS TESTS. ANNEX 3.1 OF

SCIENTIFIC DIRECTOR'S REPORT OF ATOMIC WEAPON TESTS AT ENIWETOK, 1951
Ammann and Whitney, New York
Publication Date: Aug. 1951 82 p.
Primary Report No.: WT-75(REF)
Note: Operation GREENHOUSE
Journal Announcement: NSA16
Document Type: Report
Language: English
The testing program was designed to supply information on the strength of the precast and poured-in-place concrete, the reinforcing steel, and the structural steel. Most of the materials were subjected to a number of independent tests and the values used in the post-test analysis were based on the results thereof. Data from these tests are presented in the report. (C.H.)
Descriptors: CONCRETES; MATERIALS TESTING; NUCLEAR EXPLOSIONS; PLANNING; STEELS; TESTING
Subject Codes (NSA): GENERAL AND MISCELLANEOUS

10/5/158 (Item 158 from file: 109)
187317 NSA-16-011361
ATMOSPHERIC CONDUCTIVITY. ANNEX 4.6 OF SCIENTIFIC DIRECTOR'S REPORT OF ATOMIC WEAPON TESTS AT ENIWETOK, 1951
Coroniti, S.C.; Wait, G.R.; Parziale, A.J.
Air Force Cambridge Research Center, Mass.
Publication Date: Sept. 1951 90 p.
Primary Report No.: WT-71
Note: Operation GREENHOUSE
Journal Announcement: NSA16
Document Type: Report
Language: English
Aerial surveys were made during Greenhouse Operation to obtain information on the disposition of radioactive matter in an atomic cloud, on the physical and electrical characteristics of particles composing the cloud, an overall movement of an atomic cloud, on the efficiency of mechanical filters for the collection of radioactive material composing an atomic cloud, the magnitude of fall-out and its relation to the direction and velocity of the wind, and on the radioactive decay of fall-out material on adjacent islands. Data are presented and results are discussed. (C.H.)
Descriptors: AEROSOLS; ATMOSPHERE; ATOMIC CLOUDS; DECAY; EFFICIENCY ; ELECTRIC CONDUCTIVITY; FALLOUT; FILTERS; MOTION; PARTICLES; RADIOACTIVITY; VELOCITY; WIND
Subject Codes (NSA): GENERAL AND MISCELLANEOUS

10/5/159 (Item 159 from file: 109)
187316 NSA-16-011360
U.S. ARMY STRUCTURES. APPENDIX 2. AS-BUILT CONSTRUCTION. ANNEX 3.1 OF SCIENTIFIC DIRECTOR'S REPORT OF ATOMIC WEAPON TESTS AT ENIWETOK, 1951
Ammann and Whitney, New York
Publication Date: Nov. 1951 115 p.
Primary Report No.: WT-60(Ref.)(Pt.IV)
Note: Operation GREENHOUSE
Journal Announcement: NSA16
Document Type: Report
Language: English
Drawings of U. S. Army structures and components are presented. These structures were tested during Greenhouse operation for the effects of blast. (C.H.)
Descriptors: CONFIGURATION; NUCLEAR EXPLOSIONS; PERSONNEL; PROJECT GREENHOUSE; TESTING
Subject Codes (NSA): GENERAL AND MISCELLANEOUS

10/5/160 (Item 160 from file: 109)
187315 NSA-16-011359
U.S. AIR FORCE STRUCTURES. APPENDIX E. BLAST LOADING AND STRUCTURAL RESPONSE. SECTION 1. GENERAL BLAST LOADING AND RESPONSE. ANNEX 3.3 of SCIENTIFIC DIRECTOR'S REPORT OF ATOMIC WEAPON TESTS AT ENIWETOK, 1951

was five days. The influence of intermixing of fission products from different tests on the measurements is discussed. The Freidburg measuremerts showed that the products of the hydrogen bomb tests in the Marshall Islands reached West Garmany after a travel time of 10 to 20 days. In general the systematic use of the decay law did not yield discrete explosion times but only quite indistinct distribution curves which indicate approxixam mately the true explosion dates. The effects of meteorological conditions of both the troposphere and the stratosphere on the transport, exchange, and deposition of fission products is discussed. (C.H.)

Descriptors: ATMOSPHERE; DECAY; DISTRIBUTION; FALLOUT; FISSION PRODUCTS ; MEASURED VALUES; METEOROLOGY; NEVADA; NUCLEAR EXPLOSIONS; RADIOACTIVITY; RAIN; TRANSLATIONS; TRANSPORT; WATER

Subject Codes (NSA): HEALTH AND SAFETY

10/5/226 (Item 226 from file: 109)
095447 NSA-13-002078

ON THE SEISMOLOGICAL ASPECTS OF THE 1954 HYDROGEN BOMB EXPLOSIONS

Burke-Gaffney, T.N.; Bullen, K.E.

Riverview Coll. Observatory, Australia; Univ. of Sydney

Australian J. Phys. v 2.

Publication Date: (1958) Sept. 318-21 p.

Journal Announcement: NSA13

Document Type: Journal Article

Language: English

Tentative conclusions previously drawn from an analysis of seismic readings of four 1954 hydrogen bomb explosions are re-examined in the light of source data subsequently released on these explosions. The released data show that earlier computed origin-times for the four explosions were correct within 0.0, 0.4, 0.7, and 0.1 sec, respectively. The re-examination shows that the J.B. P tables need a correction of -2.2 plus or minus 1.0 sec for surface epicenters in the mid Pacific and recordings at continental stations. It is confirmed that any difference between the P travel-times from Bikini to Australia and Bikini to the United States is not much more than 1/2 sec. Previous inferences on the velocities of air waves from the explosions remain undisturbed. The re-exaanination confirms the occurrence of diffracted PKP waves in front of the 142 caustic, and confirms that these diffracted waves arrive at times significantly earlier than PKIKP waves. (auth)

Descriptors: AIR; EARTH; ERRORS; HYDROGEN; NUCLEAR EXPLOSIONS; OSCILLATIONS; SEISMOLOGY; SURFACES; THERMONUCLEAR REACTIONS; VELOCITY

Subject Codes (NSA): CONTROLLED THERMONUCLEAR PROCESSES

10/5/227 (Item 227 from file: 109)
094095 NSA-13-000725

RADIOACTIVITY OF INVERTEBRATES AND OTHER ORGANISMS AT ENIWETOK ATOLL DURING 1954-55

Bonham, K.

Washington. Univ., Seattle. Applied Fisheries Lab.

Publication Date: Jan. 6, 1958 55 p.

Primary Report No.: UWFL-53

Journal Announcement: NSA13

Availability: NTIS

Document Type: Report

Language: English

Contract No.: AT(45-1)-540

The trend in beta radioactivity as measured with methane flow counters over a period of about two years is shown, starting with the 1954 Castle series of nuclear detonations, up to but not including the series of 1956. The resuhts are presented as graphs each showing the logarithm of the radioactivity of an organism or of a particular tissue of an organism, related to the logarith of the time after the date of detonation, when nearly all of the radioactivity was assumed to have originated. Invertebrates are considered in greatest detail, and other organisms and materials are included for comparison: island soil, beach sand, sea water, plankton, algae, land plants, reef fish, birds, and rats. It is proposed

for most organisms studied that after a period varying with the organism up to two to four weeks folhowing detonation, a maximum level of radioactivity in the field samples collected is attained, followed by a decline approaching linearity on log-log plots with slope; over the major portion of the two-year period that can be represented as the negative exponent of the time after detonation. These decline slopes varied greatly with different localities and organisms, reaching a maximum of > 3. A few decay rates of individual samples of each organism or material are included for comparison, and these generally were equal to, or less steep than, the declines, suggesting that for some organisms or tissues, the level of radioactivity in the environment decreases more rapidly than can be accounted for solely by physical decay while for others the rate of decline can be accounted for solely by the rate of physical decay. Dilution by natural water currents and rain is presumed to account for the many cases of more rapid decline than decay. (See also UFFL-42.)
Descriptors: ABSORPTION; ALGAE; ANIMALS; BETA PARTICLES; BIRDS; BODY; DECAY; DIAGRAMS; ENVIRONMENT; FISH; METHANE; NUCLEAR EXPLOSIONS; PLANTS; PROPORTIONAL COUNTERS; RADIOACTIVITY; RAIN; SAND; SOILS; TISSUES; WATER
Subject Codes (NSA): HEALTH AND SAFETY

10/5/228 (Item 228 from file: 109)
091494 NSA-12-016077
SEISMIC SURFACE WAVES AT PALISADES FROM EXPLOSIONS IN NEVADA AND THE MARSHALL ISLANDS
Oliver, K.; Ewing, M.
Columbia Univ., New York
Proc. Natl. Acad. Sci. U.S. v 44.
Publication Date: (1958) Aug. 780-5 p.
Journal Announcement: NSA12
Document Type: Journal Article
Language: English
Surface waves from large nuclear explosions in the Marshall Inlands were detected at Palisades, New York, at a distance of about 105 deg and presumably may be detected by long-period seismographs throughout the world. Surface waves from nuclear explosions in Nevada were detected at Palisades at a distance of about 33 deg and presumably could be detected throughout most of North America. No information is available on these waves for oceanic paths. Signals from both sites consist entirely of dispersed Rayleigh wave trains. The dispersive pattern may be explained by using dispersion curves developed in studies of earthquakegenerated surface waves. No Love or body waves were detected at Palisades. All the foregoing data are for sources on or above the earth's surface. Rainier, the small underground nuclear explosion, was not detected at Palisades. (auth)
Descriptors: DETECTION; GEOPHYSICS; MARSHALL ISLANDS; MEASURED VALUES; NEVADA TEST SITE; NUCLEAR EXPLOSIONS; OSCILLATIONS; PACIFIC OCEAN; RAYLEIGH SCATTERING; SCATTERING; SEISMOLOGY
Subject Codes (NSA): GENERAL

10/5/229 (Item 229 from file: 109)
090713 NSA-12-015295
THE POSSIBLE ATMOSPHERIC TRAJECTORIES OF RADIOACTIVE PRODUCTS FROM THE MARSHALL ISLANDS NUCLEAR EXPLOSIONS
Drogaitsev, D.A.
Priroda v No. 7.
Publication Date: 1958 78-80 p.
Journal Announcement: NSA12
Document Type: Journal Article
Language: Russian
Descriptors: ATMOSPHERE; DISTRIBUTION; FISSION PRODUCTS; NUCLEAR EXPLOSIONS; RADIOACTIVITY
Subject Codes (NSA): BIOLOGY AND MEDICINE

10/5/230 (Item 230 from file: 109)
090609 NSA-12-015191

RESEARCH ON POWER FROM FUSION AND OTHER MAJOR ACTIVITIES IN THE ATOMIC ENERGY PROGRAMS

Publication Date: 1958 422 p.
Publ: United States Atomic Energy Commission
Journal Announcement: NSA12
Availability: U.S. Government Printing Office, Washington
Document Type: Book
Language: English
Brief reports are given of developments in raw materials, special nuclear materials. military applications, international activities, commercial and isotope development, legal aspects, inspection, reactor development, classification and declassification, information activities, education and training, physical research, biology and medicine, nuclear materials management, construction and supply, community aciivities, new headquarters, and organization and personnel. The AEC controlled thermonuclear fusion program is described in detail, the four major approaches to the problem being discussed. Appendixes are given summarizing or tabulating information on personnel, isotopes, installations, publications regulations, licenses. and including remarks on: precautions for Eniwetok tests. domestic mining and milling problems. Radioactive fall-out. seismological detonations. Euratom, arid the Oak Ridge nuclear incident. (T.R.H.)
Descriptor Groups (Splits): BIBLIOGRAPHY--ECONOMICS--INSPECTION--ISOTOPES--PERSONNEL--PLANNING--REACTORS--TABLES--USES

BIBLIOGRAPHY--BIOLOGY--MEDICINE--RADIOBIOLOGY--TABLES

BIBLIOGRAPHY--CONTROL--TABLES--THERMONUCLEAR DEVICES--THERMONUCLEAR REACTIONS

BIBLIOGRAPHY--FALLOUT--NUCLEAR EXPLOSIONS--RADIOACTIVITY--SEISMOLOGY--TABLES--TESTING

BIBLIOGRAPHY--MINING--ORE PROCESSING--TABLES

ACCIDENTS--BIBLIOGRAPHY--REACTORS--TABLES
Subject Codes (NSA): GENERAL

10/5/231 (Item 231 from file: 109)
088336 NSA-12-012913
MARCH 1957 MEDICAL SURVEY OF RONGELAP AND UTIRIK PEOPLE THREE YEARS AFTER EXPOSURE TO RADIOACTIVE FALLOUT
Conard, R.A.; Meyer, L.M.; Rall, J.E.; Lowery, A.; Bach, S.A.; Cannon, B.; Carter, E.L.; Eicher, M.; Hechter, H.
Brookhaven National Lab., Upton, N.Y.
Publication Date: June 1958 29 p.
Primary Report No.: BNL-501
Journal Announcement: NSA12
Availability: NTIS
Document Type: Report
Language: English
Marshallese people exposed to radioactive fall-out three years previously. Examinations were carried out on 82 people from Rongelap who had been exposed to the heaviest fall-out, and on a comparison population of unexposed Rongelap people matched for age and sex. The survey showed that all the irradiated Marshellese people were making satisfactory recovery from their radiation exposure. (C.H.)
Descriptors: AGE; ENVIRONMENT; FALLOUT; MAN; MEDICINE; POPULATIONS; RADIATION DOSES; RADIATION EFFECTS; RECOVERY; SEX; STATISTICS
Subject Codes (NSA): BIOLOGY AND MEDICINE

10/5/232 (Item 232 from file: 109)
087629 NSA-12-012202
PERSISTENCE OF RADIOACTIVE CONTAMINATION IN ANIMALS OF MARSHALL ISLANDS TWO YEARS AFTER OPERATION CASTLE. The Shorter-Term Biological Hazards of a Fallout Field
Cohn, S.H.; Dunning, G.M.; Hilcken, J.A. eds.
U. S. Naval Radiological Defense Lab., San Francisco

Publication Date: 1958 211-18 p.
Publ: Atomic Energy Commission-Department of Defense
Journal Announcement: NSA12
Availability: U. S. Government Printing Office
Document Type: Book Analytic
Language: English
Data are summarized on the residual radioactive contamination in the tissues of 88 fish and marine invertebrates collected from the various lagoons of the Marshall Islands 2 years after the thermonuclear explosion of March 1, 1984. (C.H.)
Descriptors: ANIMALS; CONTAMINATION; FISH; MARSHALL ISLANDS; MEASURED VALUES; MICROORGANISMS; NUCLEAR EXPLOSIONS; RADIOACTIVITY; SEA; TESTING
Subject Codes (NSA): BIOLOGY AND MEDICINE

10/5/233 (Item 233 from file: 109)
087628 NSA-12-012201
RESIDUAL CONTAMINATION OF PLANTS, ANIMALS, SOIL, AND WATER OF THE MARSHALL ISLANDS TWO YEARS FOLLOWING OPERATION CASTLE FALLOUT. The Shorter-Term Biological Hazards of a Fallout Field
Weiss, H.V.; Dunning, G.M.; Hilcken, J.A. eds.
U. S. Naval Radiological Defense Lab., San Francisco
Publication Date: 1958 205-10 p.
Publ: Atomic Energy Commission-Department of Defense
Journal Announcement: NSA12
Availability: U. S. Government Printing Office
Document Type: Book Analytic
Language: English
A survey was made two years post-detonation to determine the persistence and fate of radioactive material in the biological systems and in the physical enviromnent of those Marshall Islands contaminated by fall-out from the March 1, 1954, thermonuclear weapon detonation. Specimens of land and marine animals, birds, vegetation, soil, and water were collected for analysis. Radioassays for gross beta and gamma activity were conducted, and in addition radiochemical determinations of individual fission products and induced activities were made. Data are tabulated. An evaluatlon is made of the potential hazard from the ingestion of contaminated materials. (C.H.)
Descriptors: ANIMALS; BETA DETECTION; BIRDS; CONTAMINATION; ENVIRONMENT ; FALLOUT; FISSION PRODUCTS; GAMMA DETECTION; INTESTINE; MARSHALL ISLANDS; MEASURED VALUES; NUCLEAR EXPLOSIONS; PLANTS; RADIOACTIVITY; RADIOBIOLOGY; SEA; SOILS; TESTING; WATER
Subject Codes (NSA): BIOLOGY AND MEDICINE

10/5/234 (Item 234 from file: 109)
087558 NSA-12-012131
GENETIC STUDIES OF IRRADIATED NATURAL POPULATIONS OF DROSOPHILA. II. 1957 TESTS
Stone, W.S.; Wilson, F.D.
Univ. of Texas, Austin
Proc. Natl. Acad. Sci. U.S. v 44.
Publication Date: (1958) June 565-75 p.
Journal Announcement: NSA12
Document Type: Journal Article
Language: English
BS>Genetic analyses were made of irradiated and control isolated populations of D. ananassae from the Pacific Proving Ground area, others of the Marshall Islands, and Ponape. These tests shows that the Bikini and Rongelap populations were severely damaged genetically by the direct radiations and fallout from the thermonuclear device exploded on March 1, 1954. The Rongerik atoll populations had recovered from fallout by August 1955 -- a period roughly equivalent to 26 generations. The populations collected at Rongelap and Bikini had not recovered then, but the Rongelap populatlon had recovered by 1956, in 40 or more generations. Because of the heavier irradiation on Bikini--including effects of the weapons tests in 1956--this population was still slightly below other Pacific Island populations even in 1957. The general relations and comparisons between these isolated island populations and other Drosophila-populations are

discussed. (auth)
Descriptors: CONTAMINATION; DROSOPHILA; FALLOUT; GENETICS; INSECTS; NUCLEAR EXPLOSIONS; RADIATION INJURIES; RADIOBIOLOGY; RECOVERY
Subject Codes (NSA): BIOLOGY AND MEDICINE

10/5/235 (Item 235 from file: 109)
083081 NSA-12-007642
THE COMPOSITIONS, STRUCTURES, AND ORIGINS OF RADIOACTIVE FALLOUT PARTICLES
Adams, C.E.; Farlow, N.H.; Schell, W.R.
Naval Radiological Defense Lab., San Francisco
Publication Date: Feb. 3, 1958 47 p.
Primary Report No.: USNRDL-TR-209
Journal Announcement: NSA12
Document Type: Report
Language: English
The chemical compositions, structures and modes of origin of severai different types of radioactive fallout particles have been determined through petrographic techniques, x-ray-diffraction analysis, radioautography, and specially prepared reagent films for liquid fallout. The fallout particles studied were collected following the detonation of nuclear weapons under various conditions at both the Nevada Test Site and the Eniwetok Proving Grounds. Radioactive fallout particles were formed by the interaction of the condensing vaporized metals and fission products derived from the homb and associated structures with the surface material swept up into the cooling fireball. Description of the various types of fallout particles are given and their modes of origin are qualitatively related by a simplified htermodynamic treatment. (auth)
Descriptors: ATMOSPHERE; COOLING; DIFFRACTION; ELEMENTS; EVAPORATION; FALLOUT; FILMS; FISSION PRODUCTS; LIQUIDS; METALS; NEVADA TEST SITE; NUCLEAR EXPLOSIONS; PARTICLES; PRODUCTION; QUANTITY RATIO; RADIOACTIVITY; RADIOAUTOGRAPHY; THERMODYNAMICS; X RADIATION
Subject Codes (NSA): GENERAL

10/5/236 (Item 236 from file: 109)
081315 NSA-12-005871
BIOLOGICAL CYCLES OF FISSION PRODUCTS IN AQUATIC SYSTEMS AS STUDIED AT THE PACIFIC ATOLLS OF BIKINI AND ENIWETOK
Donaldson, L.R.
Washington. Univ., Seattle
Publication Date: 1954? 8 p.
Primary Report No.: AECU-3412
Journal Announcement: NSA12
Availability: NTIS
Document Type: Report
Language: English
The ecology of the Pacific Atolls of Bikini and Eniwetok is described. Results are summarized from studies on the distribution of fission products in the biota. The contributions of these studies to a better understanding of life zones of coral atolls, the economy of the sea, and fundamental concepts of biological sciences are discussed. (C.H.)
Descriptors: BIOLOGY; DISTRIBUTION; ECONOMICS; ENVIRONMENT; FISSION PRODUCTS; SEA
Subject Codes (NSA): BIOLOGY AND MEDICINE

10/5/237 (Item 237 from file: 109)
081293 NSA-12-005849
LAND CRABS AND RADIOACTIVE FALLOUT AT ENIWETOK ATOLL
Held, E.E.
Washington. Univ., Seattle. Applied Fisheries Lab.
Publication Date: May 27, 1957 39 p.
Primary Report No.: UWFL-50
Journal Announcement: NSA12
Availability: NTIS
Document Type: Report
Language: English

Contract No.: AT(45-1)-540
The pattern of changing levels of radioactivity is given for the tissues of land hermit crabs, Coenobita perlatus, from Belle lsland, Eniwetok Atoll, during a period of . nearly two years following the 1954 series of atomic tests. Sr/sup 90/ + Y/sup 90/, and Cs/sup 137/ were the principal long-lived fission products foumd. Sr/sup 90/ levels in the skeleton remained constant throughout the period of study. (auth)
Descriptors: ANIMALS; BONES; CESIUM 137; CRABS; FALLOUT; FISH; FISSION PRODUCTS; LIFETIME; NUCLEAR EXPLOSIONS; RADIOACTIVITY; STRONTIUM 90; TISSUES; YTTRIUM 90
Subject Codes (NSA): BIOLOGY AND MEDICINE

10/5/238 (Item 238 from file: 109)
080122 NSA-12-004673
HUMAN AND CATTLE THYROID RADIOACTIVITY ASSOCIATED WITH FALLOUT: OCTOBER 1955 TO OCTOBER 1956
White, M.R.
California. Univ., Berkeley. Radiation Lab.
Publication Date: Mar. 1, 1957 15 p.
Primary Report No.: UCRL-3703
Journal Announcement: NSA12
Availability: NTIS
Document Type: Report
Language: English
Contract No.: W-7405-ENG-48
Thyroids from humans, obtained at autopsy, were followed for radioactivity from January 1956 to October 1956. There is less than one chance in one thousand that human thyroid tissue could have been irradiated to the extent of 0.001 rep from I/sup 131/ fallout. The probable value is no more that 0.00016 rep during this period. Thyroids from cattle slaughtered in the San Francisco Bay Area were followed for radioactivity from October 1955 to October 1956. Two periods of increase in radioactivity, possibly due to smallyield detonations in Nevada, were seen in December 1955 and January 1956. A period of high activity in cattle thyroid, probably due to a Russian detonation, began in March, and radioactivity from this delivered a maximum of 0.2 rep. Another period of high activity, presumably due to the Bikini tests, began in May 1956 and was continuing at the time this report ended. It delivered (up to October thyroid tissue. This level of radiation exposure would produce no change in physiological function of the thyroid and would not be detrimental to cattle. (auth)
Descriptors: CALIFORNIA; CATTLE; FALLOUT; IODINE 131; MAN; NUCLEAR EXPLOSIONS; PHYSIOLOGY; RADIOACTIVITY; SAN FRANCISCO BAY; TESTING; THYROID; TISSUES
Subject Codes (NSA): BIOLOGY AND MEDICINE

10/5/239 (Item 239 from file: 109)
079483 NSA-12-004034
RADIOACTIVITY IN THE REEF FISHES OF BELLE ISLAND ENIWETOK ATOLL APRIL 1954 TO NOVEMBER 1955
Welander, A.D.
Washington. Univ., Seattle. Applied Fisheries Lab.
Publication Date: May 17, 1957 42 p.
Primary Report No.: UWFL-49
Journal Announcement: NSA12
Availability: NTIS
Document Type: Report
Language: English
Contract No.: AT(45-1)-540
Studies of the radioactivity ln reef fishes of Belle (Bogombogo) Island, Eniwetok Atoll, were made during a period of about one year followlng the atomic detonations in 1954. Thirty-four different collections were made amd 693 specimens were analyzed to determine the trend or decline of radioactivity. The decline of radioactivity during the period under study was generally similar in all species. The relative amount of radioactivity per gram of tissue was greatest in the alimentary tract, with the liver,

skin bone and muscle havlng successively lesser amourts. This relationship prevailed throughout the period. The rate of decline was greatest during the first 100 days, with a loss of 90% of the radioactivity during the period. Studies were made on the varlation of total radioactivity in the tissues and species, on comparisons of the amount of radioactivity in the species and in their food, smd on comparisons of the decline of radioactivity during the period with the decay of radioactivity in tissues collected soon after the shots. (auth)
Descriptors: BONES; DECAY; ENVIRONMENT; FISH; FOOD; INTESTINE; LIVER; MEASURED VALUES; MUSCLES; NUCLEAR EXPLOSIONS; QUANTITY RATIO; RADIOACTIVITY; SKIN; STOMACH
Subject Codes (NSA): BIOLOGY AND MEDICINE

10/5/240 (Item 240 from file: 109)
079008 NSA-12-003550
SALT CONCENTRATION IN THE AIR AT BIKINI ATOLL (A PRELIMINARY STUDY)
Evans, E.C. III
Naval Radiological Defense Lab., San Francisco
Publication Date: May 15, 1957 52 p.
Primary Report No.: USNRDL-TR-166
Secondary Report No.: Project NS-088-001
Note: Project NS-088-001
Journal Announcement: NSA12
Document Type: Report
Language: English
This preliminary study conducted at the Bikini Atoll investigated the variation of salt concentration in the first 300 ft of atmosphere by collection on specially developed silver dichromate reagent films. For a 10-knot wind maximum concentration appeared to exist at 50 to 75 ft above Mean Low Water Springs, with the possibility of a second maximum somewhere ahove 300 ft. Preliminary sine-frequency counts showed a bimodal distribution of salt nuclei with maximum at 5 and 12 microns. (auth)
Descriptors: AIR; ATMOSPHERE; CHEMICAL REACTIONS; CHROMIUM OXIDES; FILMS; GRAIN SIZE; QUANTITY RATIO; SALTS; SAMPLING; SILVER COMPOUNDS
Subject Codes (NSA): CHEMISTRY

10/5/241 (Item 241 from file: 109)
078170 NSA-12-002702
DETECTION OF MANGANESE-54 IN RADIOACTIVE FALLOUT
Shipman, W.H.; Simone, P.; Weiss, H.V.
U.S. Naval Radiological Defense Lab., San Francisco, Calif.
Science See Saiensu v 126.
Publication Date: (1957) Nov. 8 971-2 p.
Coden: SIENDS1
Journal Announcement: NSA12
Document Type: Journal Article
Language: English
The chemical separation and gamma spectral analysis of Mn are described. The gamma spectra before and after separation are graphed. The samples were collected during the 1956 Eniwetok nuclear tests. (M.H.R.)
Descriptors: FALLOUT; GAMMA SPECTROMETERS; MANGANESE 54; NUCLEAR EXPLOSIONS; QUALITATIVE ANALYSIS; SAMPLING; SEPARATION PROCESSES; TESTING
Subject Codes (NSA): BIOLOGY AND MEDICINE

10/5/242 (Item 242 from file: 109)
075545 NSA-12-000041
SURVEY OF RADIOACTIVITY IN THE SEA AND IN PELAGIC MARINE LIFE WEST OF THE MARSHALL ISLANDS, SEPTEMBER 1-20, 1956
Seymour, A.H.; Held, E.E.; Lowman, F.G.; Donaldson, J.R.; South, D.J.
Washington. Univ., Seattle. Applied Fisheries Lab.
Publication Date: Mar. 15, 1957 63 p.
Primary Report No.: UWFL-47
Journal Announcement: NSA12
Availability: NTIS 5003637
Document Type: Report
Language: English

Contract No.: AT(45-1)-540
A survey of the radioactivity in the sea in the region of the North Equatorial Current from the Marshall Islands to the Marianas Islands was made in September 1956. Plankton samples were taken by oblique tows from 200 meters and water samples were taken from the surface, pattern of distribution of radioactivity shows a sharp decrease east of Bikini and a gradual but irregular decrease west of Eniwetok. A slight degree of cortamination is indicated as far to the west as Guam, the western extremity of the survey. Non-fission products account for a large proportion of the radioactivity in plankton and fish samples. (auth)
Descriptors: ALGAE; CONTAMINATION; DISTRIBUTION; ENVIRONMENT; FISH; FISSION PRODUCTS; MICROORGANISMS; RADIOACTIVITY; SAMPLING; SEA; SURFACES; WATER
Subject Codes (NSA): BIOLOGY AND MEDICINE

10/5/243 (Item 243 from file: 109)
075522 NSA-12-000018
A RADIOLOGICAL STUDY OF RONGELAP ATOLL, MARSHALL ISLANDS, DURING 1954-1955
Washington. Univ., Seattle. Applied Fisheries Lab.
Publication Date: Aug. 15, 1955 75 p.
Primary Report No.: UWFL-42
Journal Announcement: NSA12
Availability: NTIS
Document Type: Report
Language: English
Contract No.: AT(45-1)540
Descriptor Groups (Splits): ALGAE--ANIMALS--BIOLOGY--BIRDS--CONTAMINATION--DISTRIBUTION--ENVIRONMENT--FALLOUT--FISH--INVERTEBRATES--MEASURED VALUES--MICROORGANISMS--NUCLEAR EXPLOSIONS--PLANKTON--PLANTS--RADIOACTIVITY--RADIOGRAPHY--SAMPLING--SOILS--WATER

ALGAE--BIRDS--COCONUTS--ENVIRONMENT--FALLOUT--FISH--FOOD--FRUIT--LIVER--MAN--MARSHALL ISLANDS--MEAT--NUCLEAR EXPLOSIONS--POPULATIONS--RADIATION DOSES--ROOTS--TISSUES
Subject Codes (NSA): BIOLOGY AND MEDICINE

10/5/244 (Item 244 from file: 109)
075518 NSA-12-000014
STUDIES ON LARGE AREA SUB-FABRIC BURNS
Berkley, K.M.; Pearse, H.E.
Rochester, N.Y. Univ. Atomic Energy Project
Publication Date: July 5, 1957 19 p.
Primary Report No.: UR-494
Journal Announcement: NSA12
Availability: NTIS
Document Type: Report
Language: English
Contract No.: W-7401-ENG-49
The detonation of shot one at Bikini Atoll on March 1, 1954, produced a fallout of radioactive ash upon Rongelap Atoll, Marshall Islands. The distribution of the radioactive ash on the islands and in the plants and animals of the area has been studied and evaluated. During the first expedition to Rongelap Atoll on March 26, 1954, biological samples were collected and measurements made of the radiation contamination. On three additional expeditions extensive collections of material were made for this study, the last on January 25-30, 1955. The decline in radioactivity was measured in 1499 samples of fish, invertebrates, land plants, algae, birds plankton, soil, and water from the Rongelap area. During this study particular emphasis was placed upon evaluation of the radioactivity in food used by the natives. Coconut milk collected on March 26, 1954, contained 1.03 microcuries per kilogram of wet tissue while the coconut meat had 1.16 mu c/kg. By January 25-30, 1955, the level in coconut milk had declined to 0.041 mu c/kg and the meat to 0.036 mu c/kg. Fish muscle on March 26, 1954, averaged 2.74 mu c/kg and fish liver 204.0 mu c/kg. The decline to January 25-30 was 0.10 mu c/kg for the muscle and 3.52 mu c/kg for the

liver of fish. Somewhat similar declines were found for clam muscle, crab muscle, bird muscle and liver, and for squash, papaya, arrowroot and pandanus. The level of radioactivity was highest in the northern portion of the atoll, except for samples of algae and fish-eating birds, collected during January 1955 from the southern part of the atoll, which had higher levels of radioactivity than samples collected from the northern islands on the same date. This may indicate a translocation of radioactive materials within the lagoon. (auth)
Descriptors: BURNS; CLOTHING; RADIATION INJURIES; TEXTILES
Subject Codes (NSA): BIOLOGY AND MEDICINE

10/5/245 (Item 245 from file: 109)
074116 NSA-11-012638
RADIOACTIVE CONTAMINATION OF CERTAIN AREAS IN THE PACIFIC OCEAN FROM NUCLEAR TESTS
Dunning, G.M. ed.
Publication Date: 1957 60 p.
Publ: U.S. Atomic Energy Commission
Journal Announcement: NSA11
Availability: U.S. Government Printing Office
Document Type: Book
Language: English
Descriptors: BIOLOGY; BIRDS; CONTAMINATION; ENVIRONMENT; FISH; GAMMA DETECTION; MAN; MARSHALL ISLANDS; MEASURED VALUES; MEDICINE; NUCLEAR EXPLOSIONS; PLANTS; POPULATIONS; RADIOACTIVITY; RADIOCHEMISTRY; RADIOGRAPHY ; SEA; SOILS; SURVIVAL TIME; TESTING; WATER
Subject Codes (NSA): BIOLOGY AND MEDICINE

10/5/246 (Item 246 from file: 109)
070689 NSA-11-009206
RESEARCH IN THE EFFECTS AND INFLUENCES OF THE NUCLEAR BOMB TEST EXPLOSIONS. VOLUME I AND II
Publication Date: 1956 1837 p.
Publ: Japan Society for the Promotion of Sciences
Journal Announcement: NSA11
Document Type: Book
Language: English
Descriptors: BIKINI; ECONOMICS; FISH; JAPAN; MEDICINE; METEOROLOGY; NUCLEAR EXPLOSIONS; RADIATION EFFECTS; RADIATION INJURIES; RADIOCHEMISTRY; TESTING
Subject Codes (NSA): BIOLOGY AND MEDICINE

10/5/247 (Item 247 from file: 109)
070675 NSA-11-009192
RADIOBIOLOGICAL RESURVEY OF RONGELAP AND AILINGINAE ATOLLS, MARSHALL ISLANDS, OCTOBER-NOVEMBER 1955
Washington. Univ., Seattle. Applied Fisheries Lab.
Publication Date: Dec. 30, 1955 91 p.
Primary Report No.: UWFL-43
Journal Announcement: NSA11
Availability: NTIS
Document Type: Report
Language: English
Contract No.: AT(45-1)-540
Descriptors: ANIMALS; BONES; CESIUM 144; COCONUTS; CRABS; FISH; FRUIT; MARSHALL ISLANDS; PLANTS; RADIOACTIVITY; RADIOBIOLOGY; SALTS; SAMPLING; STRONTIUM 90MEEEEEEEEEEE
Subject Codes (NSA): BIOLOGY AND MEDICINE

10/5/248 (Item 248 from file: 109)
070277 NSA-11-008794
A FALLOUT FORECASTING TECHNIQUE WITH RESULTS OBTAINED AT THE ENIWETOK PROVING GROUND
Schuert, E.A.
Naval Radiological Defense Lab., San Francisco
Publication Date: Apr. 3, 1957 67 p.

5003639

Primary Report No.: USNRDL-TR-139
Secondary Report No.: Project NS 081-001
Note: Project NS 081-001
Journal Announcement: NSA11
Document Type: Report
Language: English
Descriptors: COMPUTERS; FALLOUT; METEOROLOGY; MONITORING; NUCLEAR EXPLOSIONS; TESTING
Subject Codes (NSA): BIOLOGY AND MEDICINE

10/5/249 (Item 249 from file: 109)
067458 NSA-11-005965
SURVEY OF RADIOACTIVITY IN THE SEA NEAR BIKINI AND ENIWETOK ATOLLS JUNE 11-21, 1956
Donaldson, L.R.; Seymour, A.H.; Held, E.E.; Hines, N.O.; Lowman, F.G.; Olson, P.R.; Welander, A.D.
Washington. Univ., Seattle. Applied Fisheries Lab.
Publication Date: July 23, 1956 39 p.
Primary Report No.: UWFL-46
Note: Decl. Nov. 28, 1956
Journal Announcement: NSA11
Document Type: Report
Language: English
Contract No.: AT(45-1)-540
Descriptors: BIKINI; ENIWETOK; FISH; MICROORGANISMS; MONITORING; PLANKTON; RADIOACTIVITY; SEA; TABLES; WATER
Subject Codes (NSA): PHYSICS

10/5/250 (Item 250 from file: 109)
065747 NSA-11-004250
PROGRAM OF THE APPLIED FISHERIES LABORATORY, UNIVERSITY OF WASHINGTON, FOR THE 1956 TEST SERIES AT BIKINI AND ENIWETOK ATOLLS, MARSHALL ISLANDS
Washington. Univ., Seattle. Applied Fisheries Lab.
Publication Date: Feb. 7, 1956 27 p.
Primary Report No.: UWFL-45
Journal Announcement: NSA11
Availability: NTIS
Document Type: Report
Language: English
Contract No.: AT(45-1)-540
Descriptors: MARSHALL ISLANDS; MATERIALS TESTING; MONITORING; RADIOBIOLOGY FFF
Subject Codes (NSA): BIOLOGY AND MEDICINE

10/5/251 (Item 251 from file: 109)
064808 NSA-11-003310
ATOMIC ENERGY IN ITS REPERCUSSIONS ON LIFE AND HEALTH. (Papers from a Scientific Conference held at National Museum of Natural History, July 1-2, 1955)
Publication Date: 1956 254 p.
Publ: L'Expansion Editeur
Note: 1,000 frames
Journal Announcement: NSA11
Document Type: Book
Language: French
Descriptors: AEROSOLS; AIR; BIKINI; DUSTS; ENERGY; FALLOUT; GASES; JAPAN; METEOROLOGY; NUCLEAR EXPLOSIONS; QUANTITY RATIO; RADIATION EFFECTS; RADIATION PROTECTION; RADIOACTIVITY; RAIN; SAFETY
Subject Codes (NSA): BIOLOGY AND MEDICINE

10/5/252 (Item 252 from file: 109)
062325 NSA-11-000825
MAJOR ACTIVITIES IN THE ATOMIC ENERGY PROGRAMS--JANUARY-JUNE 1956
Publication Date: July 1956 260 p.
Publ: U.S. Government Printing Office
Journal Announcement: NSA11

Document Type: Book
Language: English
Descriptor Groups (Splits): ENIWETOK--NUCLEAR EXPLOSIONS--RADIATION PROTECTION--SAFETY--TESTING

DISTRIBUTION--ISOTOPES--URANIUM 235
Subject Codes (NSA): GENERAL

10/5/253 (Item 253 from file: 109)
060877 NSA-10-011571
DETECTION OF $sup 103$m Rh IN THE "BIKINI ASHES"
Kimura, K.; Ikeda, N.; Yoshihara, K.
Bull. Chem. soc. Japan v 29.
Publication Date: (1956) Apr. 395-8 p.
Journal Announcement: NSA10
Document Type: Journal Article
Language: English
Descriptors: COMBUSTION; ELECTRONS; ENERGY; GASES; HALF-LIFE; INTERNAL CONVERSION; ION EXCHANGE; ISOMERS; MEASURED VALUES; PROPORTIONAL COUNTERS; QUANTITATIVE ANALYSIS; RADIOACTIVITY; RESINS; SEPARATION PROCESSES; TABLES
Subject Codes (NSA): PHYSICS

10/5/254 (Item 254 from file: 109)
058481 NSA-10-009174
PAPER CHROMATROGRAPHY OF RADIOACTIVE SUBSTANCES. (RADIOCHEMICAL STUDIES ON "BIKINI ASHES" (MARCH 1, 1954), PART III). (STUDIES OF THE ANALYTICAL CHEMISTRY OF FILTER PAPER XVI)
Nakano, S.
Bull. Chem. Soc. Japan v 29.
Publication Date: (1956) Mar. 219-24 p.
Journal Announcement: NSA10
Document Type: Journal Article
Language: English
Descriptors: BIKINI; CHROMATOGRAPHY; FALLOUT; PAPER; QUALITATIVE ANALYSIS; RADIOCHEMISTRY
Subject Codes (NSA): CHEMISTRY

10/5/255 (Item 255 from file: 109)
058458 NSA-10-009151
A PROPOSED METHOD OF ANALYSIS OF RADIOACTIVE SUBSTANCES IN RAIN WATER. ANALYSIS OF "BIKINI ASH."
Honda, M.
Publication Date: nd 73-5 p.
Primary Report No.: AEC-TR-2104
Note: Special Collection of Papers; Translated from Japan Analyst 3, 368(1954)
Journal Announcement: NSA10
Document Type: Translation of Analytic
Language: English
Descriptors: AMBERLITE; BIKINI; CATIONS; DOWEX; FALLOUT; ION EXCHANGE; ION EXCHANGE MATERIALS; NUCLEAR EXPLOSIONS; QUALITATIVE ANALYSIS; RADIOACTIVITY; RAIN; RESIDUES; WATER
Subject Codes (NSA): CHEMISTRY

10/5/256 (Item 256 from file: 109)
058457 NSA-10-009150
RADIOACTIVE SUBSTANCES FOUND IN THE SO-CALLED ATOM BLAST TUNA FISH. ANALYSIS OF THE "BIKINI ASH."
Kiba, T.; Ohashi, S.; Shibata, M.; Mizube, T.
Publication Date: nd 55-60 p.
Primary Report No.: AEC-tr-2104
Note: Summary, Title and Author List in English; Special Collection of Papers; Translated from Japan Analyst 3, 361-3(1954)
Journal Announcement: NSA10
Document Type: Translation of Analytic
Language: English

5003641

Descriptors: BIKINI; CHROMATOGRAPHY; CONTAMINATION; FALLOUT; FISH; FISSION PRODUCTS; NUCLEAR EXPLOSIONS; PAPER; QUALITATIVE ANALYSIS; RADIOCHEMISTRY; SEPARATION PROCESSES; TUNA FISH
Subject Codes (NSA): CHEMISTRY

10/5/257 (Item 257 from file: 109)
058456 NSA-10-009149
ON THE RADIOACTIVE DUST COLLECTED FROM THE NO. 5 FUKURYU MARU. ANALYSIS OF "BIKINI ASH."
Yamatera, H. et al.
Publication Date: nd 43-54 p.
Primary Report No.: AEC-tr-2104
Note: Summary, Title, and Author List in English; Special Collection of Papers; Translated from Japan Analyst 3, 356-61(1954)
Journal Announcement: NSA10
Document Type: Translation of Analytic
Language: English
Descriptors: BETA PARTICLES; BIKINI; DUSTS; ENERGY; FALLOUT; HALF-LIFE; MEASURED VALUES; NUCLEAR EXPLOSIONS; QUALITATIVE ANALYSIS; RADIOACTIVITY; RADIOCHEMISTRY; RADIOISOTOPES; RESIDUES
Subject Codes (NSA): CHEMISTRY

10/5/258 (Item 258 from file: 109)
058455 NSA-10-009148
RADIOCHEMICAL STUDIES ON BIKINI ASH, MARCH 1, 1954. PART I. ANALYSIS OF "BIKINI ASH."
Shiokawa, T.; Ozaki, T.; Kanbara, T.; Yagi, M.; Matsuoka, Y.; Takasashi, A.
Publication Date: nd 28-42 p.
Primary Report No.: AEC-tr-2104
Note: Summary in English; Translated from Japan Analyst 3, 349-56(1954)
Journal Announcement: NSA10
Document Type: Translation of Analytic
Language: English
Descriptors: BIKINI; DISTILLATION; ENERGY; FALLOUT; HALF-LIFE; ION EXCHANGE; MEASURED VALUES; NUCLEAR EXPLOSIONS; PRECIPITATION; QUALITATIVE ANALYSIS; RADIOACTIVITY; RADIOCHEMISTRY; RADIOISOTOPES; RESIDUES; SAMPLING; SOLVENT EXTRACTION; TRACER TECHNIQUES
Subject Codes (NSA): CHEMISTRY

10/5/259 (Item 259 from file: 109)
058454 NSA-10-009147
ON THE RADIOACTIVE FALL-OUT ON NO. 5 FUKURYU MARU. ANALYSIS OF THE "BIKINI ASH"
Kimura, K. et al.
Publication Date: nd 7-27 p.
Primary Report No.: AEC-tr-2104
Note: Title and Summary in English; Special Collection of Papers; Translated from Japan Analyst 3, 335-48(1954)
Journal Announcement: NSA10
Document Type: Translation of Analytic
Language: English
Descriptors: BIKINI; CALCIUM HYDROXIDES; CATIONS; FALLOUT; ION EXCHANGE; NIOBIUM; NUCLEAR EXPLOSIONS; QUALITATIVE ANALYSIS; RADIOACTIVITY; RADIOCHEMISTRY; RESIDUES; SEPARATION PROCESSES; URANIUM; ZIRCONIUM
Subject Codes (NSA): CHEMISTRY

10/5/260 (Item 260 from file: 109)
058453 NSA-10-009146
INTRODUCTION TO SPECIAL COLLECTION OF PAPERS. ANALYSIS OF THE "BIKINI ASH"
Kimura, K.
Publication Date: nd 1-6 p.
Primary Report No.: AEC-tr-2104
Note: Special Collection of Papers; Translated from Japan Analyst 3, 333-4(1955)

Journal Announcement: NSA10
Document Type: Translation of Analytic
Language: English
Descriptors: BIKINI; FALLOUT; HIROSHIMA; NAGASAKI; NUCLEAR EXPLOSIONS; QUALITATIVE ANALYSIS; RESIDUES
Subject Codes (NSA): CHEMISTRY

10/5/261 (Item 261 from file: 109)
058452 NSA-10-009145
ANALYSIS OF THE "BIKINI ASH"
Publication Date: nd 75 p.
Primary Report No.: AEC-tr-2104
Note: Special Collection of Papers; Translated from Japan Analyst 3, 333-68(1954)
Journal Announcement: NSA10
Document Type: Journal Translation
Language: English
Descriptors: BIKINI; FALLOUT; NUCLEAR EXPLOSIONS; QUALITATIVE ANALYSIS; RESIDUES
Subject Codes (NSA): CHEMISTRY

10/5/262 (Item 262 from file: 109)
054787 NSA-10-005476
EMERGENCY LABORATORY ORGANIZATION FOR THE CARE OF LARGE NUMBERS OF HUMAN BEINGS ACCIDENTALLY EXPOSED TO IONIZING RADIATION
Sipe, C.R.; Schork, P.K.; Strome, C.P.A.; Gibbs, W.H.
Naval Medical Research Inst., Bethesda, Md.; Naval Radiological Defense Lab., San Francisco
Publication Date: Nov. 18, 1955 13 p.
Primary Report No.: NM-006.012.04.91
Journal Announcement: NSA10
Document Type: Report
Language: English
Descriptors: FALLOUT; LABORATORY EQUIPMENT; MAN; MARSHALL ISLANDS; MARSHALLESE; MEDICINE; PERSONNEL; POPULATIONS; RADIATION INJURIES; SAFETY
Subject Codes (NSA): BIOLOGY AND MEDICINE

10/5/263 (Item 263 from file: 109)
053823 NSA-10-004510
THE ARTIFICIAL RADIOACTIVITY IN RAIN WATER OBSERVED IN JAPAN FROM MAY TO AUGUST 1954
Miyake, Y.
Papers in Meteorol. and Geophys. v 5.
Publication Date: (1954) Sept. 173-7 p.
Journal Announcement: NSA10
Document Type: Journal Article
Language: English
Descriptors: ATOMIC EXPLOSIONS; BIKINI; DUSTS; FALLOUT; JAPAN; QUANTITY RATIO; RADIOACTIVITY; RAIN; SAMPLING
Subject Codes (NSA): BIOLOGY AND MEDICINE

10/5/264 (Item 264 from file: 109)
053281 NSA-10-003968
TWELVE-MONTH POSTEXPOSURE SURVEY ON MARSHALLESE EXPOSED TO FALLOUT RADIATION
Cronkite, E.P.; Dunham, C.L.; Griffin, D.; McPherson, S.D.; Woodward, K.T.
Brookhaven National Lab., Upton, N.Y.
Publication Date: Aug. 1955 15 p.
Primary Report No.: BNL-384
Journal Announcement: NSA10
Availability: NTIS
Document Type: Report
Language: English
Descriptors: ACCIDENTS; BLOOD CELLS; ENVIRONMENT; EYES; FALLOUT; LEUCOCYTES; LYMPHOCYTES; MAN; MARSHALL ISLANDS; MARSHALLESE; MEDICINE;

NEUTROPHILS; PHOTOGRAPHY; PIGMENTS; PLATELETS; POPULATIONS; QUANTITY RATIO; RADIATION INJURIES; SKIN
Subject Codes (NSA): BIOLOGY AND MEDICINE

10/5/265 (Item 265 from file: 109)
049335 NSA-10-000016
SKIN LESIONS, EPILATION AND NAIL PIGMENTATION IN MARSHALLESE AND AMERICANS ACCIDENTALY CONTAMINATED WITH RADIOACTIVE FALLOUT
Conard, R.A.; Shulman, N.R.; Wood, D.A.; Dunham, C.L.; Alpen, E.L.; Browning, L.E.
Naval Medical Research Inst., Bethesda, Md.; Naval Radiological Defense Lab., San Francisco
Publication Date: Aug. 29, 1955 28 p.
Primary Report No.: NM-006-012.04.82
Journal Announcement: NSA10
Document Type: Report
Language: English
Descriptors: HAIR; MARSHALL ISLANDS
Subject Codes (NSA): BIOLOGY AND MEDICINE

10/5/266 (Item 266 from file: 109)
048116 NSA-09-006817
THE EFFECT OF ATOMIC WEAPONS ON GLAZING AND WINDOW CONSTRUCTION. ANNEX 3.5 OF SCIENTIFIC DIRECTOR'S REPORT OF ATOMIC WEAPON TESTS AT ENIWETOK, 1951. OPERATION GREENHOUSE
Clark, W.C.
General Services Administration, Washington, D.C.
Publication Date: Aug. 1951 84 p.
Primary Report No.: AECD-3643
Note: Decl. with deletions Dec. 28, 1954
Journal Announcement: NSA09
Document Type: Report
Language: English
Descriptors: GLASS; MECHANICAL PROPERTIES; NUCLEAR WEAPONS; POLYMERS; TESTING; WINDOWS
Subject Codes (NSA): GENERAL

10/5/267 (Item 267 from file: 109)
047166 NSA-09-005867
PATHOLOGICAL FINDINGS IN THE FATAL CASE (THE LATE MR. KUBOYAMA) OF THE RADIATION SICKNESS CAUSED BY BIKINI ASHES. AN INTERMEDIATE REPORT
Ohashi, S.; Hashimoto, K.; Fukushima, N.; Tashiro, K.; Sugano, H.; Mori, Y.
1st Tokyo National Hospital; Tokyo Univ.
Iryo (Tokyo) v 9.
Publication Date: (1955) Jan. 46-55 p.
Journal Announcement: NSA09
Document Type: Journal Article
Language: Japanese
Descriptors: BIKINI; DISEASES; ENVIRONMENT; FALLOUT; FUNGI; HEPATITIS; LIVER; LUNGS; MAN; MEDICINE; NUCLEAR EXPLOSIONS; PNEUMONIA; RADIATION SICKNESS; VIRUSES
Subject Codes (NSA): BIOLOGY AND MEDICINE

10/5/268 (Item 268 from file: 109)
047165 NSA-09-005866
CLINICAL COURSE OF THE RADIATION SICKNESS CAUSED BY BIKINI ASHES. INTERMEDIATE REPORT
Koyama, Y. et al.
Iryo (Tokyo) v 9.
Publication Date: (1955) Jan. 5-45 p.
Journal Announcement: NSA09
Document Type: Journal Article
Language: Japanese
Descriptors: BIKINI; ENVIRONMENT; FALLOUT; MAN; MEDICINE; NUCLEAR EXPLOSIONS; PHOTOGRAPHY; RADIATION SICKNESS; RADIOACTIVITY

5003644

Subject Codes (NSA): BIOLOGY AND MEDICINE

10/5/269 (Item 269 from file: 109)
047160 NSA-09-005861
NATURAL COLOURED PHOTOGRAPHS OF RADIATION SICKNESS CAUSED BY BIKINI ASHES
Koyama, Y. et al.
Iryo (Tokyo) v 9.
Publication Date: (1955) Jan. 1-4 p.
Journal Announcement: NSA09
Document Type: Journal Article
Language: Japanese
Descriptors: BIKINI; ENVIRONMENT; FALLOUT; MAN; NUCLEAR EXPLOSIONS; PHOTOGRAPHY; RADIATION SICKNESS
Subject Codes (NSA): BIOLOGY AND MEDICINE

10/5/270 (Item 270 from file: 109)
041837 NSA-09-000534
AEC ANALYSIS FOR LONG-LIVED PRODUCTS IN SOIL
Sax, N.I.; Gabay, J.J.; Revinson, D.; Keisch, B.
Health and Safety Lab., New York Operations Office
Publication Date: Sept. 1, 1954 24 p.
Primary Report No.: NYO-4604
Journal Announcement: NSA09
Document Type: Report
Language: English
Descriptors: CHEMICAL REACTIONS; CONTAMINATION; FALLOUT; FISSION PRODUCTS; LIFETIME; MARSHALL ISLANDS; NUCLEAR REACTIONS; QUALITATIVE ANALYSIS; QUANTITY RATIO; RARE EARTHS; RUTHENIUM; SEPARATION PROCESSES; SOILS; STRONTIUM; TESTING; ZIRCONIUM
Subject Codes (NSA): CHEMISTRY

10/5/271 (Item 271 from file: 109)
034944 NSA-08-000835
METEOROLOGICAL DATA ENIWETOK ATOLL. Memo Report 53-8
Draeger, R.H.; Lee, R.H.
Naval Medical Research Inst., Bethesda
Publication Date: May 18, 1953 22 p.
Primary Report No.: NM-006-012.01
Journal Announcement: NSA08
Document Type: Report
Language: English
Descriptors: AIR; ANIMALS; BIOLOGY; ENIWETOK; HEAT TRANSFER; HUMIDITY; MEASURED VALUES; METEOROLOGY; NUCLEAR EXPLOSIONS; PLANNING; RADIATION DOSES; RADIATIONS; SOILS; SOLAR RADIATION; SUN; SURFACES; TEMPERATURE; TESTING; VELOCITY; WINDSSSSSSSSSSSSSSSSSS
Subject Codes (NSA): PHYSICS

10/5/272 (Item 272 from file: 109)
029958 NSA-07-002554
DRILLING ON ENIWETOK ATOLL, MARSHALL ISLANDS
Ladd, H.S.; Ingerson, E.; Townsend, R.C.; Rusell, M.; Stephenson, H.K.
Los Alamos Scientific Lab.
Publication Date: nd 49 p.
Primary Report No.: AECU-2439
Note: 5 illus.
Journal Announcement: NSA07
Document Type: Report
Language: English
Descriptors: CALCIUM CARBONATES; CLAYS; DISTRIBUTION; DOLOMITE; ENIWETOK; IGNEOUS ROCKS; LIMESTONE; MAGNESIUM CARBONATES; ORGANIC COMPOUNDS; ROCKS; SILT; VOLCANICS; WELL LOGGING
Subject Codes (NSA): MINERALOGY, METALLURGY, AND CERAMICS

10/5/273 (Item 273 from file: 109)
029865 NSA-07-002461
A DESCRIPTION OF TUMORS ON IPOMOEA TUBA FROM THE A-BOMB TEST SITES ON

5003645

ENIWETOK ATOLL APPENDIX TO RADIOBIOLOGICAL SURVEY OF BIKINI, ENIWETOK, AND LIKIEP ATOLLS, JULY-AUGUST 1949
Biddulph, S.F.; Biddulph, O.
Applied Fisheries Lab., Univ. of Wash.
Publication Date: 1952 24 p.
Primary Report No.: AECD-3446(app.); UWFL-23(app.)
Secondary Report No.: UWFL-23(app.)
Journal Announcement: NSA07
Document Type: Report
Language: English
Descriptors: BIKINI; CARCINOGENESIS; CONFIGURATION; DISTANCE; DISTRIBUTION; ENIWETOK; ENVIRONMENT; ISLANDS; NUCLEAR EXPLOSIONS; PLANTS; RADIATION EFFECTS; RADIOBIOLOGY; TESTING; TUMORS; USA
Subject Codes (NSA): BIOLOGY AND MEDICINE

10/5/274 (Item 274 from file: 109)
026617 NSA-06-005934
RADIOBIOLOGICAL SURVEY OF BIKINI, ENIWETOK, AND LIKIEP ATOLLS JULY - AUGUST 1949
Applied Fisheries Lab., Univ. of Wash.
Publication Date: July 12, 1950 146 p.
Primary Report No.: AECD-3446; UWFL-23
Secondary Report No.: UWFL-23
Note: Decl. Sept. 15, 1952
Journal Announcement: NSA06
Document Type: Report
Language: English
Descriptors: ALGAE; ALPHA DETECTION; ANIMALS; BETA DETECTION; BIKINI; CONTROL; DECOMPOSITION; ENIWETOK; FISH; GAMMA DETECTION; ISLANDS; MEASURED VALUES; MICROORGANISMS; MONITORING; PLANKTON; PLANTS; RADIATION DOSES; RADIOACTIVITY; RADIOBIOLOGY; SAMPLING; SEA; TISSUES; USA; VARIATIONS; WATER
Subject Codes (NSA): BIOLOGY AND MEDICINE

10/5/275 (Item 275 from file: 109)
026616 NSA-06-005933
WORK IN PROGRESS AT THE APPLIED FISHERIES LABORATORY
Applied Fisheries Lab., Univ. of Wash.
Publication Date: Jan. 1952 15 p.
Primary Report No.: AECD-3445; UWFL-29
Secondary Report No.: UWFL-29
Note: Decl. Sept. 8, 1952
Journal Announcement: NSA06
Document Type: Report
Language: English
Descriptors: ANEMIA; ANIMALS; ARTEMIA; CERIUM 144; COBALT; DIET; DISTRIBUTION; EGGS; EMBRYOS; ENIWETOK; ERYTHROCYTES; EYES; FISH; FISSION PRODUCTS; GRAIN SIZE; PHYSIOLOGY; RADIATION DOSES; RADIATION EFFECTS; RADIOSENSITIVITY; SALMON; SOLUTIONS; TEMPERATURE; TISSUES; WATER; X RADIATION
Subject Codes (NSA): BIOLOGY AND MEDICINE

10/5/276 (Item 276 from file: 109)
026602 NSA-06-005919
TRACING NUCLEAR EXPLOSIONS
Holter, N.J.; Glasscock, W.R.
Nucleonics (U.S.) Ceased publication v 10, No. 8.
Publication Date: (1952) Aug. 10-13 p.
Coden: NUCLA
Note: 0096-6207
Journal Announcement: NSA06
Document Type: Journal Article
Language: English
Descriptors: ATMOSPHERE; DECAY; ENIWETOK; FALLOUT; FISSION PRODUCTS; METEOROLOGY; NEVADA; NUCLEAR EXPLOSIONS; RADIOACTIVITY; RECORDING SYSTEMS; THORIUM; TRACER TECHNIQUES; URANIUM; USSR
Subject Codes (NSA): PHYSICS

10/5/277 (Item 277 from file: 109)
023842 NSA-06-003159
THE RELATIONSHIP BETWEEN Ca$sup 45$, TOTAL CALCIUM AND FISSION PRODUCT RADIO-ACTIVITY IN PLANTS OF PORTULACA OLERACEA GROWING IN THE VICINITY OF THE ATOM BOMB TEST SITES ON ENIWETOK ATOLL
Biddulph, O.; Cory, R.
Applied Fisheries Lab., Univ. of Wash.
Publication Date: nd 20 p.
Primary Report No.: UWFL-31
Journal Announcement: NSA06
Document Type: Report
Language: English
Descriptors: CALCIUM; CALCIUM 45; CONTAMINATION; ENIWETOK; ENVIRONMENT; FALLOUT; FISSION PRODUCTS; METABOLISM; NUCLEAR EXPLOSIONS; PLANTS; QUANTITY RATIO; RADIOACTIVITY
Subject Codes (NSA): BIOLOGY AND MEDICINE

10/5/278 (Item 278 from file: 109)
016350 NSA-05-003007
THE HEMORRHAGIC SYNDROME OF ACUTE IONIZING RADIATION ILLNESS PRODUCED IN GOATS AND SWINE BY EXPOSURE TO THE ATOMIC BOMB AT BIKINI, 1946 Appendix No. 15 to the Final Report
Cronkite, E.P.
Naval Medical Research Inst., Bethesda
Publication Date: Oct. 7, 1948 16 p.
Primary Report No.: NP-1902
Journal Announcement: NSA05
Document Type: Report
Language: English
Descriptors: ANIMALS; BACTERIA; BIKINI; BLOOD CELLS; BLOOD VESSELS; BODY; CHEMICALS; COAGULATION; DYES; ENZYMES; GOATS; HEMORRHAGE; INFECTIONS; NUCLEAR EXPLOSIONS; PLATELETS; PROTEINS; QUANTITY RATIO; RADIATION SICKNESS ; SENSITIVITY; SWINE; THROMBIN; THROMBOPLASTIN; TOLUIDINE BLUE; TOXICITY
Subject Codes (NSA): BIOLOGY AND MEDICINE

10/5/279 (Item 279 from file: 109)
015412 NSA-05-002069
OCULAR CHANGES PRODUCED BY TOTAL BODY IRRADIATION
Wilder, H.C.; Maynard, R.M.
Am. J. Path. v 27.
Publication Date: (1951) Jan.-Feb. 1-19 p.
Journal Announcement: NSA05
Document Type: Journal Article
Language: English
Descriptors: ANEMIA; ANIMALS; BACTERIA; BIKINI; BLOOD CELLS; BLOOD SERUM; BLOOD VESSELS; BODY; BONE MARROW; DIFFUSION; DRUGS; EYES; FETUSES; GOATS; HEMORRHAGE; HEPARIN; INFECTIONS; NUCLEAR EXPLOSIONS; PIGS; PLATELETS ; QUANTITY RATIO; RADIATION DOSES; RADIATION INJURIES; X RADIATION
Subject Codes (NSA): BIOLOGY AND MEDICINE

10/5/280 (Item 280 from file: 109)
012165 NSA-04-005569
Cytological and Phenotypical Effects Induced in Maize by X-Rays and the Bikini Test Able Atomic Bomb
Randolph, L.F.
J. Cellular Comp. Physiol. v 34, Suppl. 1.
Publication Date: (1950) June 103-17 p.
Journal Announcement: NSA04
Document Type: Journal Article
Language: English
Descriptors: BIKINI; CEREALS; CHLOROPHYLL; CHROMOSOMES; CYTOLOGY; MAIZE ; MALFORMATIONS; MUTATIONS; NUCLEAR EXPLOSIONS; QUANTITY RATIO; RADIATION DOSES; RADIATION EFFECTS; REPRODUCTION; SEEDS; TISSUES; X RADIATION
Subject Codes (NSA): BIOLOGY AND MEDICINE

10/5/281 (Item 281 from file: 109)
012164 NSA-04-005568
Cotton from Bikini. Chromosome Irregularities Found in Plants Grown from Seed Exposed to Gamma Radiation
Brown, M.S.
J. Heredity v 41.
Publication Date: (1950) May 115-21 p.
Secondary Report No.: See also NSA 1-604
Note: See also NSA 1-604
Journal Announcement: NSA04
Document Type: Journal Article
Language: English
Descriptors: BIKINI; CHROMOSOMES; COTTON; CYTOLOGY; NUCLEAR EXPLOSIONS; PLANT CELLS; PLANTS; RADIATION EFFECTS; SEEDS
Subject Codes (NSA): BIOLOGY AND MEDICINE

10/5/282 (Item 282 from file: 109)
011955 NSA-04-005359
Thermal Effects of Atomic Bomb Explosions on Soils at Trinity and Eniwetok
Staritzky, E.
Publication Date: June 13, 1950 18 p.
Primary Report No.: AECD-2881
Note: Decl. Aug. 2, 1950
Journal Announcement: NSA04
Document Type: Report
Language: English
Descriptors: BLOOD; BLOOD PLASMA; BODY; ENERGY; ENIWETOK; ERYTHROCYTES; GLASS; HIGH TEMPERATURE; ION EXCHANGE; LABELLED COMPOUNDS; MAN; MELTING; METABOLISM; NUCLEAR EXPLOSIONS; POTASSIUM CHLORIDES; POTASSIUM 42; QUANTITY RATIO; RADIATION EFFECTS; ROCKS; SAMPLING; SAND; SILICATES; SOILS; SPECTROSCOPY; STANDARDS; THERMAL RADIATION; TISSUES; TRACER TECHNIQUES; VARIATIONS
Subject Codes (NSA): BIOLOGY AND MEDICINE

10/5/283 (Item 283 from file: 109)
011716 NSA-04-005120
Radiobiological Research
Jaklitsch, J.J. Jr.
Mechanical Engineering (U.S.) v 72.
Publication Date: (1950) Jan. 17-8 p.
Coden: MEENA
Note: 0025-6501
Journal Announcement: NSA04
Document Type: Journal Article
Language: English
Descriptors: BIKINI; BODY; COCONUTS; CONTAMINATION; FISH; FOOD; FRUIT; MAN; NUCLEAR EXPLOSIONS; PACIFIC OCEAN; PLANTS; RADIATION DOSES; RADIATION EFFECTS; RADIATION INJURIES; RADIATION SICKNESS; RADIOACTIVITY; RADIOBIOLOGY; RATS; SAFETY; SEA; VARIATIONS; WATER
Subject Codes (NSA): BIOLOGY AND MEDICINE

10/5/284 (Item 284 from file: 109)
010742 NSA-04-004145
Lessons from Operation Crossroads
Erickson, C.A.
Chicago Med. School Quart. v 11.
Publication Date: (1950) Apr. 91-5 p.
Journal Announcement: NSA04
Document Type: Journal Article
Language: English
Descriptors: AIR; BIKINI; FALLOUT; NUCLEAR EXPLOSIONS; PERSONNEL; PLANNING; RADIATION EFFECTS; RADIATION INJURIES; RADIATION PROTECTION; SAFETY; SHIPS; SHOCK WAVES; WATER
Subject Codes (NSA): BIOLOGY AND MEDICINE

10/5/285 (Item 285 from file: 109)
010442 NSA-04-003845
Chromosomal Rearrangements from Exposure to Radiation
Longley, A.E.
Maize Genetics Coop. News Letter (Cornell) v 24.
Publication Date: (1950) Mar. 17 7-8 p.
Journal Announcement: NSA04
Document Type: Journal Article
Language: English
Descriptors: BIKINI; CEREALS; CHROMOSOMES; GENETICS; NUCLEAR EXPLOSIONS ; PLANTS; RADIATION DOSES; RADIATION EFFECTS; RADIATION INJURIES; RADIATION SOURCES; SEEDS; TESTING; VARIATIONS; X RADIATION
Subject Codes (NSA): BIOLOGY AND MEDICINE

10/5/286 (Item 286 from file: 109)
009281 NSA-04-002684
Interpretation of Bikini Magnetic Data
Alldredge, L.R.; Dichtel, W.J.
Transactions of the American Geophysical Union (U.S.) Superseded by EOS, Trans., Am. Geophys. Union v 30.
Publication Date: (1949) Dec. 831-5 p.
Coden: TAGUA
Note: 0002-8606
Journal Announcement: NSA04
Document Type: Journal Article
Language: English
Descriptors: BIKINI; DIAGRAMS; GEOPHYSICS; MAGNETIC FIELDS; ROCKS; SUSCEPTIBILITY
Subject Codes (NSA): PHYSICS

10/5/287 (Item 287 from file: 109)
009111 NSA-04-002514
Incidental Finding of Megaloblastic-Like Cells in Bone Marrow of One of Two Swine with Macrocytic Anemia and Achlorhydria
Lawrason, F.D.; Cronkite, E.P.
Yale Journal of Biology and Medicine (U.S.) v 22.
Publication Date: (1949) Oct. 57-66 p.
Coden: YJBMA
Note: 0044-0086
Journal Announcement: NSA04
Document Type: Journal Article
Language: English
Descriptors: AGE; ANEMIA; ANIMALS; BIBLIOGRAPHY; BIKINI; BLOOD CELLS; BLOOD FORMATION; BONE MARROW; ERYTHROCYTES; FOOD; HYDROCHLORIC ACID; LEUCOCYTES; MICROSCOPY; NUCLEAR EXPLOSIONS; QUANTITY RATIO; RADIATION INJURIES; STOMACH; SWINE
Subject Codes (NSA): BIOLOGY AND MEDICINE

10/5/288 (Item 288 from file: 109)
007937 NSA-04-001340
The Hemorrhagic Syndrome of Acute Ionizing Radiation Illness Produced in Goats and Swine by Exposure to the Atomic Bomb at Bikini, 1946
Cronkite, E.P.
Blood (U.S.) v 5.
Publication Date: (1950) Jan. 32-45 p.
Coden: BLOOA
Note: 0006-4971
Journal Announcement: NSA04
Document Type: Journal Article
Language: English
Descriptors: ANIMALS; ANTIBODIES; BIKINI; BIRDS; BLOOD; BLOOD CELLS; BLOOD SERUM; BLOOD VESSELS; CAPILLARIES; CHICKENS; COAGULATION; DOGS; ENZYMES; ERYTHROCYTES; FIBRINOLYSIN; FISSION PRODUCTS; GAMMA RADIATION; GOATS; HEMATOCRIT; HEMOGLOBIN; HEMORRHAGE; HEPARIN; IRRADIATION; LEUCOCYTES ; LIPIDS; METABOLISM; NUCLEAR EXPLOSIONS; PLATELETS; PROTHROMBIN; PURPURA; QUANTITY RATIO; RADIATION INJURIES; RADIATION SICKNESS; RATS; SWINE;

TISSUES; ULCERATIONS
Subject Codes (NSA): BIOLOGY AND MEDICINE

10/5/289 (Item 289 from file: 109)
006983 NSA-04-000386
Hereditary Effects Produced in Maize by Radiations from the Bikini Atomic Bomb. I. Studies on Seedlings and Pollen of the Exposed Generation
Anderson, E.G.; Longley, A.E.; Li, C.H.; Retherford, K.L.
Genetics (U.S.) v 34.
Publication Date: (1949) Nov. 639-46 p.
Coden: GENTA
Secondary Report No.: See also NSA 1-1246
Note: See also NSA 1-1246
Note: 0016-6731
Journal Announcement: NSA04
Document Type: Journal Article
Language: English
Descriptors: BIKINI; CEREALS; GENETICS; IRRADIATION; MAIZE; NUCLEAR EXPLOSIONS; PLANT CELLS; PLANTS; POLLEN; RADIATION DOSES; RADIATION EFFECTS; RADIATION INJURIES; REPRODUCTION; SEEDS; STANDARDS; VARIATIONS; X RADIATION
Subject Codes (NSA): BIOLOGY AND MEDICINE

10/5/290 (Item 290 from file: 109)
004762 NSA-03-000537
Atomic danger from the radiation point of view
Mallet, L.
J. Radiol. Electrol. v 29.
Publication Date: 1948 631-4 p.
Journal Announcement: NSA03
Document Type: Journal Article
Language: French
Descriptors: ABSORPTION; BETA PARTICLES; BIKINI; BONE MARROW; ENERGY; FISSION PRODUCTS; GAMMA RADIATION; HEMORRHAGE; HIROSHIMA; LEUCOCYTES; LIGHT; NAGASAKI; NEUTRONS; NUCLEAR EXPLOSIONS; PACIFIC OCEAN; QUANTITY RATIO; RADIATION EFFECTS; RADIATION INJURIES; RADIOBIOLOGY; REACTORS; REPRODUCTION; SHOCK WAVES; THERMAL RADIATION; ULTRAVIOLET RADIATION; URANIUM
Subject Codes (NSA): BIOLOGY AND MEDICINE

10/5/291 (Item 291 from file: 109)
003647 NSA-02-001655
The Clinical Manifestations of Acute Radiation Illness in Goats
Cronkite, E.P.
U.S. Naval Med. Bull. v 49.
Publication Date: (1949) Mar.-Apr. 199-215 p.
Journal Announcement: NSA02
Document Type: Journal Article
Language: English
Descriptors: ANIMALS; ANTIBIOTICS; BIKINI; BLOOD; COAGULATION; GOATS; HAIR; HEMORRHAGE; LEUCOCYTES; MEDICINE; PENICILLIN; QUANTITY RATIO; RADIATION DOSES; RADIATION EFFECTS; RADIATION SICKNESS; SKIN; STOMACH; SURVIVAL TIME; TISSUES; TRANSFUSIONS; TRANSPLANTS; VARIATIONS; VOMITING
Subject Codes (NSA): PHYSICS, THEORETICAL

10/5/292 (Item 292 from file: 109)
003495 NSA-02-001503
Radiological and Salinity Relationships in the Water at Bikini Atoll
Ford, W.L.
Trans. Amer. Geophysical Union v 30.
Publication Date: (1949) Feb. 46-53 p.
Journal Announcement: NSA02
Document Type: Journal Article
Language: English
Descriptors: ANIMALS; BIKINI; CONTAMINATION; DIAGRAMS; ISLANDS; NUCLEAR EXPLOSIONS; PACIFIC OCEAN; PLANTS; QUANTITY RATIO; RADIOACTIVITY; RADIOGRAPHY; SALTS; SEA; SODIUM CHLORIDES; TRACER TECHNIQUES; WATER

Subject Codes (NSA): ATOMIC BOMBS AND WARFARE

10/5/293 (Item 293 from file: 109)
002888 NSA-02-000896
No Place to Hide
Bradley, D.
Publication Date: 1948 182 p.
Publ: Little, Brown and Co.
Journal Announcement: NSA02
Document Type: Book
Language: English
Descriptors: BIKINI; GEIGER-MUELLER COUNTERS; ISLANDS; MEASURED VALUES; NUCLEAR EXPLOSIONS; PACIFIC OCEAN; RADIOACTIVITY; RADIOTHERAPY; SEA
Subject Codes (NSA): ATOMIC BOMBS AND WARFARE

10/5/294 (Item 294 from file: 109)
002828 NSA-02-000836
The Clinical Manifestations of Acute Radiation Illness Produced in Goats by Exposure to an Atomic Bomb, Test Able, Bikini, 1946, with Comments on Therapy. Report No. 10
Crankite, E.P.
Naval Medical Research Institute
Publication Date: Mar. 8, 1948 42 p.
Primary Report No.: NP-574
Journal Announcement: NSA02
Document Type: Report
Language: English
Descriptors: ANIMALS; ANTIBIOTICS; BIKINI; BLOOD PLASMA; GOATS; HEMORRHAGE; LEUCOCYTES; MEDICINE; NUCLEAR EXPLOSIONS; PENICILLIN; QUANTITY RATIO; RADIATION DOSES; RADIATION SICKNESS; THERAPY; TRANSFUSIONS; TRANSPLANTS
Subject Codes (NSA): RADIATION SICKNESS

10/5/295 (Item 295 from file: 109)
002397 NSA-02-000405
Physiological Effects of the Atom Bomb
(Les Effets Physiologiques de la bombe Atomique)
Atomes (France) Superseded by Recherche v 3.
Publication Date: 1948 July 244 p.
Coden: ATOPA
Note: 0365-7515
Journal Announcement: NSA02
Document Type: Journal Article
Language: French
Descriptors: ANIMALS; BIKINI; HIROSHIMA; MAN; NAGASAKI; NUCLEAR EXPLOSIONS; PACIFIC OCEAN; RADIATION EFFECTS
Subject Codes (NSA): BIOLOGICAL EFFECTS OF RADIATION

10/5/296 (Item 296 from file: 109)
002028 NSA-02-000036
The Response of Tissue to Total Body Irradiation. Report 11
Tullis, J.L.
Naval Medical Research Institute
Publication Date: July 22, 1948 27 p.
Journal Announcement: NSA02
Document Type: Book
Language: English
Descriptors: ANIMALS; BIKINI; BODY; HEMORRHAGE; INFECTIONS; NECROSIS; NUCLEAR EXPLOSIONS; PHOTOGRAPHY; RADIATION INJURIES; SWINE; X RADIATION
Subject Codes (NSA): BIOLOGICAL EFFECTS OF RADIATION

10/5/297 (Item 297 from file: 109)
001246 NSA-01-001246
On the Frequency and Transmitted Chromosome Alterations and Gene Mutations Induced by Atomic Bomb Radiations in Maize
Anderson, E.G.

Proceedings of the National Academy of Sciences v 34.
Publication Date: August 1948 387-390 p.
Journal Announcement: NSA01
Document Type: Journal Article
Language: English
Descriptors: BIKINI; CEREALS; CHROMOSOMES; GENES; MAIZE; MALFORMATIONS; MUTATIONS; NUCLEAR EXPLOSIONS; PACIFIC OCEAN; PLANT CELLS; RADIATION EFFECTS; REPRODUCTION; SEEDS; STATISTICS; STERILIZATION; TESTING; X RADIATION
Subject Codes (NSA): BIOLOGICAL EFFECTS OF RADIATION

10/5/298 (Item 298 from file: 109)
001205 NSA-01-001205
Report of Scientific Director on Cooperation in Effort at Eniwetok
Froman, D.
Publication Date: May 21, 1948 5 p.
Primary Report No.: AECD-2257; (LADC-528)
Secondary Report No.: (LADC-528)
Note: decl. September 1, 1948; For publication in Review of Scientific Instruments
Journal Announcement: NSA01
Document Type: Report
Language: English
Descriptors: ENIWETOK; NUCLEAR WEAPONS; POWER
Subject Codes (NSA): SCIENTIFIC RESEARCH

10/5/299 (Item 299 from file: 109)
000604 NSA-01-000604
Chromosome Irregularities Produced by Atomic Irradiation
Brown, M.S.
Genetics (U.S.) v 33.
Publication Date: January 1948 98 p.
Coden: GENTA
Note: 0016-6731
Journal Announcement: NSA01
Document Type: Journal Article
Language: English
Descriptors: BIKINI; CHROMOSOMES; COTTON; DYES; EMBRYOS; GAMMA RADIATION; LOSSES; MEIOSIS; MITOSIS; NUCLEAR EXPLOSIONS; PLANTS; RADIATION EFFECTS; SEEDS; TEXTILES
Subject Codes (NSA): BIOLOGICAL EFFECTS OF RADIATION

10/5/300 (Item 300 from file: 109)
000406 NSA-01-000406
Cytogenetic Effects in Corn Exposed to Atomic Bomb Ionizing Radiation at Bikini
Randolph, L.F.; Longley, A.E.; Li, C.H.
Science See Saiensu v 108.
Publication Date: July 2, 1948 13-15 p.
Coden: SIENDS1
Journal Announcement: NSA01
Document Type: Journal Article
Language: English
Descriptors: BIKINI; CEREALS; CHLOROPHYLL; CHROMOSOMES; CONTROL; CORN; CYTOLOGY; FISSION PRODUCTS; GENETICS; METABOLISM; MUTATIONS; NUCLEAR EXPLOSIONS; PHENOTYPE; PLANT CELLS; PLANTS; POLLEN; QUANTITY RATIO; RADIATION DOSES; RADIATION EFFECTS; RADIATION INJURIES; RADIATION SOURCES; REPRODUCTION; SEEDS; STERILIZATION; TISSUES; VARIATIONS; X RADIATION
Subject Codes (NSA): BIOLOGICAL EFFECTS OF RADIATION

10/5/301 (Item 1 from file: 103)
03616970 JPN-93-012083; EDB-94-026963
Title: Some topics on radioecological research in marine environment
Author(s): Shimizu, Makoto (Tokyo Univ. (Japan). Faculty of Agriculture)
Title: Approach to the nuclear safety for environment and members of public
Author(s)/Editor(s): Iwakura, T.; Nakajima, T. (eds.)

Corporate Source: National Inst. of Radiological Sciences, Chiba (Japan) (Code: 4485000)
Conference Title: 20. National Institute of Radiological Sciences seminar on environmental research
Conference Location: Chiba (Japan) Conference Date: 10-11 Dec 1992
Publication Date: Mar 1993 p 32-42 (201 p)
Report Number(s): NIRS-M-93 CONF-921297--
Order Number: DE94707693
Document Type: Analytic of a Report; Conference Literature
Language: Japanese
Journal Announcement: EDB9404
Availability: OSTI; NTIS; INIS
Subfile: ERA (Energy Research Abstracts); ETD (Energy Technology Data Exchange). JPN (Japan (sent to DOE from))
US DOE Project/NonDOE Project: NP
Country of Origin: Japan
Country of Publication: Japan
Abstract: In Japan, systematic researches on marine environmental radioactivity started in 1954 when 'Bikini incidence' occurred. After several years of handling emergency situations, basic studies were carried out to understand processes and mechanisms of contamination of aquatic organisms by radionuclides. At this period 'Hiyama Group' had a large contribution to the development of this new field of research. Important concepts and items have already been dealt with in this Grant Group. Toward the end of 'Hiyama Group', a new project started in Nuclear Safety Research Association. This project, so-called 'Kaihohtoku', aimed at gathering necessary information for safety assessment on the release of low-level radioactive liquid wastes from a newly planned spent-fuel reprocessing plant at Tokai. NIRS-Nakaminato Branch was established first as Marine Radioecological Station in this project. The term 'radioecology' got popularity also in this period. Many important results were obtained and scientific basis of the safety assessment was established in this project. Today we have not any urgent matter to be handled concerning radioecology in our coastal environment. Nuclides found are exclusively of fallout and of a quite low level. We have also established methodology of radiological assessment. So, what is the problem The problem is 'from conservative to realistic', which is the trend in the world. Here, from this viewpoint, some topics such as models and parameters including concentration factors and their validation and verification in the natural environment were discussed. (author).
Major Descriptors: *AQUATIC ECOSYSTEMS -- RADIOECOLOGY
Descriptors: AQUATIC ORGANISMS; CONTAMINATION; FOOD CHAINS; LIQUID WASTES; LOW-LEVEL RADIOACTIVE WASTES; NATURAL RADIOACTIVITY; RADIATION PROTECTION; RADIONUCLIDE MIGRATION
Broader Terms: ECOLOGY; ECOSYSTEMS; ENVIRONMENTAL TRANSPORT; MASS TRANSFER; MATERIALS; RADIOACTIVE MATERIALS; RADIOACTIVE WASTES; RADIOACTIVITY; WASTES
Subject Categories: 540330* -- Environment, Aquatic -- Radioactive Materials Monitoring & Transport -- (1990-)
INIS Subject Categories: B3210* -- Water -- Radioactive materials--monitoring & transport -- (1992-)

10/5/302 (Item 2 from file: 103)
03605380 EDB-94-021346
Title: Possible differences in biological availability of isotopes of plutonium: Report of a workshop
Author(s)/Editor(s): Kercher, J.R.; Gallegos, G.M. (eds.)
Corporate Source: Lawrence Livermore National Lab., CA (United States) (Code: 9513035)
Sponsoring Organization: DOE USDOE, Washington, DC (United States)
Conference Title: Workshop on possible differences in biological availability of isotopes of Plutonium
Conference Location: Las Vegas, NV (United States) Conference Date: 28-29 Aug 1990
Publication Date: Sep 1993 (56 p)

Report Number(s): UCRL-ID-110051 CONF-9008144--Summ.
Order Number: DE94003878
Contract Number (DOE): W-7405-ENG-48
Document Type: Report; Conference Literature
Language: English
Journal Announcement: EDB9403
Availability: OSTI; NTIS; INIS; GPO Dep.
Distribution: (Report):1 (MF):4 MN-702
Subfile: ERA (Energy Research Abstracts); ETD (Energy Technology Data Exchange); INS (US Atomindex input); NTS (NTIS). IMS (DOE contractor)
US DOE Project/NonDOE Project: P
Country of Origin: United States
Country of Publication: United States
Abstract: This paper presents the results of a workshop conducted on the apparent different bioavailability of isotopes [sup 238]Pu and [sup 239]Pu. There is a substantial body of evidence that [sup 238]Pu as commonly found in the environment is more biologically available than [sup 239]Pu. Studies of the Trinity Site, Nevada Test Site from nonnuclear and nuclear events, Rocky Flats, Enewetak and Bikini, and the arctic tundra support this conclusion and indicate that the bioavailability of [sup 238]Pu is more than an order of magnitude greater than that of [sup 239]Pu. Plant and soil studies from controlled environments and from Savannah River indicate no isotopic difference in availability of Pu to plants; whereas studies at the Trinity Site do suggest a difference. While it is possible that these observations can be explained by problems in the experimental procedure and analytical techniques, this possibility is remote given the ubiquitous nature of the observations. Studies of solubility of Pu in the stomach contents of cattle grazing at the Nevada Test Site and from fish from Bikini Atoll both found that [sup 238]Pu was more soluble than [sup 239]Pu. Studies of the Los Alamos effluent stream indicate that as particle size decreases, the content of [sup 238]Pu relative to [sup 239]Pu increases.
Major Descriptors: *FOOD CHAINS -- CONTAMINATION; *PLUTONIUM 238 -- BIOLOGICAL AVAILABILITY; *PLUTONIUM 239 -- BIOLOGICAL AVAILABILITY; *SOILS -- CONTAMINATION
Descriptors: ARCTIC REGIONS; BIKINI; CATTLE; ENIWETOK; FISHES; LOS ALAMOS; NEVADA TEST SITE; PLANTS
Broader Terms: ACTINIDE ISOTOPES; ACTINIDE NUCLEI; ALPHA DECAY RADIOISOTOPES; ANIMALS; AQUATIC ORGANISMS; CRYOSPHERE; DEVELOPED COUNTRIES; DOMESTIC ANIMALS; EVEN-EVEN NUCLEI; EVEN-ODD NUCLEI; HEAVY ION DECAY RADIOISOTOPES; HEAVY NUCLEI; ISLANDS; ISOTOPES; MAMMALS; MARSHALL ISLANDS; MICRONESIA; NATIONAL ORGANIZATIONS; NEW MEXICO; NORTH AMERICA; NUCLEI; OCEANIA; PLUTONIUM ISOTOPES; POLAR REGIONS; RADIOISOTOPES; RUMINANTS; SILICON 32 DECAY RADIOISOTOPES; SPONTANEOUS FISSION RADIOISOTOPES; URBAN AREAS; US DOE; US ORGANIZATIONS; USA; VERTEBRATES; YEARS LIVING RADIOISOT; YEARS LIVING RADIOISOTOPES
Subject Categories: 540230* -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- (1990-)
560162 -- Radionuclide Effects, Kinetics, & Toxicology -- Animals, Plants, Microorganisms, & Cells
INIS Subject Categories: B3110* -- Radioactive materials monitoring & transport
C2120 -- Radioisotope effects, kinetics, & toxicology in animals, plants & microorganisms

10/5/303 (Item 3 from file: 103)
03599177 EDB-94-015143
Title: Adsorption and desorption kinetics of cesium in an organic matter-rich soil saturated with different cations
Author(s): Aharoni, C. (Technion-Israel Inst. of Technology, Haifa (Israel)); Pasricha, N.S. (Punjab Agricultural Univ., Ludihana (India)); Sparks, D.L. (Univ. of Delaware, Newark, DE (United States))
Source: Soil Science (United States) v 156:4. Coden: SOSCAK ISSN: 0038-075X
Publication Date: Oct 1993 p 233-239 5003654

Document Type: Journal Article
Language: English
Journal Announcement: EDB9402
Subfile: ETD (Energy Technology Data Exchange). IIA (DOE contractor)
US DOE Project/NonDOE Project: NP
Country of Origin: Israel
Country of Publication: United States
Abstract: The fallout from nuclear weapons tests conducted on Bikini Atoll Island in 1954 resulted in contamination of soil with Cesium 137. To develop effective regimes for decontaminating the Bikini Atoll soil, the exchange of Cs for K, Na, and other cations on the soil must be understood. Samples of soils made homoionic with K, Na, or Ca were reacted with solutions containing Cs ions, and the quantities of Cs sorbed and the rates of exchange were measured. The samples were then reacted with solutions containing K, Na, or Ca, and the quantities of Cs desorbed and the rates of exchange were again measured. Samples made homoionic with Na had a greater ion exchange capacity than samples made homoionic with K, and, in both cases, the ion exchange capacity increased with the organic matter content of the soil. For samples pretreated with Ca, the ion exchange capacity is not related in a simple way to the organic matter content. The kinetics were assessed by plotting the rate of exchange vs. the time and vs. the quantity exchanged. A first-order equation was obeyed during most of the run in Cs desorption experiments and during a limited part of the run in Cs adsorption experiments. An increase in the rate of Cs exchange was observed at the beginning of the experiments especially for Cs adsorption. This increase is presumably due to an increase of the ionic strength of the liquid phase during the exchange process. 33 refs., 9 figs., 2 tabs.
Major Descriptors: *BIKINI -- FALLOUT; *BIKINI -- LAND RECLAMATION; *CESIUM -- CHEMICAL REACTION KINETICS; *CESIUM -- ION EXCHANGE
Descriptors: ADSORPTION; CALCIUM; CATIONS; DESORPTION; NUCLEAR EXPLOSIONS; ORGANIC MATTER; POTASSIUM; SODIUM; SOILS
Broader Terms: ALKALI METALS; ALKALINE EARTH METALS; CHARGED PARTICLES; ELEMENTS; EXPLOSIONS; IONS; ISLANDS; KINETICS; MARSHALL ISLANDS; MATTER ; METALS; MICRONESIA; OCEANIA; REACTION KINETICS; SORPTION
Subject Categories: 540250* -- Environment, Terrestrial -- Site Resource & Use Studies -- (1990-)
540230 -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- (1990-)

10/5/304 (Item 4 from file: 103)
03599019 EDB-94-014985
Title: The technical basis for air pathway assessment of resuspended radioactive aerosols: LLNL experiences at seven sites around the world
Author(s)/Editor(s): Shinn, J.H.
Corporate Source: Lawrence Livermore National Lab., CA (United States) (Code: 9513035)
Sponsoring Organization: DOE USDOE, Washington, DC (United States)
Conference Title: The technical basis for measuring, modeling and mitigating toxic aerosols
Conference Location: Albuquerque, NM (United States) Conference Date: 26-30 Sep 1993
Publication Date: Sep 1993 (12 p)
Report Number(s): UCRL-JC-115045 CONF-930914--1
Order Number: DE94003626
Contract Number (DOE): W-7405-ENG-48
Document Type: Report; Conference Literature
Language: English
Journal Announcement: EDB9402
Availability: OSTI; NTIS; GPO Dep.
Distribution: (Report):0 (MF):4 MN-702; MN-707
Subfile: ERA (Energy Research Abstracts); ETD (Energy Technology Data Exchange); NTS (NTIS). TIC (Technical Information Center)
US DOE Project/NonDOE Project: P
Country of Origin: United States 5003655

Country of Publication: United States
Abstract: There is a large uncertainty in quantifying the inhalation pathway and the aerosol emission rate in human health assessments of radioactive-contamination sites. The need for site-specific assessments led to formation of our team of specialists at LLNL, who have participated in numerous field campaigns around the world. Our goal was to obtain all the information necessary for determining potential human exposures and to estimate source terms for turbulent transport of the emissions during both normal and disturbed soil conditions. That is, measurements were made of the key variables to quantify the suspended aerosols at the actual contamination sites, but different scenarios for habitation, site management, and site cleanup were included. The most notable locations of these site-investigations were the Marshall Islands (Bikini, Enewetak, and Rongelap), Nevada Test Site (GMX, Little Feller, Palanquin, and Plutonium Valley), Tonopah (Nevada--site of Roller Coaster), Savannah River Lab (South Carolina--H-Area site), Johnston Island (cleanup of rocket-impact site), Chernobyl (Ukraine--grass field end sandy beach sites near Nuclear Power Plant Unit 4), and Palomares (Spain--site of aircraft accident). This discussion will review the variables quantified, methods developed, general results, uncertainty of estimations, and recommendations for future research that are a result of our experience in these field studies.
Major Descriptors: *RADIOACTIVE AEROSOLS -- PARTICLE RESUSPENSION
Descriptors: AEROSOL MONITORING; CONCENTRATION RATIO; RADIATION MONITORING; SAMPLING; SITE CHARACTERIZATION
Broader Terms: AEROSOLS; AIR POLLUTION MONITORING; COLLOIDS; DISPERSIONS; MONITORING; SOLS
Subject Categories: 540130* -- Environment, Atmospheric -- Radioactive Materials Monitoring & Transport -- (1990-)
540230 -- Environment, Terrestrial -- Radioactive Materials Monitoring & Transport -- (1990-)
540150 -- Environment, Atmospheric -- Site Resources & Use Studies -- (1990-)
540250 -- Environment, Terrestrial -- Site Resource & Use Studies -- (1990-)

10/5/305 (Item 5 from file: 103)
03592206 EDB-94-008172
Title: On-site polychlorinated biphenyl destruction demonstration project on Kwaylein Atoll, Republic of the Marshall Islands
Author(s): Machanoff, R.; Donaldson, T.L.; Brown, C.H. (Martin Marietta Energy Systems, Oak Ridge, TN (United States))
Title: Air Waste Management Association 85th annual meeting
Conference Title: 85. annual meeting of the Air and Waste Management Association (AWMA)
Conference Location: Kansas City, MO (United States) Conference Date: 21-26 Jun 1992
Publisher: Pittsburgh, PA (United States) Air Waste Management Association
Publication Date: 1992 p 43-44 (301 p)
Report Number(s): CONF-9206114--
Document Type: Analytic of a Book; Conference Literature
Language: English
Journal Announcement: EDB9401
Availability: Air Waste Management Association, P.O. Box 2861, Pittsburgh, PA 15230 (United States)
Subfile: ETD (Energy Technology Data Exchange). IIA (DOE contractor)
US DOE Project/NonDOE Project: P
Country of Origin: United States
Country of Publication: United States
Abstract: The Hazardous Waste Remedial Actions Program (HAZWRAP), managed by Martin Marietta Energy Systems, Inc., is providing environmental management support for the installation restoration of the U.S. Army Kwajalein Atoll (USAKA) Base. The USAKA Base is located on Kwayalein Atoll, Republic of the Marshall Islands, which is over 2100 miles west

of Hawaii in the southern North Pacific. HAZWRAP was tasked to devise a scheme for disposal of polychlorinated biphenyl (PCB)-contaminated transformer fluids. Alternatives to incineration were sought because of the remote location, harsh marine environment, and difficult logistics in transporting PCB-contaminated materials to the United States for disposal. Many of the transformers on Kwajalein Island contain askarels in the range of 300,000- to 700,000-ppm PCB. A surgery of PCB disposal methods identified thermal destruction as the only available and permitted process for destroying very high-concentration PCB fluids. The economics and risk associated with transportation make this option unattractive. Existing chemical destructive methods are permitted for <10,000-ppm PCB and result in incomplete degradation of PCB. A new chemical method referred to as base catalyzed destruction (BCD) was developed by scientists at the Environmental Protection Agency Reduction Engineering Laboratory. The BCD chemical reaction will destroy PCBs in excess of 100,000 ppm. This emerging technology was not at the process or demonstration phase of development. HAZWRAP tasked scientists and engineers from Oak Ridge National Laboratory to develop and scale up the process. These efforts will result in a mobile chemical reactor unit that can be transported to remote locations and decontaminate high-concentration PCB fluids on-site.

Major Descriptors: *MARSHALL ISLANDS -- MILITARY FACILITIES; *POLYCHLORINATED BIPHENYLS -- IN-SITU PROCESSING

Descriptors: CHEMICAL REACTORS; DECONTAMINATION; MOBILE REACTORS; REMEDIAL ACTION; TRANSFORMERS; WASTE MANAGEMENT

Broader Terms: AROMATICS; CHLORINATED AROMATIC HYDROCARBONS; CLEANING; ELECTRICAL EQUIPMENT; EQUIPMENT; HALOGENATED AROMATIC HYDROCARBONS; ISLANDS; MANAGEMENT; MICRONESIA; OCEANIA; ORGANIC CHLORINE COMPOUNDS; ORGANIC COMPOUNDS; ORGANIC HALOGEN COMPOUNDS; PROCESSING; REACTORS

Subject Categories: 540220* -- Environment, Terrestrial -- Chemicals Monitoring & Transport -- (1990-)

10/5/306 (Item 6 from file: 103)

03582136 DEN-93-0FC107; EDB-93-161014

Title: Ionizing radiation and the importance for the environmental medicine practice

Original Title: Die ionisierende Strahlung in ihrer Bedeutung fuer die umweltmedizinische Praxis

Author(s): Arndt, D. (Bundesgesundheitsamt, Berlin (Germany). Klinisch-Diagnostischer Bereich)

Source: Wissenschaft und Umwelt, ISU (Interdisziplinaerer Sonderbereich Umweltschutz) (Germany) v 2. Coden: WUISD5 ISSN: 0170-6977

Publication Date: Jun 1992 p 161-175

Document Type: Journal Article; Numerical Data

Language: German

Journal Announcement: EDB9324

Subfile: ETD (Energy Technology Data Exchange). DEN (Federal Republic of Germany (sent to DOE from))

US DOE Project/NonDOE Project: NP

Country of Origin: Germany

Country of Publication: Germany

Abstract: Results of radiation exposed persons from the population are presented and the consequences are valuated. The radioecological burden and the consequences of events for the environmental medicine are debatted (e.g. Hiroshima/Nagasaki 1945, Bikini H-bomb experiment 1954, container explosion in the MAJAK nuclear weapons centre 1957 and inadmissible waste removal in south Ural 1950/51, accident at the Chernobyl power plant and their consequences particulary for Germany 1986 till now, theft of sources used for radiotherapy and the contamination of the environment after the Goiana accident 1987). Further the risk of radon cure, transatlantic flights, vagabondized sources, uranium mining and some cases of probable stochastic radiation effects (e.g. leukemia clusters at Sellafield, Elbmarsch and Sittensen) is discussed. (orig.)

Major Descriptors: *HUMAN POPULATIONS -- RADIATION DOSES; *HUMAN POPULATIONS -- RADIATION HAZARDS; *RADIATION HAZARDS -- REVIEWS

Descriptors: CARCINOGENESIS; COMPILED DATA; CONTAMINATION; COSMIC RADIATION ; DOSE-RESPONSE RELATIONSHIPS; ENVIRONMENT; MAN; NATURAL RADIOACTIVITY; NUCLEAR EXPLOSIONS; NUCLEAR WEAPONS; RADIATION ACCIDENTS; RADIOECOLOGY; REACTOR ACCIDENTS
Broader Terms: ACCIDENTS; ANIMALS; DATA; DOCUMENT TYPES; DOSES; ECOLOGY; EXPLOSIONS; HAZARDS; HEALTH HAZARDS; INFORMATION; IONIZING RADIATIONS; MAMMALS; NUMERICAL DATA; PATHOGENESIS; POPULATIONS; PRIMATES; RADIATIONS; RADIOACTIVITY; VERTEBRATES; WEAPONS
Subject Categories: 560151* -- Radiation Effects on Animals -- Man
560161 -- Radionuclide Effects, Kinetics, & Toxicology -- Man
560101 -- Biomedical Sciences, Applied Studies -- Radiation Effects -- Dosimetry & Monitoring -- (1992-)

10/5/307 (Item 7 from file: 103)
03580867 EDB-93-159745
Title: Mission hazard assessment for STARS Mission 1 (M1) in the Marshall Islands area
Author(s)/Editor(s): Outka, D.E.; LaFarge, R.A.
Corporate Source: Sandia National Labs., Albuquerque, NM (United States) (Code: 9511100)
Sponsoring Organization: DOE/DP No corporate available; No corporate available; No corporate available; No corporate available
Publication Date: Jul 1993 (50 p)
Report Number(s): SAND-93-0218
Order Number: DE93040204
Contract Number (DOE): AC04-76DP00789
Document Type: Report
Language: English
Journal Announcement: EDB9324
Availability: OSTI; NTIS; GPO Dep.
Distribution: (Report):1 (MF):4 MN-700
Subfile: ERA (Energy Research Abstracts); ETD (Energy Technology Data Exchange); NTS (NTIS). TIC (Technical Information Center)
US DOE Project/NonDOE Project: P
Country of Origin: United States
Country of Publication: United States
Abstract: A mission hazard assessment has been performed for the Strategic Target System Mission 1 (known as STARS M1) for hazards due to potential debris impact in the Marshall Islands area. The work was performed at Sandia National Laboratories as a result of discussion with Kwajalein Missile Range (KMR) safety officers. The STARS M1 rocket will be launched from the Kauai Test Facility (KTF), Hawaii, and deliver two payloads to within the viewing range of sensors located on the Kwajalein Atoll. The purpose of this work has been to estimate upper bounds for expected casualty rates and impact probability or the Marshall Islands areas which adjoin the STARS M1 instantaneous impact point (IIP) trace. This report documents the methodology and results of the analysis.
Major Descriptors: *FAILURES -- PROBABILISTIC ESTIMATION; *HUMAN POPULATIONS -- HEALTH HAZARDS; *MISSILES -- FAILURES; *MISSILES -- TESTING
Descriptors: BALLISTIC MISSILE DEFENSE; MARSHALL ISLANDS; MISSILE LAUNCHING SITES; NOZZLES; RELIABILITY; RISK ASSESSMENT; ROCKETS; STATISTICAL MODELS; TRAJECTORIES
Broader Terms: HAZARDS; ISLANDS; MATHEMATICAL MODELS; MICRONESIA; NATIONAL DEFENSE; OCEANIA; POPULATIONS
Subject Categories: 450500* -- Military Technology, Weaponry, & National Defense -- Strategic Defense Initiative -- (1990-)
990200 -- Mathematics & Computers

10/5/308 (Item 8 from file: 103)
03537976 EDB-93-110457
Title: Measurements of spatial and frequency coherence of an equatorial hf path during spread-F
Author(s)/Editor(s): Fitzgerald, T.J.; Argo, P.E.; Carlos, R.C.
Corporate Source: Los Alamos National Lab., NM (United States) (Code:

9512470)
Sponsoring Organization: DOD Department of Defense, Washington, DC (United States)
Conference Title: TENERP conference
Conference Location: Monterey, CA (United States) Conference Date: 21-24 Jun 1993
Publication Date: 1993 (15 p)
Report Number(s): LA-UR-93-2140 CONF-9306190--1
Order Number: DE93016615
Contract Number (DOE): W-7405-ENG-36
Document Type: Report; Conference Literature
Language: English
Journal Announcement: EDB9317
Availability: OSTI; NTIS; GPO Dep.
Distribution: (Report):0 (MF):4 MN-000
Subfile: ERA (Energy Research Abstracts); ETD (Energy Technology Data Exchange); NTS (NTIS). IIA (DOE contractor)
US DOE Project/NonDOE Project: P
Country of Origin: United States
Country of Publication: United States
Abstract: In August 1990, the authors set up an hf path on the equatorial path between Maloelap Atoll and Bikini Atoll. This path, which had a range of 702 km, reflected in the ionosphere approximately 100 km north of the Altair radar location on Kwajalein. Transmitters at Maloelap broadcasted four cw tones within bandwidth of either 4 kHz, 9 kHz, or 70 kHz to be used to determine frequency coherence and also a phase-coded pseudo random sequence with a bandwidth of 60 kHz (channel probe) to be used to determine time delay spread. A spatial array of antennas was deployed at Bikini to measure spatial and frequency coherence using the cw broadcasts. The system was run in the post-sunset time period over two weeks during which almost every night showed significant degradation due to spread F resulting in rapid fading, decreased spatial and frequency coherence, and increased time delay spread. Doppler spreads of greater than 20 Hz were not uncommon, and the spatial correlation distances and frequency coherence bandwidths became so small (50 meters and 1 kHz respectively) that the experiment had to be readjusted. Measurements taken by the Altair incoherent scatter radar and the CUPRI 50 MHz coherent scatter radar indicate that although the bistatic hf channel is affected by the large scale plume structures, most of the [open quotes]damage[close quotes] is done by the bottomside spread F.
Major Descriptors: *IONOSPHERE -- SIGNAL DISTORTION; *RADIOWAVE RADIATION -- SIGNAL DISTORTION; *RADIOWAVE RADIATION -- WAVE PROPAGATION
Descriptors: DOPPLER BROADENING; MHZ RANGE 01-100; SPREAD F
Broader Terms: EARTH ATMOSPHERE; ELECTROMAGNETIC RADIATION; F REGION; FREQUENCY RANGE; IONOSPHERE; LINE BROADENING; MHZ RANGE; PLANETARY IONOSPHERES; RADIATIONS
Subject Categories: 661300* -- Other Aspects of Physical Science -- (1992-)

10/5/309 (Item 9 from file: 103)
03532084 AIX-24-057509; EDB-93-104565
Title: Nations of the earth report
Corporate Source: United Nations, New York, NY (USA) (Code: 6465050)
Conference Title: United Nations conference on environment and development: earth summit
Conference Location: Rio de Janeiro (Brazil) Conference Date: 1-12 Jun 1992
Publisher: Geneva (Switzerland) UNCED
Publication Date: 1992 ([2 v.] p)
Report Number(s): CONF-9206148--
ISBN: 92-1-100483-7 92-1-100484-5
Document Type: Book; Conference Literature
Language: English
Journal Announcement: EDB9317
Subfile: ETD (Energy Technology Data Exchange). INIS (non-US Atomindex

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