**Idaho
National
Engineering
Laboratory**

INEL-95/0513

September 1995

RECEIVED
NOV 21 1995

OSTI

**Bibliography for Nuclear Criticality
Accident Experience, Alarm
Systems, and Emergency
Management**

Valerie L. Putman

INEL-95/0513

Bibliography for Nuclear Criticality Accident Experience, Alarm Systems, and Emergency Management

Valerie L. Putman

Published September 1995

**Idaho National Engineering Laboratory
Lockheed Idaho Technologies Company
Idaho Falls, Idaho 83415**

DISCLAIMER

This report was prepared as an account of work sponsored by an agency of the United States Government. Neither the United States Government nor any agency thereof, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government or any agency thereof.

Prepared for the
U. S. Department of Energy
Assistant Secretary for Environmental Management
Under DOE Idaho Operations Office
Contract DE-AC07-94ID13223

MASTER

DISTRIBUTION OF THIS DOCUMENT IS UNLIMITED
PLC

DISCLAIMER

Portions of this document may be illegible in electronic image products. Images are produced from the best available original document.

Abstract

The characteristics, detection, and emergency management of nuclear criticality accidents outside reactors has been an important component of criticality safety for as long as the need for this specialized safety discipline has been recognized. The general interest and importance of such topics receives special emphasis because of the potentially lethal, albeit highly localized, effects of criticality accidents and because of heightened public and regulatory concerns for any undesirable event in nuclear and radiological fields.

This bibliography lists references which are potentially applicable to or interesting for criticality alarm, detection, and warning systems; criticality accident emergency management; and their associated programs. The lists are annotated to assist bibliography users in identifying applicable:

- industry and regulatory guidance and requirements, with historical development information and comments;
- criticality accident characteristics, consequences, experiences, and responses;
- hazard-, risk-, or safety-analysis criteria;
- CAS design and qualification criteria;
- CAS calibration, maintenance, repair, and testing criteria;
- experiences of CAS designers and maintainers;
- criticality accident emergency management (planning, preparedness, response, and recovery) requirements and guidance;
- criticality accident emergency management experience, plans, and techniques;
- methods and tools for analysis; and
- additional bibliographies.

This page intentionally blank.

Table of Contents

Abstract	iii
Table of Contents	v
List of Abbreviations, Acronyms, and Initialisms	vii
List of Subject Codes	xi
 1 Introduction	 1-1
1.1 General Overview	1-1
1.2 Scope and Limitations	1-1
1.3 Acknowledgements	1-3
1.4 Comments	1-3
 2 Standard Bibliographic Listing	 2-1
 3 Listing Sorted by Subject Code	 3-1
3.1 Code A1: Criticality Accidents in Non-Reactors	3-1
3.1.1 General and Miscellaneous	3-1
3.1.2 1953 Through 1978, 11 Incidents in the Soviet Union	3-2
3.1.3 June 16, 1958, ORNL Y-12 Plant, Oak Ridge, Tennessee USA	3-3
3.1.4 Dec. 30, 1958, LASL Recovery Process, Los Alamos, New Mexico USA	3-4
3.1.5 Oct. 16, 1959, ICPP, NRTS, Idaho USA	3-4
3.1.6 Jan. 25, 1961, ICPP, NRTS, Idaho USA	3-4
3.1.7 April 7, 1962, Hanford Works Recuplex Process, Richland Washington USA	3-4
3.1.8 July 24, 1964, Scrap Recovery Plant, Wood River Junction, Rhode Island USA	3-5
3.1.9 Aug. 24, 1970, Windscale Works Plutonium Recovery, UK	3-6
3.1.10 Oct. 17, 1978, ICPP, INEL, Idaho USA	3-6
3.2 Code A2: Criticality Accidents in Reactors	3-6
3.2.1 General and Miscellaneous	3-6
3.2.2 June 6, 1945, Los Alamos, New Mexico USA	3-8
3.2.3 Aug. 21, 1945, Los Alamos, New Mexico USA	3-8
3.2.4 May 21, 1946, Los Alamos, New Mexico USA	3-8
3.2.5 Dec. 1949, LASL, Los Alamos, New Mexico USA	3-9
3.2.6 1940s - 1950s, Chalk River Laboratory ZEEP Critical Facility, Chalk River, Ontario Canada	 3-9
3.2.7 Feb. 1, 1951, LASL, Los Alamos, New Mexico USA	3-9
3.2.8 Nov. 16, 1951, Hanford Homogeneous Reactor, Hanford Works, Richland Washington USA ..	3-9
3.2.9 April 18, 1952, LASL Jemima Assembly, Los Alamos, New Mexico USA	3-9
3.2.10 June 2, 1952, ANL ZPR-1, Lamont, Illinois USA	3-10
3.2.11 Dec. 12, 1952, NRX Reactor, Chalk River, Ontario Canada	3-10
3.2.12 1953, Soviet Union	3-10
3.2.13 Feb. 3, 1954, LASL Lady Godiva Assembly, Los Alamos, New Mexico USA	3-11
3.2.14 May 26, 1954, ORNL Critical Experiments Laboratory, Oak Ridge, Tennessee USA	3-11
3.2.15 July 22, 1954, ANL BORAX Reactor, NRTS, Idaho USA	3-11
3.2.16 Feb. 1, 1956, ORNL Critical Experiments Laboratory, Oak Ridge, Tennessee USA	3-11
3.2.17 July 3, 1956, LASL Honeycomb Critical Assembly, Los Alamos, New Mexico USA	3-11
3.2.18 Feb. 12, 1957, LASL Lady Godiva Assembly, Los Alamos, New Mexico USA	3-12
3.2.19 Jan. 22, 1958, Mayak Enterprise, Urals, Soviet Union	3-12
3.2.20 Oct. 15, 1958, Boris Kidrič Institute, Vinča Yugoslavia	3-12

3.2.21	March 15, 1960, Alize Critical Facility, Centre d'Etudes Nucleaires de Saclay France	3-12
3.2.22	June 17, 1960, LASL, Los Alamos, New Mexico USA	3-12
3.2.23	Jan. 3, 1961, SL-1 Reactor, NRTS, Idaho USA	3-13
3.2.24	Nov. 10, 1961, ORNL, Oak Ridge, Tennessee USA	3-13
3.2.25	March 26, 1963, LLNL, Livermore, California USA	3-13
3.2.26	Dec. 30, 1965, VENUS Critical Facility at Mol, Belgium	3-13
3.2.27	Jan. 30, 1968, ORNL Critical Experiments Facility, Oak Ridge, Tennessee USA	3-14
3.2.28	April 5, 1968, RFNC-VNIITF Critical Facility, Soviet Union	3-14
3.2.29	Sept. 23, 1983, RA-2 Facility, Buenos Aires Argentina	3-14
3.3	Code A3: Experimental and Hypothetical Criticality Accidents	3-15
3.4	Codes B1 and B2: Extensive Bibliography or References	3-30
3.5	Code C1: CAS Calibration, Maintenance, and Testing	3-34
3.6	Code C2: CAS Design	3-40
3.7	Code C3: Determining If a CAS Is Needed	3-47
3.8	Code C4: CAS Field Experience	3-50
3.9	Code C5: CAS Guidance, Requirements, and Associated Comments	3-56
3.10	Code D: Doses and Dosimetry	3-60
3.11	Code E1: Criticality Accident Emergency Management Guidance, Requirements	3-70
3.12	Code E2: Criticality Accident Emergency Planning	3-72
3.13	Code E3: Criticality Accident Emergency Preparedness	3-76
3.14	Code E4: Criticality Accident Emergency Response and Recovery	3-78
3.15	Code E5: Emergency Management in General	3-80
3.16	Code H1: Hazard-, Risk-, Safety-Analysis for Criticality Safety	3-83
3.17	Code H2: Hazard-, Risk-, Safety-Analysis in General	3-84
3.18	Code M: Medical	3-86
3.19	Code O: Other	3-88
3.20	Code R: Atmospheric Release and Dispersion	3-91
3.21	Code T: Computational Methods, Tools, and Validations	3-92
4	Sorted by Document Type and Number or Date	4-1
4.1	Reports, Rules, Standards, Etc. with Document Numbers	4-1
4.2	Books	4-24
4.3	Dissertations and Theses	4-25
4.4	Journals and Periodicals	4-26
4.5	Proceedings	4-30
4.5.1	Annual ANS Meetings (see ANS Trans.)	4-30
4.5.2	Other Conferences, Meetings, Seminars, and Workshops	4-37
4.6	Other	4-46
5	Selected Publisher and Alternate Contact Information	5-1

List of Abbreviations, Acronyms, and Initialisms

Many abbreviations, acronyms, and initialisms are used to indicate institutional authors and to document publication information. The references themselves also include acronyms and initialisms to shorten title lengths and to convey other information in report and document numbers.

ANSWERS	The ANSWERS Software Service (Winfrith, Dorchester, Dorset UK)
AEC	U. S. Atomic Energy Commission (superseded by DOE and NRC; Washington D.C. USA: GPO)
AECp	UKAEA Atomic Energy Code of Practice (UK)
AERE	Atomic Energy Research Establishment (Winfrith UK)
AESJ	Atomic Energy Society of Japan
alt.	alternate
ANL	Argonne National Laboratory
ANL-E	Argonne National Laboratory (Argonne, IL USA)
ANL-W	Argonne National Laboratory (INEL, Idaho Falls, ID USA)
ANS	American Nuclear Society, Inc. (La Grange Park, IL USA: ANS Publications)
<i>ANS Trans.</i>	<i>Transactions of the American Nuclear Society</i> (LaGrange Park, IL USA: ANS)
AHSB	UKAEA, Authority Health and Safety Branch (UK)
ANSI	American National Standards Institute, Inc. (USA)
BNFL	British Nuclear Fuels Limited (Warrington, Cheshire UK)
CAS	Criticality Alarm System or Criticality Accident Alarm System
CEA	Commissariat à l'Énergie Atomique (France)
CEI	Commission Electrotechnique Internationale (Geneva Switzerland)
CFR	Code of Federal Regulations (Washington D. C. USA: GPO)
DOE	U. S. Department of Energy (Washington D. C. USA: GPO)
DSN	CEA Département de Sûreté Nucléaire (France)

DPSR	CEA Direction de la Protection et de la Sûreté Radiologiques (France)
ed.	edition (not editor)
et al.	and others
FR	Federal Register (Washington D. C. USA: GPO)
GPO	U. S. Government Printing Office (Washington D. C. USA)
HMSO	Her Majesty's Stationery Office (London UK)
HPS	Health Physics Society (McLean, VA USA)
HW	Hanford Works, General Electric Company (Richland, WA USA)
IAEA	International Atomic Energy Agency (Vienna Austria)
ICNC	International Conference on Nuclear Criticality Safety (alternate name: ISCS)
ICPP	Idaho Chemical Processing Plant (NRTS or INEL, Idaho USA)
ICRU	International Commission on Radiation Units and Measurements (Bethesda, MD USA: ICRU Publications)
IDO	DOE Idaho Operations (Idaho Falls, ID USA), formerly AEC Idaho Operations (Idaho Falls, ID USA)
IEC	International Electrotechnical Commission (Geneva Switzerland)
IEEE	Institute of Electrical and Electronic Engineers, Inc. (New York, NY USA)
INEL	Idaho National Engineering Laboratory (formerly NRTS; Idaho Falls, ID USA)
info.	information
IPSN	CEA - Institut de Protection et de Sûreté Nucléaire (France)
ISCS	International Seminar on Nuclear Criticality Safety (alternate name: ICNC)
IOS	International Organization for Standardization (Geneva Switzerland)
ISO	meaning same or similar, used to identify standards from IOS
JAERI	Japan Atomic Energy Research Institute (Tokai-mura Japan)
LA	Los Alamos (Los Alamos, NM USA)
LANL	Los Alamos National Laboratory (formerly LASL; Los Alamos, NM USA)

LASL	Los Alamos Scientific Laboratory (now LANL; Los Alamos, NM USA)
LLNL	Lawrence Livermore National Laboratory (Livermore, CA USA)
MAPI	Mitsubishi Atomic Power Institute (Japan)
NCRP	National Council on Radiation Protection and Measurements (Bethesda, MD USA: NCRP Publications)
NEA	OECD Nuclear Energy Agency
NEADB	NEA Data Bank
NFPA	National Fire Protection Association (Quincy, MA USA)
NRC	U. S. Nuclear Regulatory Commission (Washington D.C. USA: GPO)
NRTS	National Reactor Testing Station (now INEL; Idaho Falls, ID USA)
NTIS	National Technical Information Service (USA)
NUREG	NRC Document or Report (USA)
OECD	Organization for Economic Co-operation and Development (Paris France: OECD Publications)
ORAU	Oak Ridge Associated Universities (Oak Ridge, TN USA)
ORNL	Oak Ridge National Laboratory (Oak Ridge, TN USA)
OSHA	U. S. Occupational Safety and Health Administration (Washington D. C. USA)
OSTI	DOE Office of Science and Technical Information (Oak Ridge, TN USA)
p.	page (either for a single page article or the first of a multiple page article)
PGDP	Portsmouth Gaseous Diffusion Plant (Piketon, OH USA)
PNC	Power Reactor and Nuclear Fuel Development Corporation (Japan)
PNL	Battelle Pacific Northwest Laboratories (Richland, WA USA)
POEF	Portsmouth Ohio Environmental Facility (Piketon, OH USA)
pp.	pages
(R19xx)	where 19xx is a year, the latest year in which a standard was reaffirmed
REAC/TS	Radiation Emergency Assistance Center/Training Site (Oak Ridge, TN USA)

RSIC	Radiation Shielding Information Center, ORNL (Oak Ridge, TN USA)
rev.	revision
SEESNC	CEA Section Expérimentale d'Études de Sûreté Nucléaire Criticité (France)
SRSC	CEA Service de Recherches en Sûreté et Criticité (France)
SRD	UKAEA Safety Reliability Directorate (UK)
TID	Technical Information Division (Washington D.C. USA: GPO)
UCNC	Union Carbide Nuclear Company, Union Carbide Corporation (Oak Ridge, TN USA)
UCRL	University of California Radiation Laboratory (Livermore, CA USA)
UKAEA	United Kingdom Atomic Energy Authority (UK)
UKAEA Tech.	UKAEA Technology (Winfrith, Dorchester, Dorset UK)
UN	United Nations (New York, NY USA)
UNM	University of New Mexico (Albuquerque, NM USA)
vol.	volume

List of Subject Codes

The following codes are used to indicate subject matter(s) of the referenced documents and, occasionally, to indicate possible applications for the information provided in the referenced documents.

- A criticality accidents (subject codes A1, A2, and A3 combined)
- A1 actual criticality accidents in non-reactors (usually includes mechanisms and characteristics with a brief overview of doses, medical treatment, releases, responses, and recovery)
- A2 actual criticality accidents in reactors, including critical assemblies, research reactors, and power plants (usually includes mechanisms and characteristics with a brief overview of doses, medical treatment, other consequences, responses, and recovery)
- A3 experimental or hypothetical criticality accidents (usually includes characteristics such as fission yield, duration, shutdown mechanism, and doses)
- B1 Extensive bibliography section(s)
- B2 Extensive internal referencing by document or report numbers, no bibliography as such
- C1 CAS calibration, maintenance, and testing
- C2 CAS design, possibly including alarm signal characteristics and detector placement
- C3 determining if a CAS is needed
- C4 field experience with CASs
- C5 CAS guidance and requirements, including clarifications, comments, and interpretations
- D radiological dosimetry and dose information not covered in criticality accident subject codes, including shielding and distance effects, instruments, and calculations
- E emergency management for criticality accidents outside reactor facilities (subject codes E1 through E4 combined)
- E1 emergency management guidance and requirements for criticality accidents outside reactor facilities
- E2 emergency planning for criticality accidents outside of reactor facilities, possibly including evacuation radius, mutual aide agreements, and response procedures
- E3 emergency preparedness for criticality accidents outside reactor facilities, except CASs (drills, exercises, familiarization, and training)

- E4 emergency reporting, response, and recovery for criticality accidents outside of reactor facilities in more detail than typically covered in summary reports
- E5 emergency management in general, for reactor facilities, or for different types of accidents (limited citations included for general information and for consideration of concurrent emergencies)
- H1 hazard-, risk-, or safety-analysis for criticality accidents outside of reactor facilities
- H2 hazard-, risk-, or safety-analysis in general or for other than criticality accidents (limited citations included for general information and for consideration of concurrent emergencies)
- M medical aspects of a criticality accident or of very severe radiological overexposure, except as included in a general analysis or report or an actual or hypothetical criticality accident
- O other
- R atmospheric releases and dispersion, in more detail than typically included in a general analysis or report of an actual criticality accident
- T computational methods, tools, and validations

1 Introduction

1.1 General Overview

The characteristics, detection, and emergency management of nuclear criticality accidents outside reactors has been an important component of criticality safety for as long as the need for this specialized safety discipline has been recognized. The general interest and importance of such topics receives special emphasis because of the potentially lethal, albeit highly localized, effects of criticality accidents and because of heightened public and regulatory concerns for any undesirable event in nuclear and radiological fields.

Although accident prevention is the primary concern of nuclear criticality safety, accident mitigation is a secondary concern because technical staff, management, and regulators recognize that accidents can occur despite best reasonable efforts to prevent such occurrences. Effective CASs and emergency management are key components of criticality accident mitigation. The applicable historical, technical, and regulatory information is important for developing cost-effective means of satisfying both safety and compliance goals.

This bibliography lists references which are potentially applicable to or interesting for criticality alarm, detection, and warning systems; criticality accident emergency management; and their associated programs. The lists are annotated to assist bibliography users in identifying applicable:

- industry and regulatory guidance and requirements, with historical development information and comments;
- criticality accident characteristics, consequences, experiences, and responses;
- hazard-, risk-, or safety-analysis criteria;
- CAS design and qualification criteria;
- CAS calibration, maintenance, repair, and testing criteria;
- experiences of CAS designers and maintainers;
- criticality accident emergency management (planning, preparedness, response, and recovery) requirements and guidance;
- criticality accident emergency management experience, plans, and techniques;
- methods and tools for analysis; and
- additional bibliographies.

1.2 Scope and Limitations

This bibliography is intended for use by personnel associated with closely related programs to install, maintain, and inspect CASs; or to develop, maintain, and test criticality accident emergency plans; or both. Applicable documents from the USA are referenced and UK, French, Japanese, and international references which could be adequately identified and assured to be of interest are included, recognizing the international cooperation of the criticality safety community; the usefulness of the information for criticality accidents in nonreactor facilities which do not require CASs; and general interests of the intended audience.

Bibliography users must evaluate currency, applicability, reliability, and sufficiency of information from the listed references for their specific applications:

- Users are cautioned to determine the contemporary document revision for the time at which this bibliography is used to assure that appropriate requirements, guidance, methods, and data are applied because this information, like old instrument systems, become obsolete as technology and scientific knowledge advance.

- A few currently superseded or withdrawn guidance and requirements documents are included because they are a significant basis for analysis, existing CASSs, or existing emergency plans referenced here.
 - Similarly, some outdated software code references are included because they are useful supplements to current code references.
 - Limited references describing outdated instruments or emergency plans are included because some such systems are still in use and because such historical information is occasionally useful.
- Annotations are included to warn of outdated guidance, requirement, and software references. However, reference dates are considered adequate warning for descriptions of outdated instruments and emergency plans.
- Document inclusion in the bibliography does not indicate that the document's information is appropriate for a specific application. Some documents are included because they are generally useful while other documents are useful for only a few applications.
 - Similarly, document omission does not indicate that its information is inapplicable. Some documents are omitted because they were very narrowly or remotely applicable, very difficult to obtain, unknown to the compiler, or inadvertently overlooked.
 - Document inclusion in the bibliography does not indicate endorsement, although references with known significant erroneous or discredited information are excluded. Users are cautioned that information published in proceedings and transactions rarely receive peer review such as would be required for publication in a technical journal. In addition, references published and papers presented by an implementing organization do not necessarily represent a regulator's, or a standard body's, view.

Although attempts were made to assure that references are available (not currently classified, proprietary, or unapproved for public release), some documents are difficult to obtain. Primary, secondary, and summary documents are therefore often included. The extent to which a document is available is generally indicated by the completeness of its citation, by its date, and by its annotations:

- Many documents are out of print or received limited distribution but these documents are generally available if one has access to subject matter experts' files or to technical libraries with patrons having non-reactor nuclear interests.
- Parentheses around subject codes indicate that the codes were assigned based on title, abstract, or reference in another document. Most documents annotated with such codes were not readily available to the author while the bibliography was compiled.
- Status indicators can also indicate document availability:
 - *Active* indicates current information, guidance, requirements, or software subject to change or withdrawal (for example, an ANSI standard or a user's manual representing a specific code version);
 - *Indeterminant* indicates information for software codes which are apparently still in use but for which there is no current support provision, no further development work intended, or both;
 - *Issued* indicates information that is generally not subject to change but for which public release was not confirmed (for example, reports which may be considered internal or *official-use-only* reports);
 - *Not determined* indicates information that could be subject to change and for which currency was not confirmed (for example, a ten-year-old user manual for a code with which the author is unfamiliar); and
 - *Published* indicates information that is generally not subject to change which is currently approved for public release (for example, an experiment report or assessment of a specific software code version);
- *Alternate contacts* are organizations, other than the author's or publishing organization, which might be able to assist in locating a document for review, loan, or sale.

Unless otherwise noted, documents are written in the language of the document title as cited in the bibliography. Subject codes for non-English references are based on discussions with authors, references in other documents, and recognition of key French words.

1.3 Acknowledgements

This bibliography would not exist without the encouragement, patience, and support of many people. I especially and gratefully acknowledge:

- Jerry Paulson and Norm Pruvost for requests to expand and publish my working bibliography;
- William Stratton and David Smith for an excellent summary of criticality accidents, which is included here and which served as the starting point for identifying most accident reports listed here;
- Lee Dodds, David Hetrick, and Bob Seale for assistance in identifying criticality accident analyses based on experimental and theoretical work;
- Francis Barbry, Kathleen Bhanot, and Stephen Walls for assistance in identifying and reviewing French and U.K. references,
- staff members of the INEL Technical Library, LANL Reports Collection Study Center, and LANL Criticality Safety group for assistance in identifying references and obtaining information;
- Mary French for administrative support; and
- Todd Taylor for scheduling and project support.

However, any errors in this work are the sole responsibility of the author.

1.4 Comments

There is considerable activity, both new and ongoing, in the areas of CASs, accident analyses, hazards analysis, and emergency management. Although no specific plans exist, I would like to see this bibliography updated in the future to correct any errors and to incorporate new references. Please address comments, concerns, corrections, questions, and suggestions to me at:

Valerie L. Putman
Idaho National Engineering Laboratory
P. O. Box 1625
Idaho Falls, ID 83415-3458

This page intentionally blank.

2 Standard Bibliographic Listing

AEA Tech. "MONK - A Monte Carlo Program for Nuclear Criticality Safety Analyses: Users Guide for Version 7A," ANSWERS/MONK(94)3, Issue 1 and Issue 2; CCC-393. ANSWERS, Feb. 1991 and Jan. 1995; RSIC.

Subject Codes: T 09/30/95 Status: Active

Notes: RSIC might have version 6.3 rather than 7A.

AEA Tech. "MCBEND - A Monte Carlo Program for General Radiation Transport Solutions: Users Guide for Version 9A," ANSWERS/MCBEND(94)15, Parts 1 and 2, Issue 1 and Issue 2. ANSWERS, May 1994 and Feb. 1995.

Subject Codes: T 09/30/95 Status: Active

AEA Tech. "RANKERN - A Point Kernel Program for Gamma-Ray Transport Solution: Users Guide for Version 14," ANSWERS/RANKERN(95)3. ANSWERS, 1995.

Subject Codes: T 09/30/95 Status: Active

AEC Division of Operational Safety. "Operational Accidents and Radiation Exposure Experience within the United States Atomic Energy Commission 1943-1975," WASH-1192. AEC, fall 1975.

Subject Codes: A1, A2, B2, O 09/30/95 Status: Published

Alt. Contact: NTIS, OSTI Notes: See *Stratton Report* instead

Earlier Works: Hayes, Daniel F. "A Summary of Accidents and Incidents Involving Radiation in Atomic Energy Activities, June 1945 through December 1955," TID-5360. USAEC and GPO, Aug. 1956.

- Hayes, Daniel F. "A Summary of Accidents and Incidents Involving Radioactive Material in Atomic Energy Activities, January - December 1956," TID-5360 Supplement. USAEC and GPO, Aug. 1957.

- AEC Division of Operational Safety. "A Summary of Industrial Accidents in USAEC Facilities 1956," TID-5360 (Supplement 1) (Revised). AEC, Aug. 1967.

- AEC Office of Industrial Relations. "A Summary of Industrial Accidents in USAEC Facilities," TID-5360 (Supplement 2); (Supplement 3); (Supplement 3) (Revised); (Supplement 4); and (Supplement 5). AEC, Sept. 1959; Aug. 1961; Dec. 1961; Dec. 1963; and Dec. 1965.

Akimoto, M., and J. Naito. "A General Dimensional Neutron Diffusion Calculation Code: ADC," (in Japanese?) JAERI 1260. Japan: Japan Atomic Energy Research Institute, 1970.

Subject Codes: (T) 09/30/95 Status: Not determined

Notes: ADC might not be available to the public.

Subject Codes: (see full subject code list in the front matter for additional description)

A through A3 = criticality accidents

B1 or B2 = extensive bibliography or references

C1 through C5 = CASs

D = dose, dosimetry, distance and shielding

E through E4 = emergency management

H1 and H2 = hazard-, risk-, and safety-analysis

M = medical

O = other

R = releases and release dispersion

T = computational methods, tools, validation

Parenthesis indicate that code(s) were assigned based on document title, its use as a reference in other documents, or discussions with authors.

Alcouffe, Ray E., et al. "DANTSYS: A Diffusion Accelerated Neutral Particle Code Transport System," LA-12969-M. LANL, June 1995.

Subject Codes: T

09/30/95 Status: Active

Alt. Contact: RSIC

Related Ref.s: O'Dell, R. Douglas, et al. "Revised User's Manual for ONEDANT: A Code Package for One-Dimensional, Diffusion-Accelerated, Neutral Particle Transport," LA-9184-M-Rev. LANL, 1989.

○ ———. "Users Guide for TWODANT: A Code Package for Two-Dimensional Diffusion-Accelerated, Neutral Particle Transport," LA-10049-M. LANL, 1984.

Notes: Related references are for computer codes which are probably inactive but the references are useful supplemental information for the DANTSYS document.

Allied Chemical Idaho Chemical Programs, CPP Technical Division Personnel. "Recovery of ICPP from Criticality Event of October 17, 1978: Part I - Basic Technical Data," ACI-362. Idaho Falls, Idaho USA: Allied Chemical Idaho Chemical Programs, Nov. 1978.

Subject Codes: A1, E4

09/30/95 Status: Not approved for public release

Released Ref: [Tiller, et al.], [ICPP-MISC-002], listed separately.

Notes: This report is included here only because it is referenced in McGuire, NUREG-1140, which is listed separately.

Allison, W. L. "Nuclear Incident at United Nuclear Corporation, Wood River Junction, Rhode Island, July 24, 1964." New Haven Connecticut: United Nuclear Corporation, Aug. 21, 1964.

Subject Codes: (A1)

09/30/95 Status: Issued

Summary: Auxier, *Nuclear Safety*, Vol. 6, No. 3, listed separately.

Supplement: Nakache and Shapiro, TID-21995, listed separately.

Andrews, G[ould] A., et al. "Accidental Radiation Excursion at the Oak Ridge Y-12 Plant, IV. Preliminary Report on Clinical and Laboratory Effects in the Irradiated Employees." *Health Physics* (Pergamon Press), Vol. 2, No. 2, 1959: pp. 134-138.

Subject Codes: A1, D, M

09/30/95 Status: Published

Alt. Contact: HPS

Notes: Incident date 06/16/58

4th of 4 part series of articles

Andrews, Gould A. "Medical Management of Accidental Total-body Irradiation." In *The Medical Basis for Radiation Accident Preparedness: Proceedings of the REAC/TS International Conference, Oak Ridge, Tennessee USA, Oct. 1979*, edited by Karl F. Hübner and Shirley A. Fry. New York, New York USA: Elvsevier/North-Holland, 1980, pp. 297-310.

Subject Codes: E5, M

09/30/95 Status: Published

ANS. "American National Standard: Neutron and Gamma-Ray Flux-to-Dose Rate Factors," ANSI/ANS-6.1.1-1977 [N666]. ANS, 1977.

Subject Codes: (D, T)

09/30/95 Status: Withdrawn 08/31/89

Notes: Reported data are a basis for dose estimates specified in many references included here.

ANS. "American National Standard: Immediate Evacuation Signal for Use in Industrial Installations Where Radiation Exposure May Occur," ANSI N2.3-1979. ANS, 1979.

Subject Codes: C1, C2, C5

09/30/95 Status: Withdrawn 08/29/86

Notes: Superseded ANSI N2.3-1967, which was partial basis of 10 CFR 1910.96 (f). Incorporated into ANSI/ANS-8.3-1986.

Endorsed by NRC Reg. Guide 8.5 (Rev. 1), which is active.

ANS. "Facilities and Medical Care for On-Site Nuclear Power Plant Radiological Emergencies," ANSI/ANS-3.7.1-1979 (R1986). ANS, approved April 24, 1979.

Subject Codes: E5, M 09/30/95 Status: Active

ANS. "American National Standard: Nuclear Criticality Control of Special Actinide Elements," ANSI/ANS-8.15-1981 (R1987). ANS, approved Nov. 9, 1981.

Subject Codes: O 09/30/95 Status: Active, under review

ANS. "Emergency Planning for Research Reactors," ANSI/ANS-15.16-1982 (R 1988). ANS, approved Oct. 11, 1982.

Subject Codes: E5 09/30/95 Status: Active

ANS and IEEE. "PRA Procedures Guide, Final Report," NUREG/CR-2300, Vol. 1 and 2. NRC, Dec. 1982 (issued Jan. 1983).

Subject Codes: H2, O, R 09/30/95 Status: Published
Alt. Contact: NTIS

ANS. "Nuclear Criticality Safety in Operations with Fissionable Materials Outside Reactors, An American National Standard," ANSI/ANS-8.1-1983 (R1988). ANS, approved Oct. 7, 1983.

Subject Codes: E1, E2, O 09/30/95 Status: Active, under revision

Notes: Superseded documents are ANSI N6.1-1964, ANSI N16.1-1969, and ANSI N16.1-1975.
Endorsed by NRC Reg. Guide 3.04 (Rev. 2) which is active.
Compliance required by DOE 5480.24 which is active.
No technical or detailed emergency management/planning guidance.

ANS. "Administrative Practices for Nuclear Criticality Safety, An American National Standard," ANSI/ANS-8.19-1984 (R1988). ANS, approved Oct. 1, 1984.

Subject Codes: E, O 09/30/95 Status: Active, under revision

Notes: Endorsed by NRC Reg. Guide 3.57 (Rev. 0) which is active
Compliance required by DOE 5480.24 which is active.
No technical emergency management guidance.

ANS. "Criticality Accident Alarm System, An American National Standard," ANSI/ANS-8.3-1986. ANS, approved Aug. 29, 1986.

Subject Codes: A3, C1, C2, C3, C5, E3, T 09/30/95 Status: Active, under revision

Notes: Superseded documents are ANSI N16.2-1969, ANSI/ANS-8.3-1979, ANSI/ANS N2.3-1967, and ANSI/ANS N2.3-1979.
Endorsed by NRC Reg. Guide 8.12 (Rev. 2) which is active.
Compliance required by DOE Order 5480.24 which is active.
Calculation techniques of Appendix B are not universally applicable.

Subject Codes: (see full subject code list in the front matter for additional description)

A through A3 = criticality accidents	H1 and H2 = hazard-, risk-, and safety-analysis
B1 or B2 = extensive bibliography or references	M = medical
C1 through C5 = CAs	O = other
D = dose, dosimetry, distance and shielding	R = releases and release dispersion
E through E4 = emergency management	T = computational methods, tools, validation

Parenthesis indicate that code(s) were assigned based on document title, its use as a reference in other documents, or discussions with authors.

ANS. "Criteria for Functional and Physical Characteristics of Emergency Response Facilities," ANSI/ANS-3.8.2-1987. ANS, approved Aug. 7, 1987.

Subject Codes: E5

09/30/95 Status: Active

ANS. "Criteria for Emergency Response Functions and Organizations," ANSI/ANS-3.8.1-1987. ANS, approved Aug. 10, 1987.

Subject Codes: E5

09/30/95 Status: Active

ANS. "Criteria for Emergency Response Plans and Implementing Procedures," ANSI/ANS-3.8.3-1987. ANS, approved Sept. 4, 1987.

Subject Codes: E5

09/30/95 Status: Active

ANS. "Criteria for Maintaining Emergency Response Capability," ANSI/ANS-3.8.4-1987. ANS, approved Sept. 4, 1987.

Subject Codes: E5

09/30/95 Status: Active

ANS. "Criteria for Emergency Radiological Field Monitoring, Sampling, and Analysis," ANSI/ANS-3.8.5-1992. ANS, 1992.

Subject Codes: (D, E5, R)

09/30/95 Status: Active

ANS. "Criticality Accident Alarm System, An American National Standard," ANSI/ANS-8.3-199x. Draft, May 1995.

Subject Codes: A3, C1, C2, C3, C5, T

09/30/95 Status: Draft, under review

Notes: Calculation techniques of Appendices B and C are not universally applicable.

ANS. "Nuclear Criticality Accident Emergency Planning and Response, An American National Standard," ANSI/ANS-8.23-199x. Draft, June 1995.

Subject Codes: E

09/30/95 Status: Draft, under review

Aspinall, K[ieth] J., and J. T. Daniels. "Review of UKAEA Criticality Detection and Alarm Systems 1963/64 Part 1: Provision and Design Principles," AHSB (S) R 92. London UK: UKAEA AHSB, 1965.

Subject Codes: A3, B1, C2, C3, C4, C5, E

09/30/95 Status: Published

Alt. Contact: HMSO

Aspinall, K[ieth] J. "Criticality Detection and Alarm Systems: Design Principles." In *Criticality Control of Fissile Materials, Stockholm Sweden, Nov. 1965*. IAEA, 1966, pp. 701-716.

Subject Codes: A3, C2, C3, C5, E

09/30/95 Status: Published

Austin, T[im] B., C[hristopher] R. J. Sunman, and S[tephan] J. Walls. "Aspects of Criticality Emergency Planning - Criticality Excursion Yields and Criticality Incident Detection and Alarm System Reliabilities." In *ICNC'95 Proceedings of the Fifth International Conference on Nuclear Criticality Safety, Albuquerque, New Mexico USA, Sept. 1995*, Vol. II. UNM, Sept. 1995, pp. 13•7-13•15.

Subject Codes: A3, C1, C3, E2

09/30/95 Status: Published

Auxier, J[ohn] A. "Nuclear Accident at Wood River Junction." *Nuclear Safety* (GPO), Vol. 6, No. 3, (Spring 1965): pp. 298-301.

Subject Codes: A1

09/30/95 Status: Published

Notes: Incident date 07/24/64

Reports: Allison, "Nuclear Incident ...," Aug. 21, 1964, listed separately.

○ Nakache and Shapiro, TID-21995, listed separately.

Auxier, J[ohn] A., et al. "Nuclear Accident Dosimetry Intercomparison Study." In *Health Physics Division Annual Progress Report for Period Ending July 31, 1965*, ORNL-3849. ORNL, 1965.

Subject Codes: (D)

09/30/95 Status: Issued

Alt. Contact: NTIS, OSTI

Baker, J[ames] S., J[acquelyn] A. Smith, and D[onald] T. Berry. "Testing of the Y-12 Criticality Accident Alarm System Detectors at the Sandia Pulsed Reactor Facility," Y/DD-626. Y-12 Plant, Oak Ridge, Tennessee USA, Jan. 6, 1994.

Subject Codes: (C1, C4)

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Summary: ——. "Testing of the Y-12 Criticality Accident Alarm System Detectors at the Sandia Pulsed Reactor Facility." In *ANS Trans.*, Vol. 70. ANS, June 1994, pp. 210-211.

Baker, J[ames] S., and J[acquelyn] A. Smith. "Estimating Radius of Coverag of the Y-12 Plant Criticality Accident Alarm System from Experiments at the Los Alamos Critical Experiments Facility." In *ICNC'95 Proceedings of the Fifth International Conference on Nuclear Criticality Safety, Albuquerque, New Mexico USA, Sept. 1995*, Vol. II. UNM, Sept. 1995, pp. 11•126-11•130.

Subject Codes: A3, C1, C4, D

09/30/95 Status: Published

Baker, V[an] and R[obert] L. Childs. "FALSTF: Calculator of Response of Detectors External to Shielding Configuration," CCC-351. RSIC, Jan. 1982.

Subject Codes: (T)

Status on 09/10/95: Active

Notes: Reference is an RSIC abstract.

Further info.: ——. "FALSTF: Informal Notes." ORNL, 1979.

Barbry, F[rancis Y.] "Note de Synthese Concernant le Observations Effectuées sur le Formation de Gas de Radiolyse et ed leurs Consequences," CEA/DSN 115. Sûreté Nucléaire et Criticité CEA, May 1973.

Subject Codes: (A3)

09/30/95 Status: Issued

Later Work: —, CEA/DSN/SEESNC 117, listed separately.

○ —, CEA/SRSC 89.08, listed separately.

Notes: Author translated into English for LANL Critical Facilities, LANL Criticality Safety and UA Nuclear Engineering personnel.

Barbry, F[rancis Y.], D. Mangin, and H. Revol. "CRAC - Récapitulation des Résultats Expérimentaux," CEA/DSN 116. Sûreté Nucléaire et Criticité CEA, Aug. 1973.

Subject Codes: A3

09/30/95 Status: Issued

Full Reports: Barbry, F[rancis Y.], et al. "Experience CRAC.02 Resultats," CEA/DPSR 59; "Experience CRAC.03.04 Resultats," CEA/DPSR 60; "Experience CRAC.09.10.11 Resultats," CEA/DPSR 69; "Experience CRAC.12.13.14 Resultats," CEA/DPSR 70. Sevice d' Études de Criticité, CEA, Jan. 1959; March 1969; Aug. 1969; Oct. 1969.

Subject Codes: (see full subject code list in the front matter for additional description)

A through A3 = criticality accidents

B1 or B2 = extensive bibliography or references

C1 through C5 = CASs

D = dose, dosimetry, distance and shielding

E through E4 = emergency management

H1 and H2 = hazard-, risk-, and safety-analysis

M = medical

O = other

R = releases and release dispersion

T = computational methods, tools, validation

Parenthesis indicate that code(s) were assigned based on document title, its use as a reference in other documents, or discussions with authors.

- ——. "Experience CRAC.15.16.17 Resultats," CEA/SEEC 74; "Experience CRAC.18.19 Resultats," CEA/SEEC 77; "Experience CRAC.20.1,2,3,4,5 Resultats," CEA/SEEC 79; "Experience CRAC.21.22.23 Resultats," CEA/SEEC 83; "Experience CRAC.24.25.26 Resultats," CEA/SEEC 91; "Experience CRAC.27.28.29 Resultats," CEA/SEEC 92. Service d' Études de Criticité, Direction de la Protection et de la Sécurité Radiologiques, CEA, Jan. 1970; Feb. 1970; March 1970; May 1970; July 1970; Aug. 1970.
- Barbry, F[rancis Y.], et al. "Experience CRAC.37.38 Resultats," CEA/SEEC 96; "Experience CRAC.39.40.41 Resultats," CEA/SEEC 98. Service d' Études de Criticité, Direction de la Protection et de la Sécurité Radiologiques, CEA, Dec. 1970; March 1971. ——. "Experience CRAC.42.43.44 Resultats," CEA/DSN/SEEC 103; "Experience CRAC.45.46.47 Resultats," CEA/DSN/SEEC 106; "Experience CRAC.48.50.52 Resultats," CEA/DSN/SEEC 108. Département de Sécurité Nucléaire, CEA, Aug. 1971; Dec. 1971; April 1972.
- Barbry, F[rancis Y.], D. Magnin, and H. Revol. "Experience CRAC.53.54.55.56.57 Resultats," CEA/DSN/SEEC 109; "Experience C.R.A.C 63 (1-2-3-4)," CEA/DSN/SEEC 113; "Experience CRAC.58.61.62.63 Resultats," CEA/DSN/SE 111; "Experience CRAC.59.59bis60.60 Resultats," CEA/DSN/SE 114. Département de Sécurité Nucléaire, CEA, Sept. 1972; Jan. 1973; Feb. 1973; March 1973.
- Summary: Lécorché, Pierre, and Robert L. Seale, Y-CDC-12, Nov. 1973, listed separately.
- Notes: Barbry translated all of the French reports into English for LANL Critical Facilities, LANL Criticality Safety and UA Nuclear Engineering personnel.

Barbry, F[rancis Y.] "Essais de Synthèse Partielle des Resultats Experimentaux," CEA/DSN/SEESNC 117. CEA, Sept. 1973.

Subject Codes: (A3) 09/30/95 Status: Issued
 Earlier Work: —, CEA/DSN 115, listed separately.
 Later Work: —, CEA/SRSC 89.08, listed separately.
 Notes: Author translated into English for LANL Critical Facilities, LANL Criticality Safety and UA Nuclear Engineering personnel.

Barbry, F[rancis Y.], and R. Médioni. "Dosimétrie d'Accidents de Criticité: Synthèse de Résultats Acquis sur CRAC et Silene," CEA/SEESNC 33. CEA, Nov. 1980.

Subject Codes: (A3, C1, D) 09/30/95 Status: Issued
 English Ed.: Barbry, CEA 205/91, listed separately.

Barbry, F[rancis Y.], and A. Woillard. "Accidents de Criticité en Solution: Valeurs Envelopes Résultant des Expériences Menées sur CRAC et Silene in Matières de Cinétique et de Dosimétrie," CEA/SEESNC 82/23. CEA, Dec. 1982.

Subject Codes: (A3) 09/30/95 Status: Issued
 Notes: Barbry translated into English for LANL Critical Facilities, LANL Criticality Safety and UA Nuclear Engineering personnel.

Barbry, F[rancis Y.] "Slow Kinetics Power Excursions Performed on the Silene Reactor," CEA/IPSN/SRSC 83.33. CEA, Dec. 1983.

Subject Codes: A3, T 09/30/95 Status: Issued

Barbry, F[rancis Y.], et al. "Fuel Solution Criticality Accident Studies with the Silene Reactor: Phenomenology, Consequence, and Simulated Intervention." In *Proceedings of the International Seminar on Criticality Studies Programs and Needs, Dijon France, Sept. 1983*. Centre d' Études de Valduc, France: CEA, 1984, pp. 36-52.

Subject Codes: A3, E2

09/30/95 Status: Published

Later Work: Barbry, CEA/SRSC 223, listed separately.

Barbry, Francis [Y.], and Raymond Prignet. "The EDAC System and New Developments Under Consideration at the CEA for Criticality Accident Detection." *Nuclear Technology (ANS)*, Vol. 78 (Sept. 1987): pp. 320-325.

Subject Codes: C1, C2, C4

09/30/95 Status: Published

Other Ed.s: ———. "Caracteristiques de l'Ensemble de Detction Francais des Accidents de Criticité (System E.D.A.C.)." In *Proceedings of the International Seminar on Criticality Studies Programs and Needs, Dijon France, Sept. 1983*. Centre d' Études de Valduc, France: CEA, 1984, pp.

○ ———. "The EDAC (Ensemble de Detection et d'Alarme de Criticeté) and New Developments Under Consideration at the CEA for Criticality Accident Detection." In *Proceedings of ISCS'87 International Seminar on Nuclear Criticality Safety, Tokyo Japan, Oct. 1987*. PNC, Sept. 1987, pp. 475-478.

○ ———. "The EDAC System and New Developments Under Consideration at the Commissariat a L'Énergie for Criticality Accident Detection." In *Transactions of the Criticality Accident Alarm Systems Workshop, Richland, Washington USA, Sept. 1988*, DOE/NCT-05. LLNL, 1988, pp. 103-110.

Earlier Sys: Debrie, G., et al., *Proceedings of the Third United Nations... Aug.-Sept. 1964*, Vol. 13, pp. 244-251, listed separately.

○ Prignet and Renard, CEA-R-4784, listed separately.

Later Work: Prignet and Huver, *Proceedings of ICNC'91...*, Vol. 2, pp. VII-104 - VII-123, listed separately.

Barbry, F[rancis Y.], et al. "Criticality Accident Studies in France Experimental Programmes and Modelisation." In *Proceedings of ISCS'87 International Seminar on Nuclear Criticality Safety, Tokyo Japan, Oct. 1987*. PNC, Sept. 1987, pp. 423-426.

Subject Codes: A3, T

09/30/95 Status: Published

Barbry, F[rancis Y.], et al. "Theoretical Studies of Transient Criticality of Irradiated Fuel Elements." In *ANS Trans.*, Vol. 55. ANS, Nov. 1987, pp. 410-411.

Subject Codes: A3, T

09/30/95 Status: Published

Barbry, F[rancis Y.] "Model To Estimate the Maximum Fission Yield in Accident Solution Excursions." In *ANS Trans.*, Vol. 55. ANS, Nov. 1987, pp. 413-414.

Subject Codes: A3, T

09/30/95 Status: Published

Subject Codes: (see full subject code list in the front matter for additional description)

A through A3 = criticality accidents	H1 and H2 = hazard-, risk-, and safety-analysis
B1 or B2 = extensive bibliography or references	M = medical
C1 through C5 = CASs	O = other
D = dose, dosimetry, distance and shielding	R = releases and release dispersion
E through E4 = emergency management	T = computational methods, tools, validation

Parenthesis indicate that code(s) were assigned based on document title, its use as a reference in other documents, or discussions with authors.

Barbry, F[rancis Y.], and J[ean] P[ierre] Rozain. "Objectives and Summary of Experiments on the Formation of Radiolysis Gas Carries Out Using the Silene Reactor," CEA/SRSC 89.08. CEA/IPSN/SRSC, Nov. 1989.

Subject Codes: A3, T 09/30/95 Status: Issued

Earlier Work: Barbry, CEA/DSN 115, listed separately.

○ Barbry, CEA/DSN/SEESNC 117, listed separately.

Replaces: ——. "Point sur les Connaissances en Matière de Formation de Gas de Radiolyse Lors d'une Excursion de Criticité en Solution," CEA/SRSC 87/83. CEA, Feb. 1987.

Summary: Barbry, Francis [Y.], and Jean Pierre Rozain. "Radiolysis Gas Formation and Pressure Increase During A Criticality Excursion." In *ANS Trans.*, Vol. 59. ANS, June 1989, pp. 181-182.

Barbry, F[rancis Y.] "Dosimetry of Neutron and Gamma Radiation in the CRAC and SILENE Criticality Accident Study Program," CEA 205/91. CEA/IPSN/SRSC, 1991.

Subject Codes: (A3, C1, D) 09/30/95 Status: Published

French Ed.: Barbry, F[rancis Y.], and R. Médioni, CEA/SEESNC 33, Nov. 1980, listed separately.

Barbry, Francis Y. "Exposure Risks and Possibilities of Intervention and Diagnosis in Criticality Accidents." In *Proceedings of ICNC'91 International Conference on Nuclear Criticality Safety, Oxford England, Sept. 1991*, Vol. 2. UKAEA Tech., Sept. 1991, pp. VII-33 - VII-40.

Subject Codes: A3, C3, D, E2, E3 09/30/95 Status: Published

Summary: Barbry, Francis Y. "Exposure Risks and Possibilities of Intervention and Diagnosis in Criticality Accidents." In *ANS Trans.*, Vol. 63. ANS, June 1991, pp. 228-231.

Barbry, Francis Y., and Richard E. Mallenfant. "Need for a Revision of the Standard on Criticality Accident Detection System." In *Proceedings of the 1993 Topical Meeting on Physics and Methods in Criticality Safety, Nashville, Tennessee USA, Sept. 1993*. ANS, Sept. 1993, pp. 21-25.

Subject Codes: A3, C3, C5 09/30/95 Status: Published

Earlier Work: Malenfant, *ICNC'91, England, Sept. 1991*, Vol. 2, pp. VII-51 - VII-54, listed separately.

Barby, Francis [Y.] "SILENE Reactor: Results of Selected Typical Experiments," CEA/SRSC 223. CEA/SRSC, Sept. 1994.

Subject Codes: A3 09/30/95 Status: Issued

Alt. Contact: LANL Critical Experiments Facility, UA

Earlier Work: Barbry, F[rancis Y.], and Jean[-]C[laude] Manaranche. "Criticality Accident Experimental Studies with High-Enriched Uranium Solutions." In *ANS Trans.*, Vol. 41. ANS, June 1982, pp. 358-359.

○ Barbry, *Proceedings of the International...Sept 1983, 1984*, pp. 36-52, listed separately.

○ ——. "A Review of the Silene Criticality Excursion Experiments." In *Proceedings of the 1993 Topical Meeting on Physics and Methods in Criticality Safety, Nashville, Tennessee USA, Sept. 1993*. ANS, Sept. 1993, pp. 34-40.

Barnes, V. E., et al. "Techniques for Preparing Flowchart-Format Emergency Operating Procedures," NUREG/CR-5228, PNL-6653, BHARC-700/88/017, Vol. 1 and 2. NRC, Jan. 1989.

Subject Codes: E5 09/30/95 Status: Published

Alt. Contact: NTIS

Basoglu, B[enan], et al. "Simulation of Hypothetical Criticality Accidents Involving Homogenous Damp Low-Enriched UO_2 Powder Systems." *Nuclear Technology* (ANS), Vol. 105, No. 1 (Jan. 1994): pp. 14-30.

Subject Codes: A3, B1, T, O

09/30/95 Status: Published

Full Thesis: Basoglu, Benan. "Analysis of a Hypothetical Criticality Accident Involving Damp Low Enriched UO_2 Powder." Master's thesis, University of Tennessee - Knoxville, Aug. 1992.

Bhanot, K[athleen] E., R[ussell] L. Bowden, and P[eter] R. Thorne. "Development of a Criticality Emergency Planning Programme." In *ICNC'95 Proceedings of the Fifth International Conference on Nuclear Criticality Safety, Albuquerque, New Mexico USA, Sept. 1995*, Vol. II. UNM, Sept. 1995, pp. 13•3-13•6.

Subject Codes: A3, C2, C3, E2

09/30/95 Status: Published

Bentley, C[harles L.], et al. "Shutdown Mechanisms for a Hypothetical Criticality Accident Involving HEU Powder: Preliminary Results." In *ANS Trans.*, Vol. 70. ANS, June 1994, pp. 188-189.

Subject Codes: A3

09/30/95 Status: Published

Bickley, A., et al. "The Analysis of Transient Criticality in Wetted Uranium Dioxide Systems and in Fissile Solutions." In *Proceedings of ISCS'87 International Seminar on Nuclear Criticality Safety, Tokyo Japan, Oct. 1987*. PNC, Sept. 1987, pp. 440-444.

Subject Codes: A3, T

09/30/95 Status: Published

Bickley, A., et al. "The Code CRITEX to Simulate Transient Criticality in Fissile Solution." In *ANS Trans.*, Vol. 55. ANS, Nov. 1987, pp. 406-407.

Subject Codes: T

09/30/95 Status: Published

Brewer, R[oger] W., et al. "Transient Analysis of a Hypothetical Array Criticality Accident." *Proceedings of the 1993 Topical Meeting on Physics and Methods in Criticality Safety, Nashville, Tennessee USA, Sept. 1993*. ANS, Sept. 1993, pp. 160-166.

Subject Codes: A3, T

09/30/95 Status: Published

Thesis: Brewer, Roger W. "Analysis of a Hypothetical Array Criticality Accident Involving Units of Aqueous Uranyl Fluoride." Master's thesis, University of Tennessee - Knoxville, May 1993.

Bricka, M. "First IAEA Measurement Intercomparison, Valduc, June 1970 - Final Report" (in French?), CEA/SESRCI 71/408M8. CEA, 1971.

Subject Codes: (D)

09/30/95 Status: Issued

Alt. Contact: IAEA

Briggs, J. Blair, et al. "International Handbook of Evaluated Criticality Safety Benchmark Experiments," NEA/NCS/DOC(95)03/I-VI, Vol. I through VI. Paris France: OECD-NEA, March 31, 1995.

Subject Codes: A3, T

09/30/95 Status: Published

Notes: Generally more useful for criticality prevention analysis than accident analysis or detector placement analysis.

Subject Codes: (see full subject code list in the front matter for additional description)

A through A3 = criticality accidents

B1 or B2 = extensive bibliography or references

C1 through C5 = CASs

D = dose, dosimetry, distance and shielding

E through E4 = emergency management

H1 and H2 = hazard-, risk-, and safety-analysis

M = medical

O = other

R = releases and release dispersion

T = computational methods, tools, validation

Parenthesis indicate that code(s) were assigned based on document title, its use as a reference in other documents, or discussions with authors.

Briesmeister, J[udith] F. (editor). "MCNP 4A, Monte Carlo N-Particle Transport Code System," LA-12625-M; CCC-200. LANL; RSIC, Nov. 1993; March 1994.

Subject Codes: T

09/30/95 Status: Active

Alt. Contact: NEADB

Briscoe, G[len] J. "Practical Risk Analysis." In *ANS Trans.*, Vol. 32. ANS, 1979, pp. 318-320.

Subject Codes: H2

09/30/95 Status: Published

Brittan, R[aymond] O., et al. "Technical Review of ZPR-1 Accidental Transient - The Power Excursion, Exposures, and Clinical Data," ANL-4971. ANL-E, Jan. 26, 1953.

Subject Codes: A2, D, M, T

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Notes: Incident date 06/02/52

Later Work: Brittan, R[aymond] O., L. D. Marinelli, and F. W. Thalgott. "Technical Review of ZPR-1 Accidental Transient - The Power Excursion and Exposures," ANL-4971 (Rev.). ANL-E, 1953. (Referenced in several summaries but apparently not readily retrievable.)

Broadhead, B[ryan] L., et al. "Evaluation of Criticality Alarm Response at the WEMCO Fernald Site," ORNL/TM-55. ORNL, Nov. 1992.

Subject Codes: (A3, C2, C3, C4, D)

09/30/95 Status: Issued

Alt. Contact: NTIS, OSTI

Summary: Broadhead, B[ryan] L., R[obert] L. Childs, and R[obert] M[ichael] Westfall. "Evaluation of Fernald Plant 6 Criticality Alarm Response." In *ANS Trans.*, Vol. 70. ANS, June 1994, pp. 206-208.

Broadhead, B[ryan] L., and C[alvin] M. Hopper. "Updated Tool for Nuclear Criticality Accident Emergency Response." In *ANS Trans.*, Vol. 72. ANS, June 1995, pp. 218-220.

Subject Codes: A3, D, T

09/30/95 Status: Published

Related Work: Wilkinson, et al., *Nuclear Technology*, Vol. 111, No. 2, pp. 227-240, listed separately

Notes: Part of investigation to update Hopper, Y-DD-145, 1974, listed separately.

Broadhead, B[ryan] L., R[obert] L. Childs, and C[alvin] M. Hopper. "Verification of Criticality Accident Alarm System for Environmental Restoration Activities." In *ICNC'95 Proceedings of the Fifth International Conference on Nuclear Criticality Safety, Albuquerque, New Mexico USA, Sept. 1995*, Vol. II. UNM, Sept. 1995, pp. 13•16-13•21.

Subject Codes: C2, C4, D

09/30/95 Status: Published

Bruce, Marshall (compiler). "The Acute Radiation Syndrome: A Medical Report on the Y-12 Accident, June 16, 1958," ORINS-25. Oak Ridge Institute of Nuclear Studies, Oak Ridge, Tennessee USA, April 1959.

Subject Codes: A1, D, M

09/30/95 Status: Published

Alt. Contact: NTIS

Callihan, [A.] Dixon, and Joseph T. Thomas. "Accidental Radiation Excursion at the Oak Ridge Y-12 Plant, I. Description and Physics of the Accident." *Health Physics* (Pergamon Press), Vol. 1 (1959): pp. 363-372.

Subject Codes: A1

09/30/95 Status: Published

Alt. Contact: HPS

Notes: Incident date 06/16/58

1st of 4 part series of articles

Callihan, [A.] Dixon. "Criticality Excursion of November 10, 1961," ORNL-TM-139. ORNL, Feb. 13, 1962.

Subject Codes: A2

09/30/95 Status: Issued

Alt. Contact: NTIS, OSTI

Callihan, [A.] Dixon. "Accidental Nuclear Excursion in Recuplex Operation at Hanford in April 1962." *Nuclear Safety* (GPO), Vol. 4, No. 4 (June 1963): pp. 136-144.

Subject Codes: A1 09/30/95 Status: Published
Report: Zanger, HW-74723, TID-18431, listed separately.

Callihan, [A.] Dixon. "Excursion at the Oak Ridge Critical Experiments Facility, January 30, 1968," ORNL-TM-2207. UCNC, ORNL, June 1968.

Subject Codes: A2 09/30/95 Status: Published
Alt. Contact: NTIS, OSTI

Carson, R. William, and John S. Pearson. "Criticality Safety Drill and Exercise Programs." In *ANS Trans.*, Vol. 72. ANS, June 1995, p. 221-222.

Subject Codes: E1, E3 09/30/95 Status: Published

Castro, W. R. (editor). "Operating Experiences, ICPP Criticality Event of 17 October, 1978." *Nuclear Safety* (GPO), Vol. 21, No. 5 (Sept.-Oct. 1980): pp. 648-653.

Subject Codes: A1 09/30/95 Status: Published

Alt. Contact: INEL

Full Report: [Tiller, et al.], [ICPP-MISC-002], listed separately.

Cember, Herman. "Chapter 9: Health Physics Instrumentation." In *Introduction to Health Physics*, Second Ed. Elmsford, New York USA: Pergamon Press, 1989.

Subject Codes: B1, C2, D, O 09/30/95 Status: Published

Notes: Principles and types of radiation level and radiation rate detectors.

Chang, Joseph, et al. "An Application of Probabilistic Risk Analysis in Nuclear Criticality Safety Design." In *International Meeting on Safety Margins in Criticality Safety, San Francisco, California USA, Nov. 1989*. ANS, Nov. 1989, pp. 214-220.

Subject Codes: H1, O 09/30/95 Status: Published

Choi, Jor-Shan, J. Walter Thompson, and Raymond [L.] Reed. "Estimates of Fission Yields in Nuclear Criticality Excursions." In *ANS Trans.*, Vol. 72. ANS, June 1995, pp. 217-218.

Subject Codes: A3, E2 09/30/95 Status: Published

Clayton, E. Duane. "Further Considerations of Criticality in Recuplex and Possible Shutdown Mechanism," HW-77780. HW, 1963.

Subject Codes: (A1) 09/30/95 Status: Published

Alt. Contact: Hanford, NTIS, OSTI Notes: Incident date 04/07/62

Earlier Work: Zanger, HW-74723, TID-18431, listed separately.

Subject Codes: (see full subject code list in the front matter for additional description)

A through A3 = criticality accidents	H1 and H2 = hazard-, risk-, and safety-analysis
B1 or B2 = extensive bibliography or references	M = medical
C1 through C5 = CASs	O = other
D = dose, dosimetry, distance and shielding	R = releases and release dispersion
E through E4 = emergency management	T = computational methods, tools, validation

Parenthesis indicate that code(s) were assigned based on document title, its use as a reference in other documents, or discussions with authors.

Clayton, E. D[uane]. "The Hanford Pulser Accident." In *ANS Trans.*, Vol. 46. ANS, June 1984, pp. 463-464.

Subject Codes: A1

09/30/95 Status: Published

Notes: Incident date 04/07/62

Clem, William E. "Transportable Criticality Alarm System." In *Transactions of the Criticality Accident Alarm Systems Workshop, Richland, Washington USA, Sept. 1988*, DOE/NCT-05. LLNL, 1988, pp. 125-131.

Subject Codes: C2, C4

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Cohen, Bernard L., and I-Sing Lee. "A Catalog of Risks." *Health Physics* (Pergamon Press), Vol. 36 (June 1979): pp. 707-722.

Subject Codes: H2, T

09/30/95 Status: Published

Alt. Contact: HPS

Cooper, A[ndrew] J[ames], and J[ohn] M[urray] Hobson. "Assessment of Design Implications of Detecting and Responding to Accidental Criticality Incidents." In *Proceedings of ICNC'91 International Conference on Nuclear Criticality Safety, Oxford England, Sept. 1991*, Vol. 2. UKAEA Tech., Sept. 1991, pp. VII-55 - VII-61.

Subject Codes: C2, C3, C4, E2, T

09/30/95 Status: Published

Cottrell, W. B. (editor). "SL-1 Final Report." *Nuclear Safety* (GPO), Vol. 4, No. 1 (Mar. 1963): pp. 83-86.

Subject Codes: A2

09/30/95 Status: Published

Alt. Contact: INEL

Notes: Incident date 01/03/61

Courtois, G., et al. "MORET III: Un Programme Monte Carlo pour le Calcul des Coefficients de Multiplication Effectifs de Milieux Fissiles Dans des Géométries Complexes," CEA/IPSN 93/3. CEA-IPSN, 1993.

Subject Codes: (T)

09/30/95 Status: Not Determined

Notes: MORET is apparently active but it might not be available to the public.

Cronin, D[aniel] F[rancis]. "Recovery and Restart Phases of a Criticality Accident." In *ANS Transactions*, Vol. 19. ANS, Oct. 1974, pp. 193-194.

Subject Codes: A1, E4

09/30/95 Status: Published

Crume, E. C[hables]. "Experiments to Determine Sensitivity of NMC Gamma Monitors to Distant Fission Bursts," Y-DD-113. UCNC, Y-12 Plant, Dec. 12, 1974.

Subject Codes: C1, C4

09/30/95 Status: Published

Daniels, J. T., H. Howells, and T. G. Hughes. "Criticality Incident - August 24, 1970, Windscale Works." In *ANS Trans.*, Vol. 14, No. 1. ANS, June 1971, pp. 35-36.

Subject Codes: A1

09/30/95 Status: Published

D'Aquila, Donna [M.], Michael [A.] Austin, and David [L.] Honkonen. "Evacuation, Reentry, and Rescue During Nuclear Criticality Accident Response." In *ANS Trans.*, Vol. 72. ANS, June 1995, pp. 216-217.

Subject Codes: E2, E4

09/30/95 Status: Published

Das, S. "Comment on 'Reactivity Feedback in Mechanisms in Aqueous Fissile Solutions'." *Nuclear Science and Engineering* (ANS), Vol. 118, No. 2 (Oct. 1994): pp. 127-130.

Subject Codes: T

09/30/95 Status: Published

Debrie, G., et al. "Détection des Accidents de Criticité et des Ruptures de Gaine au Commissariat à l'Énergie Atomique," (in French; summary in English). In *Proceedings of the Third United Nations International Conference on Peaceful Uses of Atomic Energy, Geneva Switzerland, Aug.-Sept. 1964*, Vol. 13. UN, 1965, pp. 244-251.

Subject Codes: C2, C4, C5

09/30/95 Status: Published

Later System: Prignet and Renard, CEA-R-4784, listed separately.

○ Barbry and Prignet, *Nuclear Technology*, Vol. 78, pp. 320-325, listed separately.

Later Work: Prignet and Huver, *Proceedings of ICNC'91*..., Vol. 2, pp. VII-104 - VII-123, listed separately.

Delafield, H[oward] J. "Design Criteria and the Principles Underlying the UKAEA Code of Practice on the Provision of Criticality Alarm Systems." In *Transactions of the Criticality Accident Alarm Systems Workshop, Richland, Washington USA, Sept. 1988*, DOE/NCT-05. LLNL, 1988, pp. 111-124.

Subject Codes: A, C1, C2, O

09/30/95 Status: Published

Alt. Contact: LLNL, NTIS, OSTI

Delafield, H[oward] J., D. M. Barker, and C. A. Perks. "The Use of an Expert System in Criticality Accident Dosimetry." In *Proceedings of ICNC'91 International Conference on Nuclear Criticality Safety, Oxford England, Sept. 1991*, Vol. 2. UKAEA Tech., Sept. 1991, pp. VII-97 - VII-103.

Subject Codes: D, E2, T

09/30/95 Status: Published

Delafield, H[oward] J., and J. J. Clifton. "Design Criteria and Principles for Criticality Detection and Alarm Systems," SRD R 309. Culcheth, Warrington UK: UKAEA SRD, Oct. 1984.

Subject Codes: A3, C1, C2, C3, C5, E2

09/30/95 Status: Published

Alt. Contact: HMSO

Dietrich, J[oseph] R. (compiler). "Experimental Investigation of the Self-Limitation of Power During Reactivity Transients in a Subcooled, Water-Moderated Reactor, Borax-I Experiments, 1954," ANL-5323. ANL-E, 1954.

Subject Codes: A3

09/30/95 Status: Published

Alt. Contact: NTIS

Summary: ———. "Experimental Determination of the Self Regulation and Safety of Operating Water-Moderated Reactors." In *Proceedings of the International Conference on the Peaceful Uses of Atomic Energy, Geneva Switzerland, Aug. 1955*, Vol. 13. UN, 1956, pp. 88-101.

deOliveira, Cassiano R. E., et al. "Three-Dimensional Time-Dependent Finite Element Radiation Transport Methods for Criticality Assessment." In *ICNC'95 Proceedings of the Fifth International Conference on Nuclear Criticality Safety, Albuquerque, New Mexico USA, Sept. 1995*, Vol. I. UNM, Sept. 1995, pp. 6•38-6•43.

Subject Codes: D, T

09/30/95 Status: Published

Subject Codes: (see full subject code list in the front matter for additional description)

A through A3 = criticality accidents

B1 or B2 = extensive bibliography or references

C1 through C5 = CASs

D = dose, dosimetry, distance and shielding

E through E4 = emergency management

H1 and H2 = hazard-, risk-, and safety-analysis

M = medical

O = other

R = releases and release dispersion

T = computational methods, tools, validation

Parenthesis indicate that code(s) were assigned based on document title, its use as a reference in other documents, or discussions with authors.

Dodds, [Jr.], H. L[ee], and R[obert] M[ichael] Westfall. "SKINATH - A Computer Program for Solving the Reactor Point Kinetics Equations with Simple Thermal Hydraulic Feedback," ORNL/CSD/TM-210. ORNL, Sept. 1984.

Subject Codes: T 09/30/95 Status: Active
Alt. Contact: University of Tennessee - Knoxville

DOE Emergency Operations. "Emergency Categories, Classes, and Notification and Reporting Requirements," DOE Order 5500.2B; incorporating Change 1. DOE, April 30, 1991; Feb. 27, 1992.
Subject Codes: E5 09/30/95 Status: Active, under rev.

DOE Emergency Operations. "Planning And Preparedness for Operational Emergencies," DOE Order 5500.3A; incorporating Change 1. DOE, April 30, 1991; Feb. 27, 1992.
Subject Codes: E5 09/30/95 Status: Active

DOE Emergency Operations. "DOE Emergency Management Guide: Standard Format and Content for Emergency Plans." DOE, December 11, 1991.
Subject Codes: E5 09/30/95 Status: Not determined

DOE Office of Environment, Safety and Health. "Occurrence Reporting and Processing of Operations Information," DOE Order 5000.3B; incorporating Change 1. DOE, Jan. 19, 1993; July 2, 1993.
Subject Codes: E4, O 09/30/95 Status: Active
Notes: Notification and reporting requirements for abnormal events including criticality accidents.

DOE Office of Environment, Safety and Health. "Safety of Nuclear Facilities," DOE Order 5480.5. DOE, Sept. 23, 1986.
Subject Codes: C2, C3, C5, O 09/30/95 Status: Cancelled
Notes: For CAS requirements see paragraphs 11c(3)(g) and 11c(3)(h).
Interest depends on the design date of an exiting CAS.

DOE Office of Environment, Safety and Health. "Environmental Protection, Safety, and Health Protection Information Reporting Requirements," DOE Order 5484.1; incorporating Changes 1 through 7. DOE, Feb. 24, 1981; June 9, 1981, through Oct. 17, 1990.
Subject Codes: E5, O 09/30/95 Status: Active
Notes: Investigation and reporting requirements for serious abnormal events including criticality accidents.

DOE Office of Nuclear Energy. "Nuclear Safety Analysis Reports," DOE Order 5480.23; incorporating Change 1. DOE, April 30, 1992; March 10, 1994.
Subject Codes: H2, O 09/30/95 Status: Active

DOE Office of Nuclear Energy. "Nuclear Criticality Safety," DOE Order 5480.24. DOE, Aug. 12, 1992.
Subject Codes: C2, C3, C5, O 09/30/95 Status: Active, under revision
Notes: For CAS requirements see paragraphs 7a, 7a(1), 7b through 7b(4).
Requires compliance with ANSI/ANS-8.1, -8.3, -8.5, -8.7, -8.15, and -8.19.

DOE Office of Nuclear Safety. "Preparation Guide for U. S. Department of Energy Nonreactor Nuclear Facility Safety Analysis Reports," DOE-STD-3009-94. DOE, Aug. 1994.
Subject Codes: C5, H2, O 09/30/95 Status: Active
Alt. Contact: NTIS, OSTI

Dunenfeld, M. S., and R. K. Stitt. "Summary Review of the Kinetics Experiments on Water Boilers," NAA-SR-7087. California USA: Atomics International, Feb. 1, 1963.

Subject Codes: A3, T

09/30/95 Status: Published

Alt. Contact: NTIS

Evans, Dennis R., Paul J. Sentieri, and James R. Wilson. "Evaluating the Consequences of a Repository Criticality." In *Proceedings of the Topical Meeting on DOE Spent Nuclear Fuel - Challenges and Initiatives, Salt Lake City, Utah USA, Dec. 1994*. ANS, Dec. 1994, pp. 389-393.

Subject Codes: A3, D, R

09/30/95 Status: Published

Notes: Well shielded underground accident. Included for general interest and for fission yield and shielding considerations; not for CASs or emergency planning.

Evans, M[artyn] C. "A Review of Criticality Accidents Within the European Community." In *ANS Trans.*, Vol. 46. ANS, June 1984, pp. 462-463.

Subject Codes: A1, A2

09/30/95 Status: Published

Notes: Saclay, 03/15/60; Mol, 12/30/65; and Windscale, 08/24/70

Eversole, Michael J., and David J. Lindenschmidt. "Criticality Alarm System Design and Operational Experience at the Westinghouse Materials Company of Ohio." In *Transactions of the Criticality Accident Alarm Systems Workshop, Richland, Washington USA, Sept. 1988*, DOE/NCT-05. LLNL, 1988, pp. 59-66.

Subject Codes: C1, C2, C4, E3

09/30/95 Status: Published

Alt. Contact: LLNL, NTIS, OSTI

Fisher, S[tephen] E., and K[atey] E. Lenox. "An Assessment of the Radiological Doses Resulting From Accidental Uranium Aerosol Releases and Fission Product Releases from a Postulated Criticality Accident at the Oak Ridge Y-12 Plant," Y/TS-1272. Y-12 Plant, Oak Ridge, Tennessee USA, March 1995.

Subject Codes: (A3, D, R, T)

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Notes: Author indicates that a technical editing error occurred in Table 3: "months" should be "minutes." Dose calculations apply to inhalation and fission products, not the prompt neutron-gamma dose.

Forehand, Jr., H. M. "Effect of Radiolytic Gas on Nuclear Excursions in Aqueous Solutions," NUREG/CR-2517. NRC, Jan. 1982.

Subject Codes: (A3, T)

09/30/95 Status: Published

Dissertation: ——. "Effect of Radiolytic Gas on Nuclear Excursions in Aqueous Solutions." Ph.D. dissertation, University of Arizona, 1981.

Earlier Work: ——. "Analytical Studies of Criticality Accidents in Aqueous Solutions." In *ANS Trans.*, Vol. 19. ANS, Oct. 1974, pp. 191-193.

Forehand, [Jr.] H. M. "An Analysis of the Yield and Quench Mechanism of the Argentine Accident of September 23, 1983." In *ANS Trans.*, Vol. 46. ANS, June 1994, p. 460.

Subject Codes: A2

09/30/95 Status: Published

Subject Codes: (see full subject code list in the front matter for additional description)

A through A3 = criticality accidents

B1 or B2 = extensive bibliography or references

C1 through C5 = CASs

D = dose, dosimetry, distance and shielding

E through E4 = emergency management

H1 and H2 = hazard-, risk-, and safety-analysis

M = medical

O = other

R = releases and release dispersion

T = computational methods, tools, validation

Parenthesis indicate that code(s) were assigned based on document title, its use as a reference in other documents, or discussions with authors.

Friedman, Bruce. "Reliability Characteristics Associated with Criticality Control Mechanisms." In *Proceedings of ISCS'87 International Seminar on Nuclear Criticality Safety, Tokyo Japan, Oct. 1987*. PNC, Sept. 1987, pp. 451-457.

Subject Codes: H1, T

09/30/95 Status: Published

Fruchard, Y., and J. M. Lavie. "Prevention des Causes et des Consequence d'un Accidente de Criticite: Solutions Adoptees in France." In *Criticality Control of Fissile Materials, Stockholm Sweden, Nov. 1965*. IAEA, 1966, pp. 717-736.

Subject Codes: A3, C2, C3, E1, O

09/30/95 Status: Published

Frolov, V[ladimir] V., B[oris] G. Ryazanov, and V[ictor] I. Sviridov. "A Review of Criticality Accidents which Occurred in the Russian Industry." In *ICNC'95 Proceedings of the Fifth International Conference on Nuclear Criticality Safety, Albuquerque, New Mexico USA, Sept. 1995*, Vol. I. UNM, Sept. 1995, pp. P•23-P•30.

Subject Codes: A1, A2

09/30/95 Status: Published

Notes: 11 process criticality accidents, 1 critical facility accident; 1953-1978.

Fuchs, K. "Efficiency for Very Slow Assembly," LA-569. LASL, August 2, 1946.

Subject Codes: A3

09/30/95 Status: Published

Alt. Contact: LANL, NTIS, OSTI

Geeting, Mark W., and Philip B. Gerrard. "Criticality Frequency Determination Using a Human-Error-Based Fault Tree." In *ANS Trans.*, Vol. 71. ANS, Nov. 1994, p. 277.

Subject Codes: H1, O

09/30/95 Status: Published

Geller, L., and H[ugh] F. Henry. "Analysis of a Possible Radiation Burst," K-1095. UCNC, June 2, 1953.

Subject Codes: A3, D, T

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Gibson, J. A. B., and H[oward] J. Delafield. "The Neutron Capture Probability for Sodium Activation in Man Phantoms," AERE-R-7728. AERE, 1974.

Subject Codes: (D)

09/30/95 Status: Issued

Alt. Contact: HMSO, UKAEA

Gibson, J. A. B., H[oward] J. Delafield, and A. H. Reading. "Nuclear Accident Dosimetry - Report on the 4th IAEA Intercomparison Experiment at Harwell, UK - 7-18 April 1975: Part 1 - Description of the Experiment and Participant Results," AERE-R-8520. AERE, 1976.

Subject Codes: (D)

09/30/95 Status: Issued

Alt. Contact: IAEA, HMSO, UKAEA

Gibson, J. A. B., and E. Piesch. "Neutron Monitoring for Radiological Protection," IAEA Technical Report Series No. 252. IAEA, 1985.

Subject Codes: B1, C1, C2, D, O, T

09/30/95 Status: Published

Ginkel, William L., et al.. "Nuclear Incident at the Idaho Chemical Processing Plant on October 16, 1959," IDO-10035. Idaho Falls, Idaho USA: Phillips Petroleum Company, Feb. 15, 1960.

Subject Codes: A1

09/30/95 Status: Published

Alt. Contact: INEL, NTIS, OSTI

Goebel, G. R., T. W. Hines, and A. M. Carver. "Radiation Monitoring During Criticality at a Gaseous Diffusion Plant." In *ANS Trans.*, Vol. 70. ANS, June 1994, pp. 208-209.

Subject Codes: D, E2, E4

09/30/95 Status: Published

Goldenberg, Neal, memorandum to distribution. "Interpretive Guidance for DOE Order 5480.24, 'Nuclear Criticality Safety'," NE-70. DOE, Feb. 17, 1993.

Subject Codes: C5, H1, O

09/30/95 Status: Active

Alt. Contact: DOE, NTIS

Golinelli, C. "Evolution du Parc Electronucléaire et ses Conséquences sur la Criticité en France." In *Proceedings of the International Seminar on Criticality Studies Programs and Needs, Dijon France, Sept. 1983*. Centre d' Études de Valduc, France: CEA, 1984, pp. 447-454.

Subject Codes: A3

09/30/95 Status: Published

Griffith, R. V., J. Palfalvi, U. Madhvanath. "Compendium of Neutron Spectra and Detector Responses for Radiation Protection Purposes," IAEA Technical Report Series No. 318. IAEA, 1990.

Subject Codes: B1, C2, D, O

09/30/95 Status: Published

Guskova, A. K., and G. D. Dasogolov. "Two Cases of Acute Radiation Disease in Man." In *Proceedings of the International Conference on the Peaceful Uses of Atomic Energy, Geneva Switzerland, Aug. 1955*, Vol. 11. UN, 1956, pp. 35-45.

Subject Codes: A2, M

09/30/95 Status: Published

Notes: Russian incident during 1953. Details of incident not specified.

Handley, G. R[ichard]. "The Y-12 Criticality Alarm System." In *Transactions of the Criticality Accident Alarm Systems Workshop, Richland, Washington USA, Sept. 1988*, DOE/NCT-05. LLNL, 1988, pp. 35-45.

Subject Codes: C1, C2, C4

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Hankins, Dale E. "Effect of Reactivity Addition Rate and of Weak Neutron Source on the Fission Yield of Uranium Solutions." *Nuclear Science and Engineering* (ANS), Vol. 26, No. 1 (Sept. 1966): pp. 26, 110-116.

Subject Codes: A3, T

09/30/95 Status: Published

Major Work: Hansen, *Nuclear Science and Engineering*, Vol. 8, pp. 709-719, listed separately.

Hankins, Dale E. "A Study of Selected Criticality Dosimetry Methods," LA-3910. LASL, June 1968.

Subject Codes: B1, D

09/30/95 Status: Issued

Alt. Contact: LANL, NTIS, OSTI

Hankins, Dale E. "Dosimetry of Criticality Accidents Using Activations of the Blood and Hair." *Health Physics* (Pergamon Press), Vol. 38, (April 1980): pp. 529-541.

Subject Codes: A3, B1, D

09/30/95 Status: Published

Alt. Contact: HPS

Subject Codes: (see full subject code list in the front matter for additional description)

A through A3 = criticality accidents

B1 or B2 = extensive bibliography or references

C1 through C5 = CASs

D = dose, dosimetry, distance and shielding

E through E4 = emergency management

H1 and H2 = hazard-, risk-, and safety-analysis

M = medical

O = other

R = releases and release dispersion

T = computational methods, tools, validation

Parenthesis indicate that code(s) were assigned based on document title, its use as a reference in other documents, or discussions with authors.

Hankins, Dale E. "Neutron and Gamma-Ray Dose Measurements at the Los Alamos Critical Assembly SHEBA." In *ANS Trans.*, Vol. 39. ANS, Nov. 1981, pp. 559-560.

Subject Codes: A3, C3, D

09/30/95 Status: Published

Hansen, G[ordon] E. "Burst Characteristics Associated with the Slow Assembly of Fissionable Materials," LA-1441. LASL, July 1952.

Subject Codes: A3, T

09/30/95 Status: Published

Alt. Contact: LANL, NTIS, OSTI

Hansen, G[ordon] E. "Assembly of Fissionable Material in the Presence of a Weak Neutron Source." *Nuclear Science and Engineering* (ANS), Vol. 8, No. 6 (Dec. 1960): pp. 709-719.

Subject Codes: A3, T

09/30/95 Status: Published

Hasterlik, R. J., and L. D. Marinelli. "Physical Dosimetry and Clinical Observations on Four Human Beings Involved in an Accidental Critical Assembly Excursion." In *Proceedings of the International Conference on Peaceful Uses of Atomic Energy, Geneva Switzerland, Aug. 1955*, Vol. 11. UN, 1956, pp. 25-34.

Subject Codes: A2, D, M

09/30/95 Status: Published

Notes: Incident date 06/02/52

Haight, C[hristopher] F., et al. "Analysis of Hypothetical Criticality Excursion Accidents in 10- and 20-MW Freezer/Sublimers." *Nuclear Technology* (ANS), Vol. 111, No. 2 (Aug. 1995): pp. 197-218.

Subject Codes: A3, B1, T

09/30/95 Status: Published

Summary: Haight, C[hristopher] F., et al. "Analysis of Hypothetical Criticality Excursion Accidents in 10- and 20-MW Freezer/Sublimers." In *ANS Trans.*, Vol. 70. ANS, June 1994, pp. 187-188.

Earlier Work: Haight, C[hristopher] F. "Analysis of Hypothetical Criticality Excursion Accidents in 10- and 20-MW Freezer/Sublimers." Master's Practice Project, University of Tennessee - Knoxville, May 1993.

Haywood, F. F., and J. W. Poston. "2nd IAEA Nuclear Accident Dosimetry Coordination Meeting and Intercomparison Experiment, May 3-15, 1971," ORNL-TM-3770. ORNL, 1971.

Subject Codes: (D)

09/30/95 Status: Issued

Alt. Contact: IAEA, NTIS, OSTI

Haywood, F. F., et al. "Dosimetry for Criticality Accidents: A Manual," IAEA Technical Report Series No. 211. IAEA, Feb. 1982.

Subject Codes: B1, D, T

09/30/95 Status: Active

Hempelmann, Louis H., Clarence C. Lushbaugh, and George L. Voelz. "What Happened to the Survivors of the Early Los Alamos Nuclear Accidents?" In *The Medical Basis for Radiation Accident Preparedness: Proceedings of the REAC/TS International Conference, Oak Ridge, Tennessee USA, Oct. 1979*, edited by Karl F. Hübner and Shirley A. Fry. New York, New York USA: Elvsevier/North-Holland, 1980, pp. 17-32.

Subject Codes: A2, D, M

09/30/95 Status: Published

Notes: Includes re-evaluations of doses based on recommendation changes over the years.
Incident dates 08/21/45 and 05/21/46.

Henderson, P. J. "Conversion of Neutron and Gamma-Ray Flux to Absorbed Dose Rate," XDC-59-8-179. Cincinnati, Ohio USA: General Electric Atomic Products Division, Aug. 1959.

Subject Codes: (D, T)

09/30/95 Status: Issued

Notes: Conversion factors revised since 1959 but the factors of this report were used extensively.

Henry, H[ugh] F., J. C. Bailey, and R. C. Rohr. "Calibration of Indium Foils for Personnel Monitoring," K-999. UCNC, 1953.

Subject Codes: (D, T)

09/30/95 Status: Issued

Alt. Contact: NTIS, OSTI

Henry, H[ugh] F., J. C. Bailey, and R. C. Rohr. "A Simple Device for Personnel Monitoring of an Accidental Nuclear Reaction." *Nuclear Science and Engineering* (ANS), Vol. 5, No. 5 (1959): pp. 285-290.

Subject Codes: D

09/30/95 Status: Published

Henry, Hugh F. "Planning for Control of Criticality Emergencies." In *Progress in Nuclear Energy Series IV: Technology, Engineering, and Safety*, edited by C. M. Nicholle. New York USA: Pergamon Press, 1960, pp. 206-227.

Subject Codes: A3, C2, C5, E, H1, O

09/30/95 Status: Published

Hetrick, David L., and Adrienne B. Smith. "Nuclear Excursions in Aqueous Solutions of Fissile Material." In *ANS Trans.*, Vol. 55. ANS, Nov. 1987, pp. 407-408.

Subject Codes: A3

09/30/95 Status: Published

Hetrick, David L. "Simulation of Power Pulses in Criticality Accidents with Fissile Solutions." In *International Meeting on Safety Margins in Criticality Safety, San Francisco, California USA, Nov. 1989*. ANS, Nov. 1989, pp. 70-78.

Subject Codes: A3, T

09/30/95 Status: Published

Hetrick, David L. "Computer Simulation of Hypothetical Criticality Accidents." In *Proceedings of ICNC'91 International Conference on Nuclear Criticality Safety, Oxford England, Sept. 1991*, Vol. 2. UKAEA Tech., Sept. 1991, pp. VII-72 - VII-84.

Subject Codes: A3, T

09/30/95 Status: Published

Summary: ——. "Computer Simulation of Hypothetical Criticality Accidents in Aqueous Fissile Solutions." In *ANS Trans.*, Vol. 63. ANS, June 1991, pp. 226-228.

Hetrick, David L., and Drew E. Kornreich. "Hypothetical Criticality Accidents in Dilute Plutonium-Water Solutions: A Potential Trans-Uranic Storage Hazard." In *Proceedings of the WM'93 Symposium on Waste Management, Tucson, Arizona, USA, Feb.-Mar. 1993*. ANS, 1993, pp. 1267-1270.

Subject Codes: A3, T

09/30/95 Status: Published

Hetrick, D[avid] L., R[obert] H. Kimpland, and D[rew] E. Kornreich. "Computer Model for Predicting the Effects of Criticality Accidents in Solution." In *Proceedings of the 1993 Topical Meeting on Physics and Methods in Criticality Safety, Nashville, Tennessee USA, Sept. 1993*. ANS, Sept. 1993, pp. 80-86.

Subject Codes: A3, T

09/30/95 Status: Published

Later Work: ——. "Computer Simulations of Homogeneous Water Solution Pulse Reactors and Criticality Accidents." In *ANS Topical Meeting on Physics, Safety, and Applications of Pulse Reactors, Washington DC USA, Nov. 1994*. ANS, 1994.

Subject Codes: (see full subject code list in the front matter for additional description)

A through A3 = criticality accidents

B1 or B2 = extensive bibliography or references

C1 through C5 = CASs

D = dose, dosimetry, distance and shielding

E through E4 = emergency management

H1 and H2 = hazard-, risk-, and safety-analysis

M = medical

O = other

R = releases and release dispersion

T = computational methods, tools, validation

Parenthesis indicate that code(s) were assigned based on document title, its use as a reference in other documents, or discussions with authors.

Hetrick, D[avid] L., and T[homas] P. McLaughlin. "Estimating Maximum Pulse Yields for Solution Criticality Accidents." In *ANS Trans.*, Vol. 69. ANS, Nov. 1993, pp. 249-250.

Subject Codes: A3, T

09/30/95 Status: Published

Hetrick, David L. "Computation of Nuclear Excursions Induced by Large Reactivity Ramps." In *ANS Trans.*, Vol. 72. ANS, June 1995, pp. 204-205.

Subject Codes: T

09/30/95 Status: Published

Hetrick, David [L.], and Sung Lee. "Progress Toward a Method of Estimating Maximum Pulse Yields for Solution Criticality Accidents." In *ICNC'95 Proceedings of the Fifth International Conference on Nuclear Criticality Safety, Albuquerque, New Mexico USA, Sept. 1995*, Vol. II. UNM, Sept. 1995, pp. 11•131-11•136.

Subject Codes: A3, T

09/30/95 Status: Published

Hill, Ernest E., and O. Clinton Kolar. "Criticality Alarm System for the Lawrence Livermore National Laboratory." In *Transactions of the Criticality Accident Alarm Systems Workshop, Richland, Washington USA, Sept. 1988*, DOE/NCT-05. LLNL, 1988, pp. 79-101.

Subject Codes: C1, C2, C4

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Hobson, J[ohn] M[urray]. "Definition of Areas Requiring Criticality Alarm Annunciation and Emergency Control." In *Transactions of the Criticality Accident Alarm Systems Workshop, Richland, Washington USA, Sept. 1988*, DOE/NCT-05. LLNL, 1988, pp. 163-171.

Subject Codes: A3, T, C3, E2, O

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Hoffman, Joseph G. "Radiation Doses in the Pajarito Accident of May 21, 1946," LA-687. LASL, May 26, 1948.

Subject Codes: A2, D, T

09/30/95 Status: Published

Alt. Contact: LANL, NTIS, OSTI

Hopper, C[alvin] M. "A Slide Rule for Estimating Nuclear Criticality Information," Y-DD-145. UCNC Y-12 Plant, Jan. 7, 1974.

Subject Codes: A3, B1, D, T

09/30/95 Status: Issued

Alt. Contact: NTIS, OSTI

Further Work: Wilkinson, et al, *Nuclear Technology*, Vol. 111, No. 2, pp. 227-240, listed separately.

○ Broadhead and Hopper, *ANS Trans.*, Vol. 72. pp. 218-220, listed separately.

Notes: Revision due to be issued in 1996.

Howells, H., and J. T. Daniels. "Organization for Operational Control of Criticality." In *Criticality Control in Chemical and Metallurgical Plant, Karlsruhe Symposium, Karlsruhe Germany, May 1961*. OECD, Nov. 1961, pp. 465-476.

Subject Codes: C2, C3, E2, E3, O

09/30/95 Status: Published

Notes: Criticality safety program overview

[HPS]. "American National Standard: Dosimetry for Criticality Accidents," ANSI N13.3-1969 (R1988). ANSI, approved July 17, 1969.

Subject Codes: D, E1, E2, E4, T

09/30/95 Status: Active

Notes: References standards ANSI N16.1-1969 and N16.2-1969 but allows rev.s to apply.

Current rev.s are ANSI/ANS-8.1-1983 (R1988) and -8.3-1986.

HPS and IEEE. "American National Standard, Radiation Protection Instrumentation Test and Calibration," ANSI N323-1978 (R1993). IEEE, approved Sept. 13, 1977.

Subject Codes: O; possibly C1, C5

09/30/95 Status: Active

Alt. Contact: ANSI, IEEE

Notes: Applies to portable instruments for measuring radiation levels

Hughes, T. G. "Criticality Incident at Windscale." *Nuclear Engineering International* (Reed Business Publishing), Vol. 17, No. 189 (Feb. 1972): pp. 95-97.

Subject Codes: A1

09/30/95 Status: Published

Notes: Incident date 08/24/70

Hurst, D. G., et al. "Panel Discussion on Criticality Control of Fissile Materials." *Criticality Control of Fissile Materials, Stockholm Sweden, Nov. 1965*. IAEA, 1966, pp. 739-746.

Subject Codes: A3, C3, O

09/30/95 Status: Published

Hurst, G. S., et al. "Techniques of Measuring Neutron Spectra with Threshold Detectors - Tissue Dose Determination." *Review of Scientific Instruments*, Vol. 27, No. 3 (March 1956): pp. 153-156.

Subject Codes: D

09/30/95 Status: Published

Hurst, G. S., R. H. Ritchie, and L. C. Emerson. "Accidental Radiation Excursion at the Oak Ridge Y-12 Plant, III. Determination of Radiation Doses." *Health Physics* (Pergamon Press), Vol. 2, No. 2 (1959): pp. 121-133.

Subject Codes: A1, D, T

09/30/95 Status: Published

Alt. Contact: HPS

Notes: Incident date 06/16/58
3rd of 4 part series of articles

IAEA. "Recommendations, Medical Handling of Accidentally Exposed Individuals." IAEA Safety Series No. 88. IAEA, Aug. 1988.

Subject Codes: B1, M, O

09/30/95 Status: Published

ICRU. "Tissue Substitutes in Radiation Dosimetry and Measurement." ICRU Report No. 44. ICRU Publications, Jan. 15, 1989.

Subject Codes: B1, T, O

09/30/95 Status: Active

Notes: Gamma and neutron flux-to-dose conversion factors.

IEC. "International Standard, Supply Voltages for Transistorized Nuclear Instruments," CEI IEC 293: 1968. IEC, 1968.

Subject Codes: (C2, C5)

09/30/95 Status: Not determined

IEC. "International Standard, Warning Equipment for Criticality Accidents," CEI IEC 860: 1987. IEC, 1987.

Subject Codes: C1, C2, C5

09/30/95 Status: Active

Subject Codes: (see full subject code list in the front matter for additional description)

A through A3 = criticality accidents

B1 or B2 = extensive bibliography or references

C1 through C5 = CASs

D = dose, dosimetry, distance and shielding

E through E4 = emergency management

H1 and H2 = hazard-, risk-, and safety-analysis

M = medical

O = other

R = releases and release dispersion

T = computational methods, tools, validation

Parenthesis indicate that code(s) were assigned based on document title, its use as a reference in other documents, or discussions with authors.

Ing, H., and S. Makra. "Compendium of Neutron Spectra in Criticality Accident Dosimetry." IAEA Technical Report Series No. 180. IAEA, 1987.

Subject Codes: A3, B1, T, O

09/30/95 Status: Published

IOS. "International Standard, Principles of Criticality Safety in Handling and Processing," ISO 1709: 1975. IOS, 1975

Subject Codes: O

09/30/95 Status: Active

Notes: International counterpart of ANSI/ANS-8.1

IOS. "International Standard, Nuclear Energy - X and Gamma Reference Radiations for Calibrating Dosemeters and Dose Ratemeters and for Determining their Response as a Function of Photon Energy," ISO 4037: 1979. IOS, 1979.

Subject Codes: (C1, D, T, O)

09/30/95 Status: Active

Notes: Apparently Part I. A draft Part II was available for comment as of June 1995.

IOS. "International Standard, Nuclear Energy - Performance and Testing Requirements for Criticality Detection and Alarm Systems," ISO 7753: 1987 (E). IOS, Aug. 1, 1987.

Subject Codes: A3, C1, C2, C3, C5

09/30/95 Status: Active

Jammet, H. P., et al. "Observation Clinique et Traitement d'un Cas d'Irradiation Globale Accidentelle." In *Proceedings of the First International Congress on Radiation Protection, Rome Italy, Sept. 1966*, Part 2. edited by W. S. Snyder, et al. Pergamon Press, 1967, pp. 1249-1291.

Subject Codes: A1, A2, M

09/30/95 Status: Published

Jones, S. A. "Technology Assessment for Improved Criticality Radiation Alarm Monitors," GAT-T-3133. Piketon, Ohio USA: Goodyear Atomic Corporation, January 29, 1982.

Subject Codes: C2, C4

09/30/95 Status: Issued

Alt. Contact: NTIS, OSTI

Jordan, Edward L. "Fatality at Argentine Critical Facility," NRC Information Notice No. 83-66; and No. 83-66, Supplement 1. NRC, Oct. 7, 1983; May 25, 1984.

Subject Codes: A2

09/30/95 Status: Published

Notes: Incident date 09/23/83

Kanamori, M., K. Noda, and O. Nokamura. "The Criticality Detection and Alarm System in PNC Tokai Works." In *Proceedings of ICS'87 International Seminar on Nuclear Criticality Safety, Tokyo Japan, Oct. 1987*. PNC, Sept. 1987, pp. 471-474.

Subject Codes: C1, C2, C4

09/30/95 Status: Published

Kathren, R[onald] L., et al. "Health Physics Following a Nuclear Excursion: The LRL Incident of 26 March 1963," UCRL-7345 (Rev. I). LLNL, June 3, 1963.

Subject Codes: A2, D, M

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Kathren, R[onald] L. "The 1963 Livermore Criticality Accident Revisited." In *ANS Trans.*, Vol. 46. ANS, June 1994, pp. 440-441.

Subject Codes: A2

09/30/95 Status: Published

Notes: Incident date 03/26/63

Kato, R., T. Naramura, and Y. Senda. "The Code CREST to Simulate Criticality Accident Power Excursion in Fuel Solution." In *International Meeting on Safety Margins in Criticality Safety, San Francisco, California USA*, Nov. 1989. ANS, Nov. 1989, pp. 79-88.

Subject Codes: A3, T

09/30/95 Status: Published

Code Report: ——. "The Code CREST to Simulate Criticality Accident Power Excursion in Fuel Solution" (in Japanese?). Mitsubishi Atomic Power Industries, Japan, no date.

Notes: CREST might not be available to the public.

Keepin, G. R[obert], and R. W. Cox. "General Solution of the Reactor Kinetic Equation." *Nuclear Science and Engineering* (ANS), Vol. 8, No. 6 (Dec. 1960): pp. 670-690.

Subject Codes: T

09/30/95 Status: Published

Kimpland, Robert Herbert. "Multi-Region Computer Model for Predicting Nuclear Excursions in Aqueous Homogeneous Solution Assemblies." Ph.D. dissertation, University of Arizona, 1993.

Subject Codes: T

09/30/95 Status: Published

Summary: Kimpland, R[obert] H. "An Improved Multi-Region Computer Model for Predicting Nuclear Excursions in Aqueous Homogeneous Solution Assemblies." In *ANS Trans.*, Vol. 68. ANS, June 1993, p. 245.

Later work: R[obert] H. Kimpland and D[rew] E. Kornreich. "A Two-Dimensional Multi-Region Computer Model for Predicting Nuclear Excursions in Aqueous Homogeneous Solution Assemblies." To be published in *Nuclear Science and Engineering* (late 1995 or early 1996).

Kindleben, Gerd. "Design of and Experience with the Gamma-Detecting Criticality Accident Alarm System at Alkem MOX Fuel Fabrication Plant." In *Transactions of the Criticality Accident Alarm Systems Workshop, Richland, Washington USA, Sept. 1988*, DOE/NCT-05. LLNL, 1988, pp. 133-144.

Subject Codes: C1, C2, C4, O

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Knief, Ronald A. "Emergency Planning Lessons Learned from TMI-2: Potential Applications for Fuel Facilities." In *ANS Trans.*, Vol. 72. ANS, June 1995, pp. 220-221.

Subject Codes: A2, E2

09/30/95 Status: Published

Kohnoura, Bunzo, and Kentaro Minami. "Gas Loop Type Criticality Alarm Monitor." In *Proceedings of ISCS'87 International Seminar on Nuclear Criticality Safety, Tokyo Japan, Oct. 1987*. PNC, Sept. 1987, pp. 467-470.

Subject Codes: C1, C2, C4

09/30/95 Status: Published

Kolar, O. Clinton, et al. "Installation of and Experience with a New Standard Criticality Alarm System." In *Proceedings of ISCS'87 International Seminar on Nuclear Criticality Safety, Tokyo Japan, Oct. 1987*. PNC, Sept. 1987, pp. 479-483.

Subject Codes: C2, C4, O

09/30/95 Status: Published

Subject Codes: (see full subject code list in the front matter for additional description)

A through A3 = criticality accidents

B1 or B2 = extensive bibliography or references

C1 through C5 = CASs

D = dose, dosimetry, distance and shielding

E through E4 = emergency management

H1 and H2 = hazard-, risk-, and safety-analysis

M = medical

O = other

R = releases and release dispersion

T = computational methods, tools, validation

Parenthesis indicate that code(s) were assigned based on document title, its use as a reference in other documents, or discussions with authors.

Kornreich, D[rew] E. "Reactivity Feedback Mechanisms in Aqueous Fissile Solutions." *Nuclear Science and Engineering* (ANS), Vol. 115, No. 1 (Sept. 1993): pp. 50-61.

Subject Codes: A3, T

09/30/95 Status: Published

Kornreich, Drew E. "'Response to 'Comment on 'Reactivity Feedback Mechanisms in Aqueous Fissile Solutions' ". ' " *Nuclear Science and Engineering* (ANS), Vol. 118, No. 2 (Oct. 1994): pp. 130-131.

Subject Codes: T

09/30/95 Status: Published

Kouts, Herbert, et al. (Technical Review Committee appointed by the AEC Director of Regulation). "Report on the Criticality Incident at the Wood River Junction Plant." No publication data, Nov. 6, 1964.

Subject Codes: (A1)

09/30/95 Status: Issued

Alt. Contact: LANL, NTIS

Notes: Incident date July 24, 1964.

Title as specified in references vary but the above title seems most complete. Document retrieval has been delayed due to uncertainty of title and publication data.

Krug, H., and W. Thomas. "Criticality Safety in the Federal Republic of Germany." In *Proceedings, Nuclear Criticality Safety, El Paso, Texas USA, April 1990*, SAND80-1675. Albuquerque, New Mexico USA: Sandia National Laboratories, 1990, pp. 141-165.

Subject Codes: A3, T, O

09/30/95 Status: Published

Alt. Contact: NTIS

Lambert, H. E. "Systems Safety Analysis and Fault Tree Analysis," UCID-16238. LLNL, May 9, 1973.

Subject Codes: H2, O

09/30/95 Status: Published

Notes: Qualitative tools

Lécorché, Pierre [R.], and Robert L. Seale. "A Review of the Experiments Performed to Determine the Radiological Consequences of a Criticality Accident," Y-CDC-12. UCNC, Nov. 1973.

Subject Codes: A3

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Full Reports: CEA/DPSR/SEEC reports 57, 59, 60, 69, 70, 74, 77, 79, 83, 91, 92, 96, and 98; and CEA/DSN/SEEC report 103. All are listed separately here (see Barbry).

Earlier Ed.s: Lécorché, P[ierre] R., and H. F. Revol. "CRAC - Experimental Study of Criticality Accidents." In *ANS Trans.*, Vol. 14, No. 1. ANS, June 1971, pp. 33-34.

○ Seale, R[obert] L. "A Review of the CRAC Experiments." In *ANS Trans.*, Vol. 14, No. 1. ANS, June 1971, pp. 34-35.

○ Lécorché, P[ierre] R. "CRAC Experimental Study of Criticality Accidents." In *ANS Trans.*, Vol. 16, No. 1. ANS, June 1973, pp. 163-164.

Lee, [Jr.], Billy L., et al. "Calculated In-Air Leakage Spectra and Power Levels for the ANSI Standard Minimum Accident of Concern." In *ANS Trans.*, Vol. 71. ANS, Nov. 1994, pp. 286-287.

Subject Codes: A3, D, O

09/30/95 Status: Published

Lee, Jr., Billy L., et al. "Evaluation of Coverage of Enriched UF₆ Cylinder Storage Lots by Existing Criticality Accident Alarms," POEF-SH--29. Martin Marietta Energy Systems, Inc., Piketon, Ohio USA, March 1995.

Subject Codes: (A3, C2, C4, D)

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Lee, Sung, and David [L.] Hetrick. "Effect of Axial Expansion on the Reactivity of a Cylindrical Fissile Solution Assembly." In *ANS Trans.*, Vol. 72. ANS, June 1995, pp. 203-204.

Subject Codes: A3, T

09/30/95 Status: Published

Leonard, Jr., B. R. "A Study of the Radiation Burst in the Hanford Homogeneous Reactor," HW-24327. HW, May 2, 1952.

Subject Codes: A2, M, O, T

09/30/95 Status: Published

Alt. Contact: Hanford, NTIS, OSTI

Notes: Incident date 11/16/51.

Lewis, W. B. "The Accident to the NRX Reactor on December 12, 1952," DR-32. Atomic Energy of Canada, Limited, Chalk River Project, Chalk River, Ontario Canada, 1953.

Subject Codes: (A2)

09/30/95 Status: Issued

Alt. Contact: NTIS

Additional: ———. "Interim Report at January 9, 1953 on Problems Arising from the NRX Incident of December 12, 1952," DR-29. Atomic Energy of Canada, Limited, Chalk River Project, Chalk River, Ontario Canada, Feb. 1953.

○ Henderson, W. J., et al. "An Investigation of Some of the Circumstances Pertinent to the Accident to the NRX Reactor on December 12, 1952," NEI-26. Atomic Energy of Canada, Limited, Chalk River Project, Chalk River, Ontario Canada, 1953.

Luntz, Jerome D. (editor). "Reactors." *Nucleonics* (McGraw-Hill), Vol. 13 (Sept. 1955): p. 40-45.

Subject Codes: (A2)

09/30/95 Status: Published

Notes: Incident date 07/22/54

Luntz, Jerome D. (editor). "Oak Ridge Y-12 Accidental Excursion, June 16, 1958." *Nucleonics* (McGraw-Hill), Vol. 16, No. 11 (Nov. 1958): pp. 138-140 and 200-203.

Subject Codes: A1

09/30/95 Status: Published

Full Report: Patton, et al., Y-1234, listed separately.

Luntz, Jerome D. (editor). "Yugoslavian Criticality Accident, October 15, 1958." *Nucleonics* (McGraw-Hill), Vol. 17, No. 4 (April 1959): pp. 106 and 154-156.

Subject Codes: A2

09/30/95 Status: Published

Lutz, H[arry] F. "Nuclear Criticality Safety Assessment: Part I. Calculating Power Histories in Nuclear Excursions," M-164. LLNL, June 17, 1985.

Subject Codes: A3, T

09/30/95 Status: Issued

Alt. Contact: NTIS, OSTI

Lutz, Harry F. "Predicting Accident Characteristics by Calculations." In *ANS Trans.*, Vol. 55. ANS, Nov. 1987, pp. 408-409.

Subject Codes: A3, T

09/30/95 Status: Published

Subject Codes: (see full subject code list in the front matter for additional description)

A through A3 = criticality accidents

B1 or B2 = extensive bibliography or references

C1 through C5 = CASs

D = dose, dosimetry, distance and shielding

E through E4 = emergency management

H1 and H2 = hazard-, risk-, and safety-analysis

M = medical

O = other

R = releases and release dispersion

T = computational methods, tools, validation

Parenthesis indicate that code(s) were assigned based on document title, its use as a reference in other documents, or discussions with authors.

Maceda, E. L., and D[on] K. Sgarlata. "Radius of Coverage of Nuclear Criticality Detectors." In *ANS Trans.*, Vol. 34. ANS, 1980, pp. 330-331.

Subject Codes: C2, D, T

09/30/95 Status: Published

Malenfant, Richard E., and H. M. Forehand. "Facility Description of a Solution Critical Assembly: SHEBA." In *ANS Trans.*, Vol. 39. ANS, Nov. 1981, pp. 555-557.

Subject Codes: A3, C1, O

09/30/95 Status: Published

Malenfant, R[ichard] E., and H. M. Forehand, Jr. "Simulation of Process Plant Accidents." In *ANS Trans.*, Vol. 43. ANS, June 1982, p. 405.

Subject Codes: A3

09/30/95 Status: Published

Duplicate: LA-UR-82-1988. LANL, 1982.

Malenfant, Richard E. "Self Limiting Features of Accidental Criticality in a Solution System." In *Transactions of the Criticality Accident Alarm Systems Workshop, Richland, Washington USA, Sept. 1988*, DOE/NCT-05. LLNL, 1988, pp. 27-34.

Subject Codes: A3

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Duplicate: LA-UR-88-3124. LANL, Sept. 1988.

Malenfant, Richard E. "Los Alamos Critical Experiments Facility." In *Proceedings of ICNC'91 International Conference on Nuclear Criticality Safety, Oxford England, Sept. 1991*, Vol. 2. UKAEA Tech., Sept. 1991, pp. VII-12 - VII-16.

Subject Codes: C1, O

09/30/95 Status: Published

Malenfant, Richard E. "Criticality Accident Alarm System." In *Proceedings of ICNC'91 International Conference on Nuclear Criticality Safety, Oxford England, Sept. 1991*, Vol. 2. UKAEA Tech., Sept. 1991, pp. VII-51 - VII-54.

Subject Codes: A3, C3, C5

09/30/95 Status: Published

Summary: ——. "A Criticism of ANSI/ANS-8.3-1986: Criticality Accident Alarm System." In *ANS Trans.*, Vol. 64. ANS, Nov. 1991, p. 327.

Later Work: Barbry and Malenfant, *Proceedings of the 1993 Topical ...*, pp. 21-25, listed separately.

Mallory, E. C., et al. "Neutron Burst from a Cylindrical Untamped Oy Assembly," LA-1477. LASL, July 22, 1952.

Subject Codes: A2

09/30/95 Status: Published

Alt. Contact: LANL, NTIS, OSTI

Notes: Incident date 04/18/52.

Oy is the now declassified codeword for enriched uranium.

Marble, Ronald C., Tulanda D. Brown, and Jeff C. Wooldridge. "Criticality Accident Alarm System at the Fernald Environmental Management Project," FEMP--2328. Fernald Environmental Restoration Management Corporation, Cincinnati, Ohio USA, June 1994.

Subject Codes: (C1, C2, C4)

09/30/95 Status: Published

Summary: ——. "Criticality Accident Alarm System at the Fernald Environmental Management Project." In *ANS Trans.*, Vol. 70. ANS, June 1994, p. 206.

Mather, D[onald] J., and P. M. Shaw. "Calculations of Criticality Excursions in Fissile Liquid Solutions," SRD-R-308. UKAEA, July 1984.

Subject Codes: (A3, T)

09/30/95 Status: Issued

Alt. Contact: HMSO, UKAEA Tech.

Mather, D[onald] J., and P. Hague. "The Analysis of Transient Criticality in Wetted Uranium Dioxide Systems and in Fissile Solutions." In *ANS Trans.*, Vol. 55. ANS, Nov. 1987, pp. 414-415.

Subject Codes: A3, T

09/30/95 Status: Published

Mather, D[onald] J., et al. "Validation of the Critex Code." In *Proceedings of ICNC'91 International Conference on Nuclear Criticality Safety, Oxford England, Sept. 1991*, Vol. 2. UKAEA Tech., Sept. 1991, pp. VII-62 - VII-71.

Subject Codes: T

09/30/95 Status: Published

Mather, D[onald] J., et al. "Examination of Some Fissile Solution Scenarios Using Critex." In *Proceedings of ICNC'91 International Conference on Nuclear Criticality Safety, Oxford England, Sept. 1991*, Vol. 2. UKAEA Tech., Sept. 1991, pp. VII-85 - VII-96.

Subject Codes: A3, T

09/30/95 Status: Published

Replaces: Mather, D[onald] J., and P. M. Shaw. "Calculations of Criticality Excursions in Fissile Liquid Solutions." In *Proceedings of the International Seminar on Criticality Studies Programs and Needs, Dijon France, Sept. 1983*. Centre d' Études de Valduc, France: CEA, 1984, pp. 485-515.

Mather, D[onald] J., A. Bickley, and A[nthony] Prescott. "CRITEX - A Code To Calculate the Fission Release Arising from Transient Criticality in Fissile Solutions," AEA/CS/R1007/R. UKAEA Tech., 1994.

Subject Codes: (T)

09/30/95 Status: Indeterminant

Notes: Work on CRITEX has apparently ended. Although the code was available for sale, there is no support network, such as ANSWERS, for users.

Mather, D[onald] J. "Analysis of Radiolytic Gas Nucleation during Criticality Transients." In *ICNC'95 Proceedings of the Fifth International Conference on Nuclear Criticality Safety, Albuquerque, New Mexico USA, Sept. 1995*, Vol. II. UNM, Sept. 1995, pp. 10•11-10•18.

Subject Codes: A3, T

09/30/95 Status: Published

Mazzola, Carl A., Robert. B. Addis, and the Emergency Management Laboratory of the Oak Ridge Institute for Science and Education. *Atmospheric Dispersion Modeling Resources*, 2nd Ed. ORAU, March 1995.

Subject Codes: (B1, R, T)

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Notes: Critical review with supporting bibliography for most methods of estimating and predicting atmospheric dispersion.

McBride, J[ohn] A., et al. "Safety Aspects of U. S. Fuel Reprocessing." In *Proceedings of the Third United Nations International Conference on Peaceful Uses of Atomic Energy, Geneva Switzerland, Aug.-Sept. 1964*, Vol. 13. UN, 1965, pp. 194-203.

Subject Codes: A1, E1, O

09/30/95 Status: Published

Subject Codes: (see full subject code list in the front matter for additional description)

A through A3 = criticality accidents
 B1 or B2 = extensive bibliography or references
 C1 through C5 = CASs
 D = dose, dosimetry, distance and shielding
 E through E4 = emergency management

H1 and H2 = hazard-, risk-, and safety-analysis
 M = medical
 O = other
 R = releases and release dispersion
 T = computational methods, tools, validation

Parenthesis indicate that code(s) were assigned based on document title, its use as a reference in other documents, or discussions with authors.

McGuire, S. A. "A Regulatory Analysis on Emergency Preparedness for Fuel Cycle Facilities and Other Radioactive Material Licensees, Final Report" NUREG-1140. NRC, Jan. 1985.

Subject Codes: E1, E5

09/30/95 Status: Published

McLaughlin, Thomas P. "Process Criticality Accident Likelihoods, Consequences and Emergency Planning." *Proceedings of ICNC'91 International Conference on Nuclear Criticality Safety, Oxford England, Sept. 1991*, Vol. 2. UKAEA Tech., Sept. 1991, pp. VII-1 - VII-11.

Subject Codes: A3, C3, H1

09/30/95 Status: Published

McLendon, J[ack] D. "Accidental Radiation Excursion at the Oak Ridge Y-12 Plant, II. Health Physics Aspects of the Accident." *Health Physics* (Pergamon Press), Vol. 2, No. 1 (1959): pp. 21-29.

Subject Codes: A1, D, M

09/30/95 Status: Published

Alt. Contact: HPS

Notes: Incident date 06/16/58

2nd of 4 part series of articles

McMahan, J[ohn] W., and J. D. Clayton. "Savannah River MIN System Maintenance Program." In *Transactions of the Criticality Accident Alarm Systems Workshop, Richland, Washington USA, Sept. 1988*, DOE/NCT-05. LLNL, 1988, pp. 47-57.

Subject Codes: C1, C2, C4

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Mee, W[illiam] T., and J[ack] D. McLendon. "The Oak Ridge Y-12 Plant Criticality Accident Emergency Program." In *ANS Trans.*, Vol 19. ANS, Oct. 1974, pp. 194-195.

Subject Codes: E2, E3

09/30/95 Status: Published

Mee, W[illiam] T., D[avis] A. Reed, and R[ichard] G. Taylor. "Consequences of a Postulated, Moderated Criticality Accident at the Oak Ridge Y-12 Plant," Y/DD-384. Martin Marietta Energy Systems, Inc., Oak Ridge, Tennessee USA, Sept. 1988.

Subject Codes: A3, D, R, T

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Notes: Authors indicate there are a few minor errors with the release calculations.

Mirić, I, and Ž. Ubović. "3rd IAEA Nuclear Accident Intercomparison Experiment, 14-25 May 1973" (probably not in English), IBK-1275. Belgrade Yugoslavia: Boris Kidrič Institute, 1974.

Subject Codes: (D)

09/30/95 Status: Issued

Alt. Contact: IAEA

Monahan, S[hean] P. "The Neutron Physics of Concrete Reflectors." In *ICNC'95 Proceedings of the Fifth International Conference on Nuclear Criticality Safety, Albuquerque, New Mexico USA, Sept. 1995*, Vol. II. UNM, Sept. 1995, pp. 11•158-11•165.

Subject Codes: D

09/30/95 Status: Published

Naito, Y[oshitaka], M. Yokota, and K[o] Nakano. "MULTI-KENO: A Monte Carlo Code for Criticality Safety Analysis," (in Japanese) JAERI-M 83-049. JAERI, March 1983.

Subject Codes: (T)

09/30/95 Status: Not determined

Notes: MULTI-KENO is apparently active but it might not be available to the public.

Nakache, F. R., and M. M. Shapiro. "The Nuclear Aspects of the Accidental Criticality at Wood River Junction, Rhode Island, July 24, 1964," TID-21995. New Haven, Connecticut USA: United Nuclear Corporation, Nov. 12, 1964.

Subject Codes: A1, D, T

09/30/95 Status: Published

Alt. Contact: NTIS

Notes: No. assigned after initial distribution

Summary: Auxier, *Nuclear Safety*, Vol. 6, No. 3, pp. 298-301, listed separately.

Supplement to: Allison, et al., "Nuclear Incident ... July 24, 1964," Aug. 21, 1964, listed separately.

Nakajima, Ken, and Yeong-Chan Kim. "Comparisons of Void-Models and Effects of Initial Neutron Density in Criticality Accident Analysis." In *Proceedings of ICNC'91 International Conference on Nuclear Criticality Safety, Oxford England, Sept. 1991*, Vol. 2. UKAEA Tech., Sept. 1991, pp. VII-25 - VII-32.

Subject Codes: A3, T

09/30/95 Status: Published

Nakajima, K[en], and H. Yanagisawa. "Development of a Kinetics Code, AGNES, for the Evaluation of Criticality Accidents in Solution Fuel Systems." In *Proceedings of ISCS'87 International Seminar on Nuclear Criticality Safety, Tokyo Japan, Oct. 1987*. PNC, Sept. 1987, pp. 427-429.

Subject Codes: T

09/30/95 Status: Published

Notes: Author indicates the AGNES code is not yet available to the public.

NCRP. "Protection Against Neutron Radiation, Recommendations" NCRP Report No. 38. NCRP, issued Jan. 4, 1971.

Subject Codes: B1, D, O, T

09/30/95 Status: Active

Notes: Especially see Appendix F, "Accident Dosimetry."

NCRP. "Basic Radiation Protection Criteria," NCRP Report No. 39. NCRP, issued Jan. 15, 1971.

Subject Codes: B1, D, M, O, T

09/30/95 Status: Superseded by NCRP Report No. 91

Notes: The 12 rad threshold specified in ANSI/ANS-8.3-1986 is loosely based on 1/2 the NCRP 39 reported 25 rad dose at which temporary changes to whole blood cells were barely detectable.

NCRP. "Recommendations on Limits for Exposure to Ionizing Radiation," NCRP Report No. 91. NCRP, issued June 1, 1987.

Subject Codes: B1, D, O, T

09/30/95 Status: Active

Notes: Limit recommendations supersede those of NCRP Report No. 39.

NCRP. "Developing Radiation Emergency Plans for Academic, Medical, or Industrial Facilities, Recommendations of the National Council on Radiation Protection and Measurements," NCRP Report No. 111. NCRP, 1991.

Subject Codes: (E5)

09/30/95 Status: Active

Subject Codes: (see full subject code list in the front matter for additional description)

A through A3 = criticality accidents

B1 or B2 = extensive bibliography or references

C1 through C5 = CASs

D = dose, dosimetry, distance and shielding

E through E4 = emergency management

H1 and H2 = hazard-, risk-, and safety-analysis

M = medical

O = other

R = releases and release dispersion

T = computational methods, tools, validation

Parenthesis indicate that code(s) were assigned based on document title, its use as a reference in other documents, or discussions with authors.

Negron, Scott B., and Robert W. Tayloe, Jr. "Analysis of the Proposed Relocation of Neutron Criticality Clusters in the Process Buildings for the Portsmouth Gaseous Diffusion Plant," POEF-SH-12. Martin Marietta Energy Systems, Inc., Piketon, Ohio USA, Jan. 1994.

Subject Codes: (A3, C1, C2, C4, D) 09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Summary: Negron, Scott B., Robert W. Tayloe, Jr., and Donna M. D'Aquila. "Proposed Relocation of Neutron Criticality Clusters for the PGDP." In *ANS Trans.*, Vol. 70. ANS, June 1994, pp. 209-210.

Negron, Scott B., Robert W. Tayloe, Jr., and M. C. Dobelbower "Analysis of Criticality Alarm System Response to an Accidental Criticality Outside the Cascade Process Buildings at the Portsmouth Gaseous Diffusion Plant," POEF-SH-19. Martin Marietta Energy Systems, Inc., Piketon, Ohio USA, July 1994.

Subject Codes: (A3, C2, C4, D) 09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Nertney, R. J. "Risk Projection and Human Factors as Related to Nuclear Systems." In *ANS Trans.*, Vol. 32. ANS, 1979, p. 318.

Subject Codes: H2

09/30/95 Status: Published

Newlon, C[harles] E., A[nn] H. Hansen, and C[raig] Fithian. "An Assessment of the Minimum Critical Accident of Concern," H&R 82-2. Oak Ridge, Tennessee USA: H&R Technical Associates, April 1982.

Subject Codes: (A3) 09/30/95 Status: Issued

Alt. Contact: K-25 Plant at Oak Ridge, Tennessee USA; NTIS, OSTI

Newmyer, William D. "Analysis of a Hypothetical Criticality Accident Involving Dry Highly Enriched Uranium Powder." Master's thesis, University of Tennessee - Knoxville, Dec. 1991.

Subject Codes: (A3, T) 09/30/95 Status: Issued

Summary: ———. "Analysis of a Hypothetical Criticality Accident Involving Dry Highly Enriched Uranium Powder." In *ANS Trans.*, Vol. 64. ANS, Nov. 1991, p. 344-346.

NFPA. "Recommended Fire Protection Practice for Facilities Handling Radioactive Materials," ANSI/NFPA 801-1991. Quincy, Massachusetts USA: NFPA, February 8, 1991.

Subject Codes: E5 09/30/95 Status: Active

Notes: Specifically recommends that selection of fire protection and fighting methods consider criticality safety, among other concerns.

Nguyen, Dong H. "Source Term Analysis for a Criticality Accident in Metal Production Line Glove Boxes." *Proceedings of ICNC'91 International Conference on Nuclear Criticality Safety, Oxford England, Sept. 1991*, Vol. 2. UKAEA Tech., Sept. 1991, pp. VII-17 - VII-24.

Subject Codes: A3, T

09/30/95 Status: Published

Nichols, J. P. "Idaho Chemical Processing Plant Criticality Incident of January 25, 1961." *Nuclear Safety* (GPO), Vol. 3, No. 2 (Dec. 1961): pp. 71-73.

Subject Codes: A1

09/30/95 Status: Published

Full Report: Paulus, et al., IDO-10036, listed separately.

Nomura, Y[asushi], and H[iroshi] Okuno. "Simplified Evaluation Models for Total Fission Number in a Criticality Accident." *Nuclear Technology*, Vol. 109 (1995): pp. 142-152.

Subject Codes: (A3, T)

09/30/95 Status: Published

Summary: ———. "Simplified Evaluation Models for Total Fission Number in a Criticality Accident." In *ICNC'95 Proceedings of the Fifth International Conference on Nuclear Criticality Safety, Albuquerque, New Mexico USA, Sept. 1995*, Vol. II. UNM, Sept. 1995, pp. 11•25-11•28.

NRC. "Criticality Accident Requirements," 10 CFR 70.24. FR, no date.

Subject Codes: C2, C3, C5, E

09/30/95 Status: Active

Source: *Federal Register* (GPO), Vol. 39 (Nov. 5, 1974): p. 39021; as amended in Vol. 41 (July 29, 1976): p. 31522, and in Vol. 53 (May 27, 1988): p. 19252.

NRC. "Reports of Accidental Criticality or Loss or Theft or Attempted Theft of Special Nuclear Material," 10 CFR 70.52. FR, no date.

Subject Codes: E1, E4, O

09/30/95 Status: Active

Source: *Federal Register* (GPO), Vol. 52 (June 9, 1987): p. 21657.

NRC Office of Standards Development. "Standard Format and Content of Safety Analysis Reports for Uranium Enrichment Facilities," NRC Regulatory Guide 3.25 (Rev. 0). NRC, Dec. 1974.

Subject Codes: H2, O

09/30/95 Status: Active

NRC Office of Standards Development. "Standard Format and Content of Safety Analysis Reports for Fuel Reprocessing Plants," NRC Regulatory Guide 3.26 (Rev. 0). NRC, Feb. 1975.

Subject Codes: H2, O

09/30/95 Status: Active

NRC Office of Standards Development. "Assumptions Used for Evaluating the Potential Radiological Consequences of Accidental Nuclear Criticality in a Uranium Fuel Fabrication Plant," NRC Regulatory Guide 3.34 (Rev. 1). NRC, July 1979.

Subject Codes: A3, B1, C5, D, E1, T

09/30/95 Status: Active

NRC Office of Standards Development. "Assumptions Used for Evaluating the Potential Radiological Consequences of Accidental Nuclear Criticality in a Plutonium Processing and Fuel Fabrication Plant," NRC Regulatory Guide 3.35 (Rev. 1). NRC, July 1979.

Subject Codes: A3, B1, C5, D, E1, T

09/30/95 Status: Active

NRC Division of Human Factors Safety. "Guidelines for the Preparation of Emergency Operating Procedures," NUREG-0899. NRC, Aug. 1982.

Subject Codes: E5

09/30/95 Status: Published

Alt. Contact: NTIS

Subject Codes: (see full subject code list in the front matter for additional description)

A through A3 = criticality accidents

H1 and H2 = hazard-, risk-, and safety-analysis

B1 or B2 = extensive bibliography or references

M = medical

C1 through C5 = CASs

O = other

D = dose, dosimetry, distance and shielding

R = releases and release dispersion

E through E4 = emergency management

T = computational methods, tools, validation

Parenthesis indicate that code(s) were assigned based on document title, its use as a reference in other documents, or discussions with authors.

NRC Office of Standards Development. "Nuclear Criticality Safety in Operations with Fissionable Materials at Fuels and Materials Facilities," NRC Regulatory Guide 3.4 (Rev. 2). NRC, March 1986.

Subject Codes: O 09/30/95 Status: Active

Notes: Endorses ANSI/ANS-8.1-1981.

NRC Office of Standards Development. "Assumptions Used for Evaluating the Potential Radiological Consequences of Accidental Nuclear Criticality in a Fuel Processing Plant," NRC Regulatory Guide 3.33 (Rev. 0). NRC, April 1987.

Subject Codes: A3, B1, C5, D, E1, T 09/30/95 Status: Active

NRC Office of Standards Development. "Emergency Planning for Fuel Cycle Facilities and Plants Licensed Under 10 CFR Parts 50 and 70," NRC Regulatory Guide 3.42 (Rev. 1). NRC, Sept. 1979.

Subject Codes: E5 09/30/95 Status: Active

NRC Office of Standards Development. "Administrative Practices for Nuclear Criticality Safety at Fuels and Materials Facilities," NRC Regulatory Guide 3.57 (Rev. 0). NRC, Oct. 1986.

Subject Codes: O 09/30/95 Status: Published

Notes: Endorses ANSI/ANS-8.19-1984

NRC Office of Standards Development. "Criticality and Other Interior Evacuation Signals," NRC Regulatory Guide 8.5 (Rev. 1). NRC, March 1981.

Subject Codes: C2, C3, C5 09/30/95 Status: Active

Notes: Endorses ANSI N2.3-1975.

NRC Office of Standards Development. "Criticality Accident Alarm System," NRC Regulatory Guide 8.12 (Rev. 2). NRC, Oct. 1988.

Subject Codes: C5 09/30/95 Status: Active

Notes: Endorses ANSI/ANS-8.3-1986.

NRC Office of Standards Development. "Standard Format and Content for Emergency Plans for Fuel Cycle and Materials Facilities," NRC Regulatory Guide 3.67 (Rev. 0). NRC, Jan. 1992.

Subject Codes: E5 09/30/95 Status: Active

Nuclear Installation Inspectorate Health and Safety Executive. *Safety Assessment Principles for Nuclear Plants*. London UK: HSE Books, Oct. 1992.

Subject Codes: (C, E5, H2, O) 09/30/95 Status: Published

Alt. Contact: HMSO

Nyer, W. E., G. O. Bright, and R. J. McWhorter. "Reactor Excursion Behavior." In *Proceedings of the Third United Nations International Conference on Peaceful Uses of Atomic Energy, Geneva Switzerland, Aug.-Sept. 1964*, Vol. 13. UN, 1965, pp. 13-25.

Subject Codes: A2, O 09/30/95 Status: Published

Notes: Incident date 06/02/52

O'Dell, A[ustin] A., and O. C[linton] Kolar. "A New Criticality Alarm System." In *Proceedings of the International Seminar on Criticality Studies Programs and Needs, Dijon France, Sept. 1983*. Centre d' Études de Valduc, France: CEA, 1984, pp. 28-35.

Subject Codes: C2, C4 09/30/95 Status: Published

Ogilvie, F[iona] M. "Thermal Oxide Reprocessing Plant Basket Handling Cave - An Integrated Deterministic/Probabilistic Criticality Analysis." In *ICNC'95 Proceedings of the Fifth International Conference on Nuclear Criticality Safety, Albuquerque, New Mexico USA, Sept. 1995*, Vol. II. UNM, Sept. 1995, pp. 11•37-11•42.

Subject Codes: H1, O, T

09/30/95 Status: Published

Okuno, H[iroshi], et al. "Supplement to the Nuclear Criticality Safety Handbook of Japan" (in Japanese), JAERI-xxxx. JAERI, to be published in 1995.

Subject Codes: (A3, C2, C5, O, T)

09/30/95 Status: To be published

Notes: Supplement will contain Chapter 6, "Criticality Accidents and Their Evaluation Methods," and Chapter 7, "Basic Principles on Design and Installation of Criticality Alarm System."

Supplement to: Science and Technology Agency. *Nuclear Criticality Safety Handbook* (in Japanese).

Tokyo Japan: Nikkan Shobo, 1988. The handbook is also published in English with the same authoring institution and title, translated by Yoshitaka Naito and Hiroshi Okuno, JAERI-Review 95-013. Tokyo Japan: Nikkan Shobo, Sept. 1995.

Olsen, A. R., et al. "Empirical Model to Estimate Energy Release from Accidental Criticality." In *ANS Trans.* Vol. 19. ANS, Oct. 1974, p. 189-191.

Subject Codes: A3, T

09/30/95 Status: Published

ORNL. "SCALE 4.2: A Modular Code System for Performing Standardized Computer Analyses for Licensing Evaluation," draft NUREG/CR-200 (Rev. 4), draft ORNL/NUREG/CSD-2/R4; CCC-545. ORNL; RSIC, Nov. 1993. Approved edition numbered NUREG/CR-200 (Rev. 4), ORNL/NUREG/CSD-2/R4 published by NRC, Feb. 1995.

Subject Codes: T

09/30/95 Status: Active

Alt. Contact: NEADB

Notes: Help available via e-mail, scalehelp@ornl.gov.

Newsletters on internet URL http://www.cad.ornl.gov/cad_nea/text/scale_news.html.

Next rev., SCALE 4.3, due to be available from RSIC in Oct. 1995.

ORNL. "ANISN-ORNL: One-Dimensional Discrete Ordinates Transport Code with Anisotropic Scattering," CCC-254. RSIC, May 1995.

Subject Codes: T

09/30/95 Status: Active

Related Ref.s: Engle, Jr., W[ard] W. "ANISN, A One-Dimensional Discrete Ordinates Transport Code with Anisotropic Scattering," K-1693. UCNC, March 1967.

○ Engle, [Jr.], W[ard] W., M. A. Boling, and B. W. Colston. "DTF-II, A One-Dimensional, Multigroup Neutron Transport Program," NAA-SR-10951. California USA: Atomics International, March 1966.

Notes: Reference is an RSIC abstract.

Related references are for computer codes which are probably inactive but the reference are useful information for ANISN-ORNL.

Subject Codes: (see full subject code list in the front matter for additional description)

A through A3 = criticality accidents

B1 or B2 = extensive bibliography or references

C1 through C5 = CASs

D = dose, dosimetry, distance and shielding

E through E4 = emergency management

H1 and H2 = hazard-, risk-, and safety-analysis

M = medical

O = other

R = releases and release dispersion

T = computational methods, tools, validation

Parenthesis indicate that code(s) were assigned based on document title, its use as a reference in other documents, or discussions with authors.

OSHA. "Ionizing Radiation," 29 CFR 1910.96. FR, no date.

Subject Codes: C1, C2, C5, E3, O 09/30/95 Status: Active

Source: *Federal Register* (GPO), Vol. 39 (June 27, 1974): p. 23502; as amended in Vol. 43 (Oct. 24, 1978): p. 49746; Vol. 43 (Nov. 7, 1978): p. 51759; and Vol. 49 (April 30, 1984): p. 18295.

Notes: See paragraphs (f), "Immediate evacuation warning signal," and (p), "Atomic Energy Commission licensees - AEC contractors operating AEC plants and facilities - AEC Agreement State licensees or registrants."

Pagliari, J[ames] N., and R. P. Conner. "Experience with Neutron Criticality Alarm Systems at Westinghouse Hanford Company." In *Transactions of the Criticality Accident Alarm Systems Workshop, Richland, Washington USA, Sept. 1988*, DOE/NCT-05. LLNL, 1988, pp. 69-78.

Subject Codes: C1, C2, C4 09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Pahissa-Campa, J., and D. Beninson. "RA-2 Criticality Accident." In *ANS Trans.*, Vol. 46. ANS, June 1994, p. 440.

Subject Codes: A2 09/30/95 Status: Published

Notes: Incident date 09/23/83

Paine, Jr., R[oger] W. "A Study of an Accidental Radiation Burst," LA-1289. LASL, March 20, 1951.

Subject Codes: A2, D 09/30/95 Status: Issued

Alt. Contact: LANL, NTIS, OSTI Notes: Incident date 02/01/51.

Parks, C[ecil] V., et al. "Assessment of Shielding Analysis Methods, Codes, and Data for Spent Fuel Transport/Storage Applications," ORNL/CSD/TM-246. ORNL, July 1988.

Subject Codes: (D, T) 09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Parmentier, N. C., R. Boulenger, and G. Portal. "Problèmes de Dosimétrie lors de l'Accident." In *Proceedings of the First International Congress on Radiation Protection, Rome Italy, Sept. 1966*, edited by W. S. Snyder, et al., Part 2. Pergamon Press, 1967, pp. 1231-1248.

Subject Codes: A2, D, M 09/30/95 Status: Published

Notes: Incident date 12/30/65

Parmentier, N. C., J. C. Nénot, and H. J. Jammet. "A Dosimetric Study of the Belgian (1965) and Italian (1975) Accidents." In *The Medical Basis for Radiation Accident Preparedness: Proceedings of the REAC/TS International Conference, Oak Ridge, Tennessee USA, Oct. 1979*, edited by Karl F. Hübner and Shirley A. Fry. New York, New York USA: Elsevier/North-Holland, 1980, pp. 105-112.

Subject Codes: A2, D, O 09/30/95 Status: Published

Notes: Incident dates 12/30/65 (criticality accident) and 05/13/75 (cobalt source accident).

[Patton, F. S., et al.] "Accidental Excursion at the Y-12 Plant, June 16, 1958, Final Report," Y-1234. UCNC Y-12 Plant, July 28, 1958.

Subject Codes: A1, D, E2, O 09/30/95 Status: Issued

Alt. Contact: NTIS, OSTI

Summary: Luntz, *Nucleonics*, Vol. 16, No. 1, pp. 138-140 and 200-203, listed separately

Paulus, R. C., et al. "Nuclear Incident at the Idaho Chemical Processing Plant on January 25, 1961,"

IDO-10036. Idaho Falls, Idaho USA: Phillips Petroleum Company, June 1, 1961.

Subject Codes: A1 09/30/95 Status: Published

Alt. Contact: INEL, NTIS, OSTI

Summary: Nichols, *Nuclear Safety*, Vol. 3, No. 2, pp. 71-73, listed separately.

Payne, Jon (editor). Standards, Standards Actions, "Clarification." *Nuclear News* (ANS), Vol. 35, No. 9 (July 1992): p. 76.

Subject Codes: C3, C5, E1, E2 09/30/95 Status: Published

Notes: Clarification to paragraph 4.2 of ANSI/ANS-8.3-1986.

[Paxton, Hugh C]. "Godiva Wrecked at Los Alamos." *Nucleonics* (McGraw-Hill), Vol. 15, No. 4 (April 1957): p. 104.

Subject Codes: A2 09/30/95 Status: Published

Notes: Incident date 02/12/57

Paxton, Hugh C. "Critical Assembly Booby Traps." *Nucleonics* (McGraw-Hill), Vol. 16, No. 3 (March 1958): pp. 80-81.

Subject Codes: A2 09/30/95 Status: Published

Full Report: ———. "Critical Assembly Booby Traps," AECD-4240. LASL, 1957.

Notes: Incident dates 02/01/51, 02/03/54, and 07/03/56.

There is apparently an error in the number of the full report because the document does not seem to be retrievable through the AECD number.

Paxton, Hugh C. "The Nature and Consequences of Nuclear Accidents." In *Proceedings of the National Topical Meeting on Nuclear Criticality Safety, Las Vegas, Nevada USA, Dec. 1966*, SC-DC-67-1305.

No publication data, pp. 213-218.

Subject Codes: (A3, D, E2, E3, E4) 09/30/95 Status: Published

Alt. Contact: possibly ANS or NTIS

Paxton, H[ugh] C., et al. "Nuclear-Criticality Accident at the Los Alamos Scientific Laboratory on December 30, 1958," LAMS-2293. LASL, Feb. 1959.

Subject Codes: A1 09/30/95 Status: Published

Alt. Contact: LANL, NTIS, OSTI

Summary: Paxton, H[ugh] C., et al. "Los Alamos Criticality Accident, December 30, 1958." *Nucleonics* (McGraw-Hill), Vol. 17, No. 4 (April 1959): pp. 107-108 and 151-153.

Pearson, J[ohn] S., and E[rnest] E. Hill. "Emergency Response Preparation Based on an Internal Exercise Program." In *ANS Trans.*, Vol. 59. ANS, June 1989, pp. 180-181.

Subject Codes: E2, E3 09/30/95 Status: Published

Subject Codes: (see full subject code list in the front matter for additional description)

A through A3 = criticality accidents

B1 or B2 = extensive bibliography or references

C1 through C5 = CASs

D = dose, dosimetry, distance and shielding

E through E4 = emergency management

H1 and H2 = hazard-, risk-, and safety-analysis

M = medical

O = other

R = releases and release dispersion

T = computational methods, tools, validation

Parenthesis indicate that code(s) were assigned based on document title, its use as a reference in other documents, or discussions with authors.

Pennelle, G. "Description et Analyse de l'Accident de Criticité Survenu au Réacteur VENUS à Mol en date du 30 Décembre 1965." In *Proceedings of the First International Congress on Radiation Protection, Part 2, Rome Italy, Sept. 1966*. Pergamon Press, 1967, pp. 1223-1230.

Subject Codes: A2

09/30/95 Status: Published

Pešić, Milan P., and Miodrag J. Milošević. "A Study on the 'RB' Reactor Accident." In *ICNC'95 Proceedings of the Fifth International Conference on Nuclear Criticality Safety, Albuquerque, New Mexico USA, Sept. 1995*, Vol. II. UNM, Sept. 1995, pp. 10•3-10•10.

Subject Codes: A2

09/30/95 Status: Published

Notes: Incident date 10/15/58.

Peterson, D[onald] M., W[illiam] R. Stratton, and T[homas] P. McLaughlin. "PAD: A One-Dimensional, Coupled Neutronic-Thermodynamic-Hydrodynamic Computer Code," LA-6540-MS. LASL, Dec. 1976.

Subject Codes: T

09/30/95 Status: Not determined

Alt. Contact: LANL, NTIS, OSTI

Notes: Code in occasional use

Plassmann, E[ugene] A., and G[regory] D. Spriggs. "Criticality Alarm System Verification at the Los Alamos Critical Experiments Facility: Past Experience and Present Capabilities." In *Transactions of the Criticality Accident Alarm Systems Workshop, Richland, Washington USA, Sept. 1988*, DOE/NCT-05. LLNL, 1988, pp. 19-26.

Subject Codes: C1, C4

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Plaster, M[ichael] J., et al. "Analysis of a Hypothetical Criticality Accident in a Waste Super-Compactor." *Nuclear Technology (ANS)*, Vol. 111, No. 2 (Aug. 1995): pp. 219-226.

Subject Codes: A3, T

09/30/95 Status: Published

Summary: Plaster, M[ichael] J., et al. "Analysis of a Hypothetical Criticality Accident in a Waste Super-Compactor." In *ANS Trans.*, Vol. 70. ANS, June 1994, pp. 189-191.

Full Thesis: Plaster, Michael J. "Analysis of a Hypothetical Criticality Accident in a Waste Super-Compactor." Master's thesis, University of Tennessee - Knoxville, Dec. 1993.

Prignet, Raymond, and Claude Renard. "E.D.A.C. Ensemble de détection et d'alarme de criticité, Caractéristiques physiques et électroniques," CEA-R-4784. CEA Department de Protection, Centre d'Études Nucléaires de Fontenay-aux-Roses, 1976.

Subject Codes: (C1, C2, C4, C5)

09/30/95 Status: Published

Earlier Sys.: Debré, et al., *Proceedings of the Third United Nations... Aug.-Sept. 1964*, Vol. 13, pp. 244-251, listed separately.

Later Sys.: Prignet and Huver, *Proceedings of ICNC'91...*, Vol. 2, pp. VII-104 - VII-123, listed separately.

Other Work: Barbry and Prignet, *Nuclear Technology*, Vol. 78, pp. 320-325, listed separately.

Prignet, Raymond and Martial Huver. "Detection of Criticality Accidents, The Intertechnique EDAC II System." In *Proceedings of ICNC'91 International Conference on Nuclear Criticality Safety, Oxford England, Sept. 1991*, Vol. 2. UKAEA Tech., Sept. 1991, pp. VII-104 - VII-123.

Subject Codes: A3, C1, C2, C3, C4

09/30/95 Status: Published

Earlier Sys.: Debré, et al., *Proceedings of the Third United Nations... Aug.-Sept. 1964*, Vol. 13, pp. 244-251, listed separately.

○ Prignet and Renard, CEA-R-4784, listed separately.

Other Work: Barbry and Prignet, *Nuclear Technology*, Vol. 78, pp. 320-325, listed separately.

Profio, A. E. "Experimental Tests of Shielding Codes," AFWL-TR-69-116. San Diego, California USA: Gulf General Atomic, Inc., Dec. 1969.

Subject Codes: D, T

09/30/95 Status: Published

Alt. Contact: NTIS

"Le Programme CRAC - Études d'Accidents de Criticité en Solution." *Bulletin d'Informations Scientifiques et Techniques*, Vol. 172 (July-Aug. 1972): no page.

Subject Codes: (A3, T)

09/30/95 Status: Published

Pruvost, Norman L., and John C. Tsitouras. "A Study of Some Current Technologies for Criticality Alarm Systems." In *ANS Trans.*, Vol. 39. ANS, Nov. 1981, p. 561.

Subject Codes: C2, C4

09/30/95 Status: Published

Pruvost, Norman L., and John A. Schlessor. "MCNP Transport Calculations for Detector Locations." In *Transactions of the Criticality Accident Alarm Systems Workshop, Richland, Washington USA, Sept. 1988*, DOE/NCT-05. LLNL, 1988, pp. 145-155.

Subject Codes: C2, T

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Pruvost, Norman L. "Proposed Standard for Nuclear Criticality Accident Emergency Planning and Response." In *ANS Trans.*, Vol. 72. ANS, June 1995, p. 215.

Subject Codes: E1

09/30/95 Status: Published

Pryor, William A. "Accident Consequences and Emergency Planning." In *Proceedings, Nuclear Criticality Safety, El Paso, Texas USA, April 1990*, SAND80-1675. Albuquerque, New Mexico USA: Sandia National Laboratories, 1990, pp. 301-316.

Subject Codes: A3, D, E2, E3, O

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Notes: Overview of criticality accident and emergency planning history, with emphasis on developing emergency management resources including REAC/TS

Putman, Valerie L. "Consensus Standard Requirements and Guidance," INEL-95/00426. INEL, Sept. 1995.

Subject Codes: C5

09/30/95 Status: Published

Duplicate: ———. "1. Consensus Standard Requirements and Guidance," In notebook for *ANS Criticality Alarm System Workshop, San Francisco California USA, Nov. 1995*. ANS, Nov. 1995.

Subject Codes: (see full subject code list in the front matter for additional description)

A through A3 = criticality accidents

B1 or B2 = extensive bibliography or references

C1 through C5 = CASs

D = dose, dosimetry, distance and shielding

E through E4 = emergency management

H1 and H2 = hazard-, risk-, and safety-analysis

M = medical

O = other

R = releases and release dispersion

T = computational methods, tools, validation

Parenthesis indicate that code(s) were assigned based on document title, its use as a reference in other documents, or discussions with authors.

REAC/TS. "Radiation Accident Registries: Serious Radiation Accidents Worldwide." ORAU, updated periodically.

Subject Codes: (A1, A2, B2, D, M, O) 09/30/95 Status: Ongoing project

Notes: REAC/TS database maintained in conjunction with site for maintaining and training responders for radiation emergencies.

Description: Fry, Shirley A. "The United States Radiation Accident and Other Registries of the REAC/TS Registry System: Their Functions and Current Status." In *The Medical Basis for Radiation Accident Preparedness: Proceedings of the REAC/TS International Conference, Oak Ridge, Tennessee USA, Oct. 1979*, edited by Karl F. Hübner and Shirley A. Fry. New York, New York USA: Elvsevier/North-Holland, 1980, pp. 451-468.

Example: An example of the data were included on pages 6-16 of the same proceedings.

Reed, Davis A. "ANSI/ANS-8.3-1986: American National Standard Criticality Accident Alarm System." In *ANS Trans.*, Vol. 64. ANS, Nov. 1991, p. 325.

Subject Codes: C5

09/30/95 Status: Published

Rhoades, W[ayne] A., and R[obert] L. Childs. "TORT-DORT: Two- and Three-Dimensional Ordinates Transport, Version 2.12.14" CCC-543. RSIC, Jan. 1990 with revisions through January 1995.

Subject Codes: (T)

09/30/95 Status: Active

Alt. Contact: NTIS, OSTI

Notes: Reference is an RSIC abstract

Additional: ———. "An Updated Version of the DOT 4 One- and Two-Dimensional Neutron/Photon Transport Code," ORNL-5851. ORNL, April 1982.

○ ———. "Theoretical Basis of the Linear Nodal and Linear Characteristic Methods in the TORT Computer Code," ORNL/TM-12246. ORNL, Jan. 1993.

○ Rhoades, W[ayne] A., "The TORT Three-Dimensional Discrete Ordinates Neutron/Photon Transport Code," ORNL-6268. ORNL, Nov. 1987.

○ ———. "The TORSED Method for Construction of TORT Boundary Sources from External DORT Flux Files," ORNL/TM-12359. ORNL, Aug. 1993.

Richey, C. R., and T. W. Jeffs. "Criticality Detection and Alarm System." PNL, Dec. 1977.

Subject Codes: C1, C2, C4

09/30/95 Status: Issued

Rimmer, E., et al. "The Provision of Criticality Incident Detection, Alarm and Warning Systems (Provisional)," AECF 1074. Risley, Warrington UK: UKAEA Standards Section, Feb. 1987.

Subject Codes: C1, C2, C3, C5, E 09/30/95 Status: Indeterminant

Alt. Contact: HMSO

Notes: Never formally issued but in current use at several UK facilities

Ricks, Robert C. "REAC/TS: Its Role As a Specialty Referral Center and Training Site." In *The Medical Basis for Radiation Accident Preparedness: Proceedings of the REAC/TS International Conference, Oak Ridge, Tennessee USA, Oct. 1979*, edited by Karl F. Hübner and Shirley A. Fry. New York, New York USA: Elvsevier/North-Holland, 1980, pp. 291-296.

Subject Codes: D, E5, M, O

09/30/95 Status: Published

Notes: Describes REAC/TS and other centers as a resource for radiological emergency training, response, and information.

Rittmann, Paul D. "An Automated Method for Determining the Areas Covered by Gamma Sensitive Criticality Detectors." In *Transactions of the Criticality Accident Alarm Systems Workshop, Richland, Washington USA, Sept. 1988*, DOE/NCT-05. LLNL, 1988, pp. 157-162.

Subject Codes: T

09/30/95 Status: Not determined

Alt. Contact: NTIS, OSTI

Notes: Code might not be active

Roesch, R. O., et al. "Dosimetry Investigation of the Recuplex Accident," HW-SA-2730. HW, Aug. 22, 1962.

Subject Codes: (A1, D, T)

09/30/95 Status: Published

Alt. Contact: Hanford, NTIS, OSTI

Notes: Incident date 04/07/62

Summary: Hanford Laboratories. "Dosimetry Investigation on the RECUPLEX Criticality Accident." *Health Physics* (Pergamon Press), Vol. 9 (1963): p. 839.

Rozain, J[ean] P[ierre], et al. "Criticality Excursions in Wetted UO₂ Powder." In *Proceedings of ICNC'91 International Conference on Nuclear Criticality Safety, Oxford England, Sept. 1991*, Vol. 2. UKAEA Tech., Sept. 1991, pp. VII-40 - VII-50.

Subject Codes: A3, T

09/30/95 Status: Published

Summary: Rozain, J[ean] P[ierre], et al. "Criticality Excursions in Wetted UO₂ Powder." In *ANS Trans.*, Vol. 63. ANS, June 1991, p. 228.

Ryazanov, B[oris] G., V. Goriouinov, and V[ictor I.] Sviridov. "Quantitative Evaluation of Nuclear Criticality Safety Level for Nuclear Industry." In *ICNC'95 Proceedings of the Fifth International Conference on Nuclear Criticality Safety, Albuquerque, New Mexico USA, Sept. 1995*, Vol. II. UNM, Sept. 1995, pp. 7•11-7•15.

Subject Codes: H1, O

09/30/95 Status: Published

Santoro, R. T., et al. "Nuclear Accident Dosimetry in a Simulated Criticality Accident." In *ANS Trans.*, Vol. 19. ANS, Oct. 1974, pp. 195-196.

Subject Codes: D, E2

09/30/95 Status: Issued

Savić, Pavle P. "Sur l' Accident Avec le Reacture de Puissance Zero de 15 Octobre 1958." *Bulletin of the Institute of Nuclear Sciences Boris Kidre* (Belgrade Yugoslavia), Vol. 9 (Mar. 1959): pp. 1-4.

Subject Codes: A2

09/30/95 Status: Published

Schuske, C. L. "Administrative and Operational Nuclear Criticality Safety Controls in a Chemical Processing Plant." In *Criticality Control in Chemical and Metallurgical Plant, Karlsruhe Symposium, Karlsruhe Germany, May 1961*. OECD, Nov. 1961, pp. 477-490.

Subject Codes: C4, C5, O

09/30/95 Status: Published

Notes: Includes review of commercially available CASs for 1961

Subject Codes: (see full subject code list in the front matter for additional description)

A through A3 = criticality accidents

B1 or B2 = extensive bibliography or references

C1 through C5 = CASs

D = dose, dosimetry, distance and shielding

E through E4 = emergency management

H1 and H2 = hazard-, risk-, and safety-analysis

M = medical

O = other

R = releases and release dispersion

T = computational methods, tools, validation

Parenthesis indicate that code(s) were assigned based on document title, its use as a reference in other documents, or discussions with authors.

Seale, Robert L. "Consequences of Criticality Accidents." In *Nuclear Criticality Safety Proceedings of a Short Course, Taos, New Mexico USA, May 1973*, TID-26286. UNM, 1974, pp. 16-24.

Subject Codes: A3, O, T

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Seale, R[obert] L. "Kinetics Calculations." In *Proceedings of the International Seminar on Criticality Studies Programs and Needs, Dijon France, Sept. 1983*. Centre d' Études de Valduc, France: CEA, 1984, pp. 300-341.

Subject Codes: A3, T

09/30/95 Status: Published

Seale, Robert L. "Criticality Alarms: How Sensitive to What?" In *Transactions of the Criticality Alarm Systems Workshop, Richland, Washington USA, Sept. 1988*, DOE/NCT-05. LLNL, 1988, pp. 5-12.

Subject Codes: A3, C5, T

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Simpkins, W. M., H. L[ee] Dodds, [Jr.], and R[obert] S[herwood] Howell. "Investigation of the Validity of the Point Kinetics Model During the Initiating Phase of a Hypothetical Core Disruptive Accident (HCDA) in the Clinch River Breeder Reactor," R-82-036. Knoxville, Tennessee USA: Technology for Energy Corporation, Nov. 1982.

Subject Codes: (A3, T)

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI, University of Tennessee - Knoxville

Notes: Dr. Dodds indicates the calculation model is very similar to models for criticality accidents outside reactors.

Sims, C. S., and H. W. Dickson. "Nuclear Accident Dosimetry Intercomparison Studies at the Health Physics Research Reactor: A Summary (1965-1978)." *Health Physics* (Pergamon Press), Vol. 37 (1979): p. 328.

Subject Codes: (D)

09/30/95 Status: Published

Notes: Apparently Sims published an update in *Health Physics* sometime in 1989 or 1990.

Singleterry, Jr., R. C. "Parameter Study for Dynamic Models of Power Bursts for the KEWB5, CRAC, and Silene Experiments." Master's thesis, University of Arizona, 1990.

Subject Codes: (A3, B1, T)

09/30/95 Status: Published

Six, D[onald] E. "The Influence of Safeguards and Fire Protection on Criticality Safety." In *Proceedings, Nuclear Criticality Safety, El Paso, Texas USA, April 1990*, SAND80-1675. Albuquerque, New Mexico USA: Sandia National Laboratories, 1990, pp. 277-299.

Subject Codes: E2, E5, H1, H2, O

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Smalley, W. M. "The AEC Radiological Assistance Program." In *ANS Trans.*, Vol. 19. ANS, Oct. 1974, pp. 196-197.

Subject Codes: E2

09/30/95 Status: Published

Smith, D[avid] R. "ANSI/ANS-1983-1979 - American National Standard Criticality Accident Alarm System." In *ANS Trans.*, Vol. 39. ANS, Nov. 1981, pp. 545.

Subject Codes: C5

09/30/95 Status: Published

Smith, D[avid] R. "The Function and Characteristics of Criticality Accident Alarm Systems." In *ANS Trans.*, Vol. 39. ANS, Nov. 1981, pp. 554-555.

Subject Codes: C5, E2, E3, O

09/30/95 Status: Published

Smith, David R. "The Development of Criticality Accident Alarm System Standards." In *Transactions of the Criticality Accident Alarm Systems Workshop, Richland, Washington USA, Sept. 1988*, DOE/NCT-05. LLNL, 1988, pp. 13-17.

Subject Codes: C5, O

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Smith, K., and D[avid] N. Simister. "The UK Regulatory Approach to Deterministic and Probabilistic Safety Analysis in Criticality Safety Cases." In *ICNC'95 Proceedings of the Fifth International Conference on Nuclear Criticality Safety, Albuquerque, New Mexico USA, Sept. 1995*, Vol. II. UNM, Sept. 1995, pp. 7•7-7•10.

Subject Codes: H1, O

09/30/95 Status: Published

Soldat, J. K. "Recuplex Incident, April 7, 1962, Emission of Fission Products for the 291-Z Stack," HW-77345. HW, May 23, 1962.

Subject Codes: (A1, R)

09/30/95 Status: Issued

Alt. Contact: Hanford, NTIS, OSTI

Stewart, M. C. "The Human Component: An Off-the-Shelf Subsystem." In *ANS Trans.*, Vol. 32. ANS, 1979, p. 320.

Subject Codes: H2

09/30/95 Status: Published

Storrs, C. L., and C. W. Bills. "The SL-1 Recovery Operation." In *ANS Trans.*, Vol. 5. ANS, 1962, p. 152.

Subject Codes: A2, E4

09/30/95 Status: Published

Notes: Incident date 01/03/61

Stratton, William R. "A Review of Criticality Accidents," revised by David R. Smith, DOE/NCT-04. LLNL and DOE, March 1989.

Subject Codes: A, B1, T

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Notes: Known as *Stratton Report*

Previous Ed.s: ——. "A Review of Criticality Accidents." In *Progress in Nuclear Energy Series IV: Technology, Engineering, and Safety*, edited by C. M. Nicholle. New York USA: Pergamon Press, 1960, pp. 163-205.

○ ——. "A Review of Criticality of Criticality Accidents." In *ANS Trans.*, Vol. 3. ANS, 1960, pp. 290-292.

○ ——. "A Review of Criticality Incidents." In *Criticality Control in Chemical and Metallurgical Plant, Karlsruhe Symposium, Karlsruhe Germany, May 1961*. OECD, Nov. 1961, pp. 491-533.

○ ——. "A Review of Criticality Accidents," LA-3611. LASL, Jan. 1967.

○ ——. "Criticality Accident Experience: Heterogenous Water-Moderated Systems." In *ANS Trans.*, Vol. 46. ANS, June 1984, pp. 460-462.

Subject Codes: (see full subject code list in the front matter for additional description)

A through A3 = criticality accidents

H1 and H2 = hazard-, risk-, and safety-analysis

B1 or B2 = extensive bibliography or references

M = medical

C1 through C5 = CASs

O = other

D = dose, dosimetry, distance and shielding

R = releases and release dispersion

E through E4 = emergency management

T = computational methods, tools, validation

Parenthesis indicate that code(s) were assigned based on document title, its use as a reference in other documents, or discussions with authors.

Stratton, W[illiam] R., T. H. Colvin, and R. B. Lazarus. "Analyses of Prompt Excursions in Simple Systems and Idealized Fast Reactors." In *Proceedings of the Second United Nations International Conference on Peaceful Uses of Atomic Energy, Geneva Switzerland, Sept. 1958*, Vol. 12. UN, 1959, pp. 196-206.

Subject Codes: A3, T

09/30/95 Status: Published

Schwinkendorf, K[evin] N. "Dose Calculations for Nuclear Criticality Accidents that Occur Under Large Amounts of Water." In *ANS Trans.*, Vol. 66. ANS, Nov. 1992, pp. 292-293.

Subject Codes: A3, D

09/30/95 Status: Published

Swaja, R. E., and R. T. Greene. "Neutron and Gamma Attenuation Characteristics of Various Shields During Nuclear Criticality Accidents." In *ANS Trans.*, Vol. 39. ANS, Nov. 1981, pp. 521-522.

Subject Codes: A3, C2, C4, D

09/30/95 Status: Published

Tadmor, J., and H. Galron. "Guide for the Hazards Evaluation of a Nuclear Chemical Installation." In *Proceedings of the Third United Nations International Conference on Peaceful Uses of Atomic Energy, Geneva Switzerland, Aug.-Sept. 1964*, Vol. 13. UN, 1965, pp. 225-231.

Subject Codes: H1, H2

09/30/95 Status: Published

Tardiff, A.F. "Some Aspects of the WTR and SL-1 Accidents." In *Proceedings of the Symposium on Reactor Safety and Hazards Evaluation Techniques*, Vol. 1. IAEA, 1962, pp. 43-88.

Subject Codes: (A2)

09/30/95 Status: Published

Notes: Incident date 01/03/61

Thomas, J[oseph] T., and [A.] D[ixon] Callihan. "Radiation Excursions at the ORNL Critical Experiments Laboratory, I. May 26, 1954, II. February 1, 1956," ORNL-2452. ORNL, May 27, 1958.

Subject Codes: A2, T

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Thomas, W., and B. Gamal. "Modeling of Criticality Accidents and Their Environmental Consequences." In *ANS Trans.*, Vol. 55. ANS, Nov. 1987, pp. 409-410.

Subject Codes: D, R, T

09/30/95 Status: Published

Thomas, W., and B. Gamal. "In-Depth Analysis of Accidental Criticality in a Reprocessing Plant." In *International Meeting on Safety Margins in Criticality Safety, San Francisco, California USA, Nov. 1989*. ANS, Nov. 1989, pp. 207-213.

Subject Codes: H1, O

09/30/95 Status: Published

Thorngate, John H., Duane W. Rueppel, and Richard V. Griffith. "Neutron and Gamma Spectrum Measurements at the Los Alamos Critical Assembly SHEBA." In *ANS Trans.*, Vol. 39. ANS, Nov. 1981, pp. 557-559.

Subject Codes: A3, C3, D

09/30/95 Status: Published

[Tiller, Robert E., et al.] "Investigation of the 10/17/78 Criticality Incident in the Uranium Extraction Process Scrub Column at the Idaho Chemical Processing Plant," [ICPP-MISC-002]. Idaho Falls, Idaho USA: Allied Chemical Idaho Chemical Programs, Nov. 1978.

Subject Codes: A1

09/30/95 Status: Published

Alt. Contact: INEL, NTIS, OSTI

Summary: Castro, W. R. (editor), *Nuclear Safety*, Vol. 21, No. 5, pp. 648-653, listed separately.

Notes: ICPP-MISC-002 is an INEL-assigned number for filing purposes.

Toffer, Hans. "Emergency Cadre Take-Along Briefcase." In *ANS Trans.*, Vol. 72. ANS, June 1995, pp. 215-216.

Subject Codes: E2, E4

09/30/95 Status: Published

Tuck, Grover. "Simplified Methods of Estimating the Results of Accidental Solution Excursions." *Nuclear Technology* (ANS), Vol. 23 (Aug. 1974): pp. 177-188.

Subject Codes: A3, T

09/30/95 Status: Published

Tyree, William H. "A Neutron Criticality Alarm System," RFP-1621. Golden, Colorado USA: DOW Chemical USA, Rock Flats Plant, March 21, 1972.

Subject Codes: C1, C2, C4

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Tyree, William H. "Test Procedures for the Neutron Criticality Alarm System at Rocky Flats Plant," RFP-2027. Golden, Colorado USA: DOW Chemical USA, Rock Flats Plant, Aug. 2, 1973.

Subject Codes: C1, C4

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Tyree, W[illiam] H., and Henry Urano. "A Criticality Alarm System for Plutonium Process Operations." In *ANS Trans.*, Vol. 39. ANS, Nov. 1981, p. 561.

Subject Codes: C2, C4

09/30/95 Status: Published

Tyree, W[illiam] H., et al. "An Improved Criticality Alarm System." In *Proceedings of the First Annual Nuclear Criticality Safety Technology Project, Gaithersburg, Maryland USA, May 1992*, LA-12556-C. LANL, 1992, pp. 107-110.

Subject Codes: C1, C2, C4

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Vasilik, D. G., R. W. Martin, and D. Fuller. "Nuclear Accident Dosimetry: Measurements at the Los Alamos SHEBA Critical Assembly," LA-8911-MS. LANL, July 1981.

Subject Codes: A3, C1, D

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Volshin, N[ikolay] P., I. S. Pogrebov, and V. A. Teryokhin. "RFNC-VNIITF Physical Experimental Division and a Historical Sketch of Critical Mass Measurements." In *ICNC'95 Proceedings of the Fifth International Conference on Nuclear Criticality Safety, Albuquerque, New Mexico USA, Sept. 1995*, Vol. I. UNM, Sept. 1995, pp. P•31-P•36.

Subject Codes: A2, A3, O

09/30/95 Status: Published

Notes: Incident date 04/05/68.

Subject Codes: (see full subject code list in the front matter for additional description)

A through A3 = criticality accidents	H1 and H2 = hazard-, risk-, and safety-analysis
B1 or B2 = extensive bibliography or references	M = medical
C1 through C5 = CASs	O = other
D = dose, dosimetry, distance and shielding	R = releases and release dispersion
E through E4 = emergency management	T = computational methods, tools, validation

Parenthesis indicate that code(s) were assigned based on document title, its use as a reference in other documents, or discussions with authors.

Wachter, J. S., B. J. Youghblood, and S. J. Groothuis. "Response of Radiation Monitors to Prompt Critical Bursts," Y-1182. UCNC Y-12 Plant, issued June 4, 1958.

Subject Codes: C1, C4

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Waddell, Jr., M. W[esley], and H. L[ee] Dodds, [Jr.]. "A Method for Transient, Three-Dimensional Neutron Transport Calculations," Y/DD-586. UCNC Y-12 Plant, Dec. 28, 1982.

Subject Codes: T

09/30/95 Status: Not determined

Alt. Contact: NTIS, OSTI

Waddell, Jr., M. W[esley], and H. L[ee] Dodds, [Jr.]. "A Method for Transient, Three-Dimensional Neutron Transport Calculations." In *Proceeding of the Conference on Mathematical Methods and Supercomputing in Nuclear Applications, Karlsruhe Germany, April 1993*. No publication data, p. 633.

Subject Codes: (T)

09/30/95 Status: Published

Waddell, Jr., M. W[esley] "Development of a Transient Three-Dimensional Neutron Transport Code with Feedback." In *ANS Trans.*, Vol. 71. ANS, Nov. 1994, p. 283-285.

Subject Codes: T

09/30/95 Status: Published

Walls, S[tephan] J. "Application of Probabilistic Risk Assessment at BNFL, Sellafield." In *International Meeting on Safety Margins in Criticality Safety, San Francisco, California USA, Nov. 1989*. ANS, Nov. 1989, pp. 195-198.

Subject Codes: H2, O

09/30/95 Status: Published

Walls, Stephen J., and Peter R. Thorne. "The Integration of Probabilistic Assessment into Traditional Criticality Safety." In *ICNC'95 Proceedings of the Fifth International Conference on Nuclear Criticality Safety, Albuquerque, New Mexico USA, Sept. 1995*, Vol. II. UNM, Sept. 1995, pp. 7•3-7•6.

Subject Codes: A3, H1, O

09/30/95 Status: Published

Westfall, R[obert] M[ichael], and J[ohn] R. Knight. "Radiation Levels in a Gaseous Diffusion Plant Assuming a Low-Enriched Criticality Event Corresponding to the ANSI-Standard Minimum Accident of Concern," K/CSD/TM-55. UCNC, Feb. 1984.

Subject Codes: C3, D

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Whitesides, G. E[lliott]. "The Need for Radiation Field Measurements from a Low-Enriched Critical Assembly." In *ANS Trans.*, Vol. 39. ANS, Nov. 1981, p. 554.

Subject Codes: A3, D

09/30/95 Status: Published

Wilkinson, A[lan], et al. "Improved Dose Estimates for Nuclear Criticality Accidents." *Nuclear Technology* (ANS), Vol. 111, No. 2 (Aug. 1995): pp. 227-240.

Subject Codes: A3, B1, D, T

09/30/95 Status: Published

Earlier Work: Wilkinson, A[lan], et al. "Improved Dose Estimates for Nuclear Criticality Accidents: Preliminary Results." In *ANS Trans.*, Vol. 70. ANS, June 1994, pp. 191-192.

○ Wilkinson, A[lan] "Improved Dose Estimates for Nuclear Criticality Accidents." Master's thesis, University of Tennessee - Knoxville, 1994

Related Work: Broadhead and Hopper, *ANS Trans.*, Vol. 72, listed separately.

Notes: Part of investigation to update: Hopper, Y-DD-145, 1974, listed separately

Wimett, T[homas] F. "Time Behavior of Godiva Through Prompt Critical," LA-2029. LASL, April 1956.
 Subject Codes: A3, T 09/30/95 Status: Issued
 Alt. Contact: NTIS, OSTI

Woodcock, E. R. "Potential Magnitude of Criticality Accidents," AHSB (RP) R 14. UKAEA, Jan. 1966.
 Subject Codes: A3 09/30/95 Status: Published
 Alt. Contact: HMSO

Worle, Helmut A., and Glen J. Briscoe. "A Probabilistic Approach to Criticality Safety of Stored Transuranic Waste." In *ICNC'95 Proceedings of the Fifth International Conference on Nuclear Criticality Safety, Albuquerque, New Mexico USA, Sept. 1995*, Vol. II. UNM, Sept. 1995, pp. 7•16-7•21.
 Subject Codes: H1, O 09/30/95 Status: Published
 Notes: Paper does not so indicate but the approach reported does not yet have final approval.

Yamamoto, T[oshihiro]. "Space-Dependent Kinetics Analysis of a Hypothetical Criticality Accident Involving Units of Aqueous Uranyl Fluoride." In *ICNC'95 Proceedings of the Fifth International Conference on Nuclear Criticality Safety, Albuquerque, New Mexico USA, Sept. 1995*, Vol. II. UNM, Sept. 1995, pp. 10•19-10•24.
 Subject Codes: A3, T 09/30/95 Status: Published
 Notes: Analysis includes use of TDKENO which might not be available to the public.

Zanger, C. N. "Summary Report of Accidental Nuclear Excursion Recuplex Operation 234-5 Facility," HW-74723; TID-18431. HW; GPO, April 1962.
 Subject Codes: A1 09/30/95 Status: Published
 Alt. Contact: Hanford, NTIS, OSTI Notes: Incident date 04/07/62
 Summary: Callihan, *Nuclear Safety* (GPO), Vol. 4, No. 4, pp. 136-144, listed separately.
 Additional: Clayton, HW-77780, listed separately.

Zino, J. F. "Exposure Rate Response Analysis of Criticality Accident Detector at Savannah River Site," WSRC-MS-94-0544. Westinghouse Savannah River Company, Aiken, South Carolina USA, 1995.
 Subject Codes: (C1, C4) 09/30/95 Status: Published
 Alt. Contact: NTIS, OSTI

Subject Codes: (see full subject code list in the front matter for additional description)

A through A3 = criticality accidents	H1 and H2 = hazard-, risk-, and safety-analysis
B1 or B2 = extensive bibliography or references	M = medical
C1 through C5 = CASs	O = other
D = dose, dosimetry, distance and shielding	R = releases and release dispersion
E through E4 = emergency management	T = computational methods, tools, validation

Parenthesis indicate that code(s) were assigned based on document title, its use as a reference in other documents, or discussions with authors.

This page intentionally blank.

3 Listing Sorted by Subject Code

3.1 Code A1: Criticality Accidents in Non-Reactors

3.1.1 General and Miscellaneous

AEC Division of Operational Safety. "Operational Accidents and Radiation Exposure Experience within the United States Atomic Energy Commission 1943-1975," WASH-1192. AEC, fall 1975.

Subject Codes: A1, A2, B2, O 09/30/95 Status: Published

Alt. Contact: NTIS, OSTI Notes: See *Stratton Report* instead

Earlier Works: Hayes, Daniel F. "A Summary of Accidents and Incidents Involving Radiation in Atomic Energy Activities, June 1945 through December 1955," TID-5360. USAEC and GPO, Aug. 1956.

- Hayes, Daniel F. "A Summary of Accidents and Incidents Involving Radioactive Material in Atomic Energy Activities, January - December 1956," TID-5360 Supplement. USAEC and GPO, Aug. 1957.
- AEC Division of Operational Safety. "A Summary of Industrial Accidents in USAEC Facilities 1956," TID-5360 (Supplement 1) (Revised). AEC, Aug. 1967.
- AEC Office of Industrial Relations. "A Summary of Industrial Accidents in USAEC Facilities," TID-5360 (Supplement 2); (Supplement 3); (Supplement 3) (Revised); (Supplement 4); and (Supplement 5). AEC, Sept. 1959; Aug. 1961; Dec. 1961; Dec. 1963; and Dec. 1965.

Aspinall, K[ieth] J., and J. T. Daniels. "Review of UKAEA Criticality Detection and Alarm Systems 1963/64 Part 1: Provision and Design Principles," AHSB (S) R 92. London UK: UKAEA AHSB, 1965.

Subject Codes: A, B1, C2, C3, C4, C5, E 09/30/95 Status: Published

Alt. Contact: HMSO

Cronin, D[aniel] F[rancis] "Recovery and Restart Phases of a Criticality Accident." In *ANS Transactions*, Vol. 19. ANS, Oct. 1974, pp. 193-194.

Subject Codes: A1, E4 09/30/95 Status: Published

Delafield, H[oward] J. "Design Criteria and the Principles Underlying the UKAEA Code of Practice on the Provision of Criticality Alarm Systems." In *Transactions of the Criticality Accident Alarm Systems Workshop, Richland, Washington USA, Sept. 1988*, DOE/NCT-05. LLNL, 1988, pp. 111-124.

Subject Codes: A, C1, C2, O 09/30/95 Status: Published

Alt. Contact: LLNL, NTIS, OSTI

Jammet, H. P., et al. "Observation Clinique et Traitement d'un Cas d'Irradiation Globale Accidentelle." In *Proceedings of the First International Congress on Radiation Protection, Rome Italy, Sept. 1966*, Part 2. edited by W. S. Snyder, et al. Pergamon Press, 1967, pp. 1249-1291.

Subject Codes: A1, A2, M 09/30/95 Status: Published

Subject Codes: (see full subject code list in the front matter for additional description)

A through A3 = criticality accidents

B1 or B2 = extensive bibliography or references

C1 through C5 = CASs

D = dose, dosimetry, distance and shielding

E through E4 = emergency management

H1 and H2 = hazard-, risk-, and safety-analysis

M = medical

O = other

R = releases and release dispersion

T = computational methods, tools, validation

Parenthesis indicate that the code(s) were assigned based on the document title or on its use as a reference in another document.

* Also addressed in Stratton report(s), included under General and Miscellaneous for Subject Codes A1, A2, and A3

McBride, J[ohn] A., et al. "Safety Aspects of U. S. Fuel Reprocessing." In *Proceedings of the Third United Nations International Conference on Peaceful Uses of Atomic Energy, Geneva Switzerland, Aug.-Sept. 1964*, Vol. 13. UN, 1965, pp. 194-203.

Subject Codes: A1, E1, O

09/30/95 Status: Published

Stratton, William R. "A Review of Criticality Accidents," revised by David R. Smith, DOE/NCT-04. LLNL and DOE, March 1989.

Subject Codes: A, B1, T

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Notes: Known as *Stratton Report*

Previous Ed.s: ——. "A Review of Criticality Accidents." In *Progress in Nuclear Energy Series IV: Technology, Engineering, and Safety*, edited by C. M. Nicholle. New York USA: Pergamon Press, 1960, pp. 163-205.

○ ——. "A Review of Criticality of Criticality Accidents." In *ANS Trans.*, Vol. 3. ANS, 1960, pp. 290-292.

○ ——. "A Review of Criticality Incidents." In *Criticality Control in Chemical and Metallurgical Plant, Karlsruhe Symposium, Karlsruhe Germany, May 1961*. OECD, Nov. 1961, pp. 491-533.

○ ——. "A Review of Criticality Accidents," LA-3611. LASL, Jan. 1967.

○ ——. "Criticality Accident Experience: Heterogenous Water-Moderated Systems." In *ANS Trans.*, Vol. 46. ANS, June 1984, pp. 460-462.

REAC/TS. "Radiation Accident Registries: Serious Radiation Accidents Worldwide." ORAU, updated periodically.

Subject Codes: (A1, A2, B2, D, M, O) 09/30/95 Status: Ongoing project

Notes: REAC/TS database maintained in conjunction with site for maintaining and training responders for radiation emergencies.

Description: Fry, Shirley A. "The United States Radiation Accident and Other Registries of the REAC/TS Registry System: Their Functions and Current Status." In *The Medical Basis for Radiation Accident Preparedness: Proceedings of the REAC/TS International Conference, Oak Ridge, Tennessee USA, Oct. 1979*, edited by Karl F. Hübner and Shirley A. Fry. New York, New York USA: Elvsevier/North-Holland, 1980, pp. 451-468.

Example: An example of the data were included on pages 6-16 of the same proceedings.

3.1.2 1953 Through 1978, 11 Incidents in the Soviet Union

Frolov, V[ladimir] V., B[oris] G. Ryazanov, and V[ictor] I. Sviridov. "A Review of Criticality Accidents which Occurred in the Russian Industry." In *ICNC'95 Proceedings of the Fifth International Conference on Nuclear Criticality Safety, Albuquerque, New Mexico USA, Sept. 1995*, Vol. I. UNM, Sept. 1995, pp. P•23-P•30.

Subject Codes: A1, A2

09/30/95 Status: Published

Notes: 11 process criticality accidents, 1 critical facility accident; 1953-1978.

3.1.3 June 16, 1958, ORNL Y-12 Plant , Oak Ridge, Tennessee USA *

Andrews, G[ould] A., et al. "Accidental Radiation Excursion at the Oak Ridge Y-12 Plant, IV. Preliminary Report on Clinical and Laboratory Effects in the Irradiated Employees." *Health Physics* (Pergamon Press), Vol. 2, No. 2, 1959: pp. 134-138.

Subject Codes: A1, D, M

09/30/95 Status: Published

Alt. Contact: HPS

Notes: 4th of 4 part series of articles

Bruce, Marshall (compiler). "The Acute Radiation Syndrome: A Medical Report on the Y-12 Accident, June 16, 1958," ORINS-25. Oak Ridge Institute of Nuclear Studies, Oak Ridge, Tennessee USA, April 1959.

Subject Codes: A1, D, M

09/30/95 Status: Published

Alt. Contact: NTIS

Callihan, [A.] Dixon, and Joseph T. Thomas. "Accidental Radiation Excursion at the Oak Ridge Y-12 Plant, I. Description and Physics of the Accident." *Health Physics* (Pergamon Press), Vol. 1 (1959): pp. 363-372.

Subject Codes: A1

09/30/95 Status: Published

Alt. Contact: HPS

Notes: 1st of 4 part series of articles

Hurst, G. S., R. H. Ritchie, and L. C. Emerson. "Accidental Radiation Excursion at the Oak Ridge Y-12 Plant, III. Determination of Radiation Doses." *Health Physics* (Pergamon Press), Vol. 2, No. 2 (1959): pp. 121-133.

Subject Codes: A1, D, T

09/30/95 Status: Published

Alt. Contact: HPS

Notes: 3rd of 4 part series of articles

Luntz, Jerome D. (editor). "Oak Ridge Y-12 Accidental Excursion, June 16, 1958." *Nucleonics* (McGraw-Hill), Vol. 16, No. 11 (Nov. 1958): pp. 138-140 and 200-203.

Subject Codes: A1

09/30/95 Status: Published

McLendon, J[ack] D. "Accidental Radiation Excursion at the Oak Ridge Y-12 Plant, II. Health Physics Aspects of the Accident." *Health Physics* (Pergamon Press), Vol. 2, No. 1 (1959): pp. 21-29.

Subject Codes: A1, D, M

09/30/95 Status: Published

Alt. Contact: HPS

Notes: 2nd of 4 part series of articles

[Patton, F. S., et al.] "Accidental Excursion at the Y-12 Plant, June 16, 1958, Final Report," Y-1234. UCNC Y-12 Plant, July 28, 1958.

Subject Codes: A1, D, E2, O

09/30/95 Status: Issued

Alt. Contact: NTIS, OSTI

Subject Codes: (see full subject code list in the front matter for additional description)

A through A3 = criticality accidents

H1 and H2 = hazard-, risk-, and safety-analysis

B1 or B2 = extensive bibliography or references

M = medical

C1 through C5 = CASs

O = other

D = dose, dosimetry, distance and shielding

R = releases and release dispersion

E through E4 = emergency management

T = computational methods, tools, validation

Parenthesis indicate that the code(s) were assigned based on the document title or on its use as a reference in another document.

* Also addressed in Stratton report(s), included under General and Miscellaneous for Subject Codes A1, A2, and A3

3.1.4 Dec. 30, 1958, LASL Recovery Process, Los Alamos, New Mexico USA *

Paxton, H[ugh] C., et al. "Nuclear-Criticality Accident at the Los Alamos Scientific Laboratory on December 30, 1958," LAMS-2293. LASL, Feb. 1959.

Subject Codes: A1

09/30/95 Status: Published

Alt. Contact: LANL, NTIS, OSTI

Summary: Paxton, H[ugh] C., et al. "Los Alamos Criticality Accident, December 30, 1958." *Nucleonics* (McGraw-Hill), Vol. 17, No. 4 (April 1959): pp. 107-108 and 151-153.

3.1.5 Oct. 16, 1959, ICPP, NRTS, Idaho USA *

Ginkel, William L., et al.. "Nuclear Incident at the Idaho Chemical Processing Plant on October 16, 1959," IDO-10035. Idaho Falls, Idaho USA: Phillips Petroleum Company, Feb. 15, 1960.

Subject Codes: A1

09/30/95 Status: Published

Alt. Contact: INEL, NTIS, OSTI

3.1.6 Jan. 25, 1961, ICPP, NRTS, Idaho USA *

Nichols, J. P. "Idaho Chemical Processing Plant Criticality Incident of January 25, 1961." *Nuclear Safety* (GPO), Vol. 3, No. 2 (Dec. 1961): pp. 71-73.

Subject Codes: A1

09/30/95 Status: Published

Paulus, R. C., et al. "Nuclear Incident at the Idaho Chemical Processing Plant on January 25, 1961," IDO-10036. Idaho Falls, Idaho: Phillips Petroleum Company, June 1, 1961.

Subject Codes: A1

09/30/95 Status: Published

Alt. Contact: INEL, NTIS, OSTI

3.1.7 April 7, 1962, Hanford Works Recuplex Process, Richland Washington USA *

Callihan, [A.] D[ixon] "Accidental Nuclear Excursion in Recuplex Operation at Hanford in April 1962." *Nuclear Safety* (GPO), Vol. 4, No. 4 (June 1963): pp. 136-144.

Subject Codes: A1

09/30/95 Status: Published

Clayton, E. D[uane]. "Further Considerations of Criticality in Recuplex and Possible Shutdown Mechanism," HW-77780. HW, 1963.

Subject Codes: (A1)

09/30/95 Status: Published

Alt. Contact: Hanford, NTIS, OSTI

Clayton, E. D[uane]. "The Hanford Pulser Accident." In *ANS Trans.*, Vol. 46. ANS, June 1984, pp. 463-464.

Subject Codes: A1

09/30/95 Status: Published

Hanford Laboratories. "Dosimetry Investigation on the RECUPLEX Criticality Accident." *Health Physics* (Pergamon Press), Vol. 9 (1963): p. 839.

Subject Codes: (A1, D, T)

09/30/95 Status: Published

Alt. Contact: Hanford, HPS

Roesch, R. O., et al. "Dosimetry Investigation of the Recuplex Accident," HW-SA--2730. HW, Aug. 22, 1962.

Subject Codes: (A1, D, T) 09/30/95 Status: Published
Alt. Contact: Hanford, NTIS, OSTI

Soldat, J. K. "Recuplex Incident, April 7, 1962, Emission of Fission Products for the 291-Z Stack," HW-77345. HW, May 23, 1962.

Subject Codes: (A1, R) 09/30/95 Status: Issued
Alt. Contact: Hanford, NTIS, OSTI

Zanger, C. N. "Summary Report of Accidental Nuclear Excursion Recuplex Operation 234-5 Facility," HW-74723; TID-18431. HW; GPO, April 1962.

Subject Codes: A1 09/30/95 Status: Published
Alt. Contact: Hanford, NTIS, OSTI

3.1.8 July 24, 1964, Scrap Recovery Plant, Wood River Junction, Rhode Island USA *

Allison, W. L. "Nuclear Incident at United Nuclear Corporation, Wood River Junction, Rhode Island, July 24, 1964." New Haven Connecticut: United Nuclear Corporation, Aug. 21, 1964.

Subject Codes: (A1) 09/30/95 Status: Issued

Kouts, Herbert, et al. (Technical Review Committee appointed by the AEC Director of Regulation). "Report on the Criticality Incident at the Wood River Junction Plant." No publication data, Nov. 6, 1964.

Subject Codes: (A1) 09/30/95 Status: Issued

Alt. Contact: LANL, NTIS

Notes: Incident date 07/24/64.

Title as specified in references vary but the above title seems most complete. Document retrieval has been delayed due to uncertainty of title and publication data.

Auxier, J[ohn] A. "Nuclear Accident at Wood River Junction." *Nuclear Safety* (GPO), Vol. 6, No. 3, (Spring 1965): pp. 298-301.

Subject Codes: A1 09/30/95 Status: Published

Notes: Summary

Nakache, F. R., and M. M. Shapiro. "The Nuclear Aspects of the Accidental Criticality at Wood River Junction, Rhode Island, July 24, 1964," TID-21995. New Haven, Connecticut USA: United Nuclear Corporation, Nov. 12, 1964.

Subject Codes: A1, D, T 09/30/95 Status: Published

Alt. Contact: NTIS

Notes: No. assigned after initial distribution

Notes: Supplemental report

Subject Codes: (see full subject code list in the front matter for additional description)

A through A3 = criticality accidents

B1 or B2 = extensive bibliography or references

C1 through C5 = CASs

D = dose, dosimetry, distance and shielding

E through E4 = emergency management

H1 and H2 = hazard-, risk-, and safety-analysis

M = medical

O = other

R = releases and release dispersion

T = computational methods, tools, validation

Parenthesis indicate that the code(s) were assigned based on the document title or on its use as a reference in another document.

* Also addressed in Stratton report(s), included under General and Miscellaneous for Subject Codes A1, A2, and A3

3.1.9 Aug. 24, 1970, Windscale Works Plutonium Recovery, UK *

Daniels, J. T., H. Howells, and T. G. Hughes. "Criticality Incident - August 24, 1970, Windscale Works." In *ANS Trans.*, Vol. 14, No. 1. ANS, June 1971, pp. 35-36.

Subject Codes: A1

09/30/95 Status: Published

Evans, M[artyn] C. "A Review of Criticality Accidents Within the European Community." In *ANS Trans.*, Vol. 46. ANS, June 1984, pp. 462-463.

Subject Codes: A1, A2

09/30/95 Status: Published

Notes: Saclay, 03/15/60; Mol, 12/30/65; and Windscale, 08/24/70

Hughes, T. G. "Criticality Incident at Windscale." *Nuclear Engineering International* (Reed Business Publishing), Vol. 17, No. 189 (Feb. 1972): pp. 95-97.

Subject Codes: A1

09/30/95 Status: Published

3.1.10 Oct. 17, 1978, ICPP, INEL, Idaho USA *

Allied Chemical Idaho Chemical Programs, CPP Technical Division Personnel. "Recovery of ICPP from Criticality Event of October 17, 1978: Part I - Basic Technical Data," ACI-362. Idaho Falls, Idaho USA: Allied Chemical Idaho Chemical Programs, Nov. 1978.

Subject Codes: A1, E4

09/30/95 Status: Not approved for public release

Notes: This report is included here only because it is referenced in McGuire, NUREG-1140, Jan. 1985, which is listed separately.

Castro, W. R. (editor). "Operating Experiences, ICPP Criticality Event of 17 October, 1978." *Nuclear Safety* (GPO), Vol. 21, No. 5 (Sept.-Oct. 1980): pp. 648-653.

Subject Codes: A1

09/30/95 Status: Published

Alt. Contact: INEL

[Tiller, Robert E., et al.] "Investigation of the 10/17/78 Criticality Incident in the Uranium Extraction Process Scrub Column at the Idaho Chemical Processing Plant," [ICPP-MISC-002]. Idaho Falls, Idaho USA: Allied Chemical Idaho Chemical Programs, Nov. 1978.

Subject Codes: A1

09/30/95 Status: Published

Alt. Contact: INEL, NTIS, OSTI

Notes: ICPP-MISC-002 is an INEL-assigned number for filing and retrieval purposes.

3.2 Code A2: Criticality Accidents in Reactors

3.2.1 General and Miscellaneous

AEC Division of Operational Safety. "Operational Accidents and Radiation Exposure Experience within the United States Atomic Energy Commission 1943-1975," WASH-1192. AEC, fall 1975.

Subject Codes: A1, A2, B2, O

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Notes: See *Stratton Report* instead

Earlier Works: Hayes, Daniel F. "A Summary of Accidents and Incidents Involving Radiation in Atomic Energy Activities, June 1945 through December 1955," TID-5360. USAEC and GPO, Aug. 1956.

- Hayes, Daniel F. "A Summary of Accidents and Incidents Involving Radioactive Material in Atomic Energy Activities, January - December 1956," TID-5360 Supplement. USAEC and GPO, Aug. 1957.
- AEC Division of Operational Safety. "A Summary of Industrial Accidents in USAEC Facilities 1956," TID-5360 (Supplement 1) (Revised). AEC, Aug. 1967.
- AEC Office of Industrial Relations. "A Summary of Industrial Accidents in USAEC Facilities," TID-5360 (Supplement 2); (Supplement 3); (Supplement 3) (Revised); (Supplement 4); and (Supplement 5). AEC, Sept. 1959; Aug. 1961; Dec. 1961; Dec. 1963; and Dec. 1965.

Delafield, H[oward] J. "Design Criteria and the Principles Underlying the UKAEA Code of Practice on the Provision of Criticality Alarm Systems." In *Transactions of the Criticality Accident Alarm Systems Workshop, Richland, Washington USA, Sept. 1988*, DOE/NCT-05. LLNL, 1988, pp. 111-124.

Subject Codes: A, C1, C2, O

09/30/95 Status: Published

Alt. Contact: LLNL, NTIS, OSTI

Jammet, H. P., et al. "Observation Clinique et Traitement d'un Cas d'Irradiation Globale Accidentelle." In *Proceedings of the First International Congress on Radiation Protection, Rome Italy, Sept. 1966*, Part 2. edited by W. S. Snyder, et al. Pergamon Press, 1967, pp. 1249-1291.

Subject Codes: A1, A2, M

09/30/95 Status: Published

Knief, Ronald A. "Emergency Planning Lessons Learned from TMI-2: Potential Applications for Fuel Facilities." In *ANS Trans.*, Vol. 72. ANS, June 1995, pp. 220-221.

Subject Codes: A2, E2

09/30/95 Status: Published

Stratton, William R. "A Review of Criticality Accidents," revised by David R. Smith, DOE/NCT-04. LLNL and DOE, March 1989.

Subject Codes: A, B1, T

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Notes: Known as *Stratton Report*

Previous Ed.s: ——. "A Review of Criticality Accidents." In *Progress in Nuclear Energy Series IV: Technology, Engineering, and Safety*, edited by C. M. Nicholle. New York USA: Pergamon Press, 1960, pp. 163-205.

- ——. "A Review of Criticality of Criticality Accidents." In *ANS Trans.*, Vol. 3. ANS, 1960, pp. 290-292.
- ——. "A Review of Criticality Incidents." In *Criticality Control in Chemical and Metallurgical Plant, Karlsruhe Symposium, Karlsruhe Germany, May 1961*. OECD, Nov. 1961, pp. 491-533.
- ——. "A Review of Criticality Accidents," LA-3611. LASL, Jan. 1967.
- ——. "Criticality Accident Experience: Heterogenous Water-Moderated Systems." In *ANS Trans.*, Vol. 46. ANS, June 1984, pp. 460-462.

Subject Codes: (see full subject code list in the front matter for additional description)

A through A3 = criticality accidents

H1 and H2 = hazard-, risk-, and safety-analysis

B1 or B2 = extensive bibliography or references

M = medical

C1 through C5 = CASs

O = other

D = dose, dosimetry, distance and shielding

R = releases and release dispersion

E through E4 = emergency management

T = computational methods, tools, validation

Parenthesis indicate that the code(s) were assigned based on the document title or on its use as a reference in another document.

* Also addressed in Stratton report(s), included under General and Miscellaneous for Subject Codes A1, A2, and A3

REAC/TS. "Radiation Accident Registries: Serious Radiation Accidents Worldwide." ORAU, updated periodically.

Subject Codes: (A1, A2, B2, D, M, O) 09/30/95 Status: Ongoing project
Notes: REAC/TS database maintained in conjunction with site for maintaining and training responders for radiation emergencies.
Description: Fry, Shirley A. "The United States Radiation Accident and Other Registries of the REAC/TS Registry System: Their Functions and Current Status." In *The Medical Basis for Radiation Accident Preparedness: Proceedings of the REAC/TS International Conference, Oak Ridge, Tennessee USA, Oct. 1979*, edited by Karl F. Hübner and Shirley A. Fry. New York, New York USA: Elvsevier/North-Holland, 1980, pp. 451-468.
Example: An example of the data were included on pages 6-16 of the same proceedings.

3.2.2 June 6, 1945, Los Alamos, New Mexico USA *

Hayes, Daniel F. "A Summary of Accidents and Incidents Involving Radiation in Atomic Energy Activities, June 1945 through December 1955," TID-5360. USAEC and GPO, Aug. 1956.

Subject Codes: A1, A2, B2, O 09/30/95 Status: Published
Alt. Contact: NTIS, OSTI Notes: See *Stratton Report* instead

3.2.3 Aug. 21, 1945, Los Alamos, New Mexico USA *

Hempelmann, Louis H., Clarence C. Lushbaugh, and George L. Voelz. "What Happened to the Survivors of the Early Los Alamos Nuclear Accidents?" In *The Medical Basis for Radiation Accident Preparedness: Proceedings of the REAC/TS International Conference, Oak Ridge, Tennessee USA, Oct. 1979*, edited by Karl F. Hübner and Shirley A. Fry. New York, New York USA: Elvsevier/North-Holland, 1980, pp. 17-32.

Subject Codes: A2, D, M 09/30/95 Status: Published
Notes: Includes re-evaluations of doses based on recommendation changes over the years.

3.2.4 May 21, 1946, Los Alamos, New Mexico USA *

Hempelmann, Louis H., Clarence C. Lushbaugh, and George L. Voelz. "What Happened to the Survivors of the Early Los Alamos Nuclear Accidents?" In *The Medical Basis for Radiation Accident Preparedness: Proceedings of the REAC/TS International Conference, Oak Ridge, Tennessee USA, Oct. 1979*, edited by Karl F. Hübner and Shirley A. Fry. New York, New York USA: Elvsevier/North-Holland, 1980, pp. 17-32.

Subject Codes: A2, D, M 09/30/95 Status: Published
Notes: Includes re-evaluations of doses based on recommendation changes over the years.

Hoffman, Joseph G. "Radiation Doses in the Pajarito Accident of May 21, 1946," LA-687. LASL, May 26, 1948.

Subject Codes: A2, D, T 09/30/95 Status: Published
Alt. Contact: LANL, NTIS, OSTI

3.2.5 Dec. 1949, LASL, Los Alamos, New Mexico USA *

Hayes, Daniel F. "A Summary of Accidents and Incidents Involving Radiation in Atomic Energy Activities, June 1945 through December 1955," TID-5360. USAEC and GPO, Aug. 1956.

Subject Codes: A1, A2, B2, O

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Notes: See *Stratton Report* instead

3.2.6 1940s - 1950s, Chalk River Laboratory ZEEP Critical Facility, Chalk River, Ontario Canada *

Apparently listed in *Stratton Report* only. See General and Miscellaneous subdivision of Subject Code A2.

3.2.7 Feb. 1, 1951, LASL, Los Alamos, New Mexico USA *

Paine, Jr., R[oger] W. "A Study of an Accidental Radiation Burst," LA-1289. LASL, March 20, 1951.

Subject Codes: A2, D

09/30/95 Status: Issued

Alt. Contact: LANL, NTIS, OSTI

Paxton, Hugh C. "Critical Assembly Booby Traps." *Nucleonics* (McGraw-Hill), Vol. 16, No. 3 (March 1958): pp. 80-81.

Subject Codes: A2

09/30/95 Status: Published

Full Report: Paxton, H[ugh] C. "Critical Assembly Booby Traps," AECD-4240. LASL, 1957.

Notes: Incident dates 02/01/51, 02/03/54, and 07/03/56.

There is apparently an error in the number of the full report because the document does not seem to be retrievable through the AECD number.

3.2.8 Nov. 16, 1951, Hanford Homogeneous Reactor, Hanford Works, Richland Washington USA *

Leonard, Jr., B. R. "A Study of the Radiation Burst in the Hanford Homogeneous Reactor," HW-24327. HW, May 2, 1952.

Subject Codes: A2, M, O, T

09/30/95 Status: Published

Alt. Contact: Hanford, NTIS, OSTI

Notes: Incident date 11/16/51.

3.2.9 April 18, 1952, LASL Jemima Assembly, Los Alamos, New Mexico USA *

Mallory, E. C., et al. "Neutron Burst from a Cylindrical Untamped Oy Assembly," LA-1477. LASL, July 22, 1952.

Subject Codes: A2

09/30/95 Status: Published

Alt. Contact: LANL, NTIS, OSTI

Notes: Oy is codeword for enriched uranium.

Subject Codes: (see full subject code list in the front matter for additional description)

A through A3 = criticality accidents

H1 and H2 = hazard-, risk-, and safety-analysis

B1 or B2 = extensive bibliography or references

M = medical

C1 through C5 = CASs

O = other

D = dose, dosimetry, distance and shielding

R = releases and release dispersion

E through E4 = emergency management

T = computational methods, tools, validation

Parenthesis indicate that the code(s) were assigned based on the document title or on its use as a reference in another document.

* Also addressed in *Stratton report(s)*, included under General and Miscellaneous for Subject Codes A1, A2, and A3

3.2.10 June 2, 1952, ANL ZPR-1, Lamont, Illinois USA *

Brittan, R[aymond] O., et al. "Technical Review of ZPR-1 Accidental Transient - The Power Excursion, Exposures, and Clinical Data," ANL-4971. ANL-E, Jan. 26, 1953.

Subject Codes: A2, D, M, T

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Later Work: Brittan, R[aymond] O., L. D. Marinelli, and F. W. Thalgott. "Technical Review of ZPR-1 Accidental Transient - The Power Excursion and Exposures," ANL-4971 (Rev.). ANL-E, 1953. (Referenced in several summaries but apparently not readily retrievable.)

Hasterlik, R. J., and L. D. Marinelli. "Physical Dosimetry and Clinical Observations on Four Human Beings Involved in an Accidental Critical Assembly Excursion." In *Proceedings of the International Conference on Peaceful Uses of Atomic Energy, Geneva Switzerland, Aug. 1955*, Vol. 11. UN, 1956, pp. 25-34.

Subject Codes: A2, D, M

09/30/95 Status: Published

Nyer, W. E., G. O. Bright, and R. J. McWhorter. "Reactor Excursion Behavior." In *Proceedings of the Third United Nations International Conference on Peaceful Uses of Atomic Energy, Geneva Switzerland, Aug.-Sept. 1964*, Vol. 13. UN, 1965, pp. 13-25.

Subject Codes: A2, O

09/30/95 Status: Published

3.2.11 Dec. 12, 1952, NRX Reactor, Chalk River, Ontario Canada *

Lewis, W. B. "The Accident to the NRX Reactor on December 12, 1952," DR-32. Atomic Energy of Canada, Limited, Chalk River Project, Chalk River, Ontario Canada, 1953.

Subject Codes: (A2)

09/30/95 Status: Issued

Alt. Contact: NTIS

Additional: —. "Interim Report at January 9, 1953 on Problems Arising from the NRX Incident of December 12, 1952," DR-29. Atomic Energy of Canada, Limited, Chalk River Project, Chalk River, Ontario Canada, Feb. 1953.

○ Henderson, W. J., et al. "An Investigation of Some of the Circumstances Pertinent to the Accident to the NRX Reactor on December 12, 1952," NEI-26. Atomic Energy of Canada, Limited, Chalk River Project, Chalk River, Ontario Canada, 1953.

3.2.12 1953, Soviet Union *

Guskova, A. K., and G. D. Dasogolov. "Two Cases of Acute Radiation Disease in Man." In *Proceedings of the International Conference on the Peaceful Uses of Atomic Energy, Geneva Switzerland, Aug. 1955*, Vol. 11. UN, 1956, pp. 35-45.

Subject Codes: A2, M

09/30/95 Status: Published

Notes: Details of incident not specified.

3.2.13 Feb. 3, 1954, LASL Lady Godiva Assembly, Los Alamos, New Mexico USA *

Paxton, Hugh C. "Critical Assembly Booby Traps." *Nucleonics* (McGraw-Hill), Vol. 16, No. 3 (March 1958): pp. 80-81.

Subject Codes: A2

09/30/95 Status: Published

Full Report: Paxton, H[ugh] C. "Critical Assembly Booby Traps," AECD-4240. LASL, 1957.

Notes: Incident dates 02/01/51, 02/03/54, and 07/03/56.

There is apparently an error in the number of the full report because the document does not seem to be retrievable through the AECD number.

3.2.14 May 26, 1954, ORNL Critical Experiments Laboratory, Oak Ridge, Tennessee USA *

Thomas, J[oseph] T., and [A.] D[ixon] Callihan. "Radiation Excursions at the ORNL Critical Experiments Laboratory, I. May 26, 1954, II. February 1, 1956," ORNL-2452. ORNL, May 27, 1958.

Subject Codes: A2, T

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

3.2.15 July 22, 1954, ANL BORAX Reactor, NRTS, Idaho USA *

Luntz, Jerome D. (editor). "Reactors." *Nucleonics* (McGraw-Hill), Vol. 13 (Sept. 1955): p. 40-45.

Subject Codes: (A2)

09/30/95 Status: Published

3.2.16 Feb. 1, 1956, ORNL Critical Experiments Laboratory, Oak Ridge, Tennessee USA *

Thomas, J[oseph] T., and [A.] D[ixon] Callihan. "Radiation Excursions at the ORNL Critical Experiments Laboratory, I. May 26, 1954, II. February 1, 1956," ORNL-2452. ORNL, May 27, 1958.

Subject Codes: A2, T

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

3.2.17 July 3, 1956, LASL Honeycomb Critical Assembly, Los Alamos, New Mexico USA

Paxton, Hugh C. "Critical Assembly Booby Traps." *Nucleonics* (McGraw-Hill), Vol. 16, No. 3 (March 1958): pp. 80-81.

Subject Codes: A2

09/30/95 Status: Published

Full Report: Paxton, H[ugh] C. "Critical Assembly Booby Traps," AECD-4240. LASL, 1957.

Notes: Incident dates 02/01/51, 02/03/54, and 07/03/56.

There is apparently an error in the number of the full report because the document does not seem to be retrievable through the AECD number.

Subject Codes: (see full subject code list in the front matter for additional description)

A through A3 = criticality accidents

B1 or B2 = extensive bibliography or references

C1 through C5 = CASs

D = dose, dosimetry, distance and shielding

E through E4 = emergency management

H1 and H2 = hazard-, risk-, and safety-analysis

M = medical

O = other

R = releases and release dispersion

T = computational methods, tools, validation

Parenthesis indicate that the code(s) were assigned based on the document title or on its use as a reference in another document.

* Also addressed in Stratton report(s), included under General and Miscellaneous for Subject Codes A1, A2, and A3

3.2.18 Feb. 12, 1957, LASL Lady Godiva Assembly, Los Alamos, New Mexico USA *

[Paxton, Hugh C]. "Godiva Wrecked at Los Alamos." *Nucleonics* (McGraw-Hill), Vol. 15, No. 4 (April 1957): p. 104.

Subject Codes: A2

09/30/95 Status: Published

3.2.19 Jan. 22, 1958, Mayak Enterprise, Urals, Soviet Union

Frolov, V[ladimir] V., B[oris] G. Ryazanov, and V[ictor] I. Sviridov. "A Review of Criticality Accidents which Occurred in the Russian Industry." In *ICNC'95 Proceedings of the Fifth International Conference on Nuclear Criticality Safety, Albuquerque, New Mexico USA, Sept. 1995*, Vol. I. UNM, Sept. 1995, pp. P•23-P•30.

Subject Codes: A1, A2

09/30/95 Status: Published

Notes: 11 process criticality accidents, 1 critical facility accident; 1953-1978.

3.2.20 Oct. 15, 1958, Boris Kidrič Institute, Vinča Yugoslavia *

Luntz, Jerome D. (editor). "Yugoslavian Criticality Accident, October 15, 1958." *Nucleonics* (McGraw-Hill), Vol. 17, No. 4 (April 1959): pp. 106 and 154-156.

Subject Codes: A2

09/30/95 Status: Published

Pešić, Milan P., and Miodrag J. Milošević. "A Study on the 'RB' Reactor Accident." In *ICNC'95 Proceedings of the Fifth International Conference on Nuclear Criticality Safety, Albuquerque, New Mexico USA, Sept. 1995*, Vol. II. UNM, Sept. 1995, pp. 10•3-10•10.

Subject Codes: A2

09/30/95 Status: Published

Savić, Pavle P. "Sur l' Accident Avec le Reacteur de Puissance Zero de 15 Octobre 1958." *Bulletin of the Institute of Nuclear Sciences Boris Kidre* (Belgrade Yugoslavia), Vol. 9 (Mar. 1959): pp. 1-4.

Subject Codes: A2

09/30/95 Status: Published

3.2.21 March 15, 1960, Alize Critical Facility, Centre d'Etudes Nucleaires de Saclay France *

Evans, M[artyn] C. "A Review of Criticality Accidents Within the European Community." In *ANS Trans.*, Vol. 46. ANS, June 1984, pp. 462-463.

Subject Codes: A1, A2

09/30/95 Status: Published

Notes: Saclay, 03/15/60; Mol, 12/30/65; and Windscale, 08/24/70

3.2.22 June 17, 1960, LASL, Los Alamos, New Mexico USA *

Apparently listed in Stratton Report only. See General and Miscellaneous subdivision of Subject Code A2.

3.2.23 Jan. 3, 1961, SL-1 Reactor, NRTS, Idaho USA *

Cottrell, W. B. (editor). "SL-1 Final Report." *Nuclear Safety* (GPO), Vol. 4, No. 1 (Mar. 1963): pp. 83-86.
 Subject Codes: A2 Alt. Contact: INEL

Storrs, C. L., and C. W. Bills. "The SL-1 Recovery Operation." In *ANS Trans.*, Vol. 5. ANS, 1962, p. 152.
 Subject Codes: A2, E4 09/30/95 Status: Published

Tardiff, A.F. "Some Aspects of the WTR and SL-1 Accidents." In *Proceedings of the Symposium on Reactor Safety and Hazards Evaluation Techniques*, Vol. 1. IAEA, 1962, pp. 43-88.
 Subject Codes: (A2) 09/30/95 Status: Published

3.2.24 Nov. 10, 1961, ORNL, Oak Ridge, Tennessee USA *

Callihan, [A.] Dixon "Criticality Excursion of November 10, 1961," ORNL-TM-139. ORNL, Feb. 13, 1962.
 Subject Codes: A2 09/30/95 Status: Issued
 Alt. Contact: NTIS, OSTI

3.2.25 March 26, 1963, LLNL, Livermore, California USA *

Kathren, R[onald] L., et al. "Health Physics Following a Nuclear Excursion: The LRL Incident of 26 March 1963," UCRL-7345 (Rev. I). LLNL, June 3, 1963.
 Subject Codes: A2, D, M 09/30/95 Status: Published
 Alt. Contact: NTIS, OSTI

Kathren, R[onald] L. "The 1963 Livermore Criticality Accident Revisited." In *ANS Trans.*, Vol. 46. ANS, June 1994, pp. 440-441.
 Subject Codes: A2 09/30/95 Status: Published

3.2.26 Dec. 30, 1965, VENUS Critical Facility at Mol, Belgium *

Evans, M[artyn] C. "A Review of Criticality Accidents Within the European Community." In *ANS Trans.*, Vol. 46. ANS, June 1984, pp. 462-463.
 Subject Codes: A1, A2 09/30/95 Status: Published
 Notes: Saclay, 03/15/60; Mol, 12/30/65; and Windscale, 08/24/70

Subject Codes: (see full subject code list in the front matter for additional description)

A through A3 = criticality accidents	H1 and H2 = hazard-, risk-, and safety-analysis
B1 or B2 = extensive bibliography or references	M = medical
C1 through C5 = CASs	O = other
D = dose, dosimetry, distance and shielding	R = releases and release dispersion
E through E4 = emergency management	T = computational methods, tools, validation

Parenthesis indicate that the code(s) were assigned based on the document title or on its use as a reference in another document.

* Also addressed in Stratton report(s), included under General and Miscellaneous for Subject Codes A1, A2, and A3

Parmentier, N. C., R. Boulenger, and G. Portal. "Problèmes de Dosimétrie lors de l'Accident." In *Proceedings of the First International Congress on Radiation Protection, Rome Italy, Sept. 1966*, edited by W. S. Snyder, et al., Part 2. Pergamon Press, 1967, pp. 1231-1248.

Subject Codes: A2, D, M

09/30/95 Status: Published

Parmentier, N. C., J. C. Nénot, and H. J. Jammet. "A Dosimetric Study of the Belgian (1965) and Italian (1975) Accidents." In *The Medical Basis for Radiation Accident Preparedness: Proceedings of the REAC/TS International Conference, Oak Ridge, Tennessee USA, Oct. 1979*, edited by Karl F. Hübner and Shirley A. Fry. New York, New York USA: Elsevier/North-Holland, 1980, pp. 105-112.

Subject Codes: A2, D, O

09/30/95 Status: Published

Notes: Incident dates 12/30/65 (criticality accident) and 05/13/75 (cobalt source accident).

Pennelle, G. "Description et Analyse de l'Accident de Criticité Survenue au Reacteur VENUS à Mol en date du 30 Décembre 1965." In *Proceedings of the First International Congress on Radiation Protection, Part 2, Rome Italy, Sept. 1966*. Pergamon Press, 1967, pp. 1223-1230.

Subject Codes: A2

09/30/95 Status: Published

3.2.27 Jan. 30, 1968, ORNL Critical Experiments Facility, Oak Ridge, Tennessee USA *

Callihan, [A.] Dixon. "Excursion at the Oak Ridge Critical Experiments Facility, January 30, 1968," ORNL-TM-2207. UCNC, ORNL, June 1968.

Subject Codes: A2

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

3.2.28 April 5, 1968, RFNC-VNIITF Critical Facility, Soviet Union

Volshin, N[ikolay] P., I. S. Pogrebov, and V. A. Teryokhin. "RFNC-VNIITF Physical Experimental Division and a Historical Sketch of Critical Mass Measurements." In *ICNC'95 Proceedings of the Fifth International Conference on Nuclear Criticality Safety, Albuquerque, New Mexico USA, Sept. 1995*, Vol. I. UNM, Sept. 1995, pp. P-31-P-36.

Subject Codes: A2, A3, O

09/30/95 Status: Published

3.2.29 Sept. 23, 1983, RA-2 Facility, Buenos Aires Argentina *

Jordan, Edward L. "Fatality at Argentine Critical Facility," NRC Information Notice No. 83-66; and No. 83-66, Supplement 1. NRC, Oct. 7, 1983; May 25, 1984.

Subject Codes: A2

09/30/95 Status: Published

Notes: Incident date 09/23/83

Forehand, [Jr.] H. M. "An Analysis of the Yield and Quench Mechanism of the Argentine Accident of September 23, 1983." In *ANS Trans.*, Vol. 46. ANS, June 1994, p. 460.

Subject Codes: A2

09/30/95 Status: Published

Pahissa-Campa, J., and D. Beninson. "RA-2 Criticality Accident." In *ANS Trans.*, Vol. 46. ANS, June 1994, p. 440.

Subject Codes: A2

09/30/95 Status: Published

3.3 Code A3: Experimental and Hypothetical Criticality Accidents

ANS. "Criticality Accident Alarm System, An American National Standard," ANSI/ANS-8.3-1986. ANS, approved Aug. 29, 1986.

Subject Codes: A3, C1, C2, C3, C5, E3, T 09/30/95 Status: Active, under revision

Notes: Superseded documents are ANSI N16.2-1969, ANSI/ANS-8.3-1979, ANSI/ANS N2.3-1967, and ANSI/ANS N2.3-1979.

Endorsed by NRC Reg. Guide 8.12 (Rev. 2) which is active.

Compliance required by DOE Order 5480.24 which is active.

Calculation techniques of Appendix B are not universally applicable.

ANS. "Criticality Accident Alarm System, An American National Standard," ANSI/ANS-8.3-199x. Draft, May 1995.

Subject Codes: A3, C1, C2, C3, C5, T 09/30/95 Status: Draft, under review

Notes: Calculation techniques of Appendices B and C are not universally applicable.

Aspinall, K[ieth] J., and J. T. Daniels. "Review of UKAEA Criticality Detection and Alarm Systems 1963/64 Part 1: Provision and Design Principles," AHSB (S) R 92. London UK: UKAEA AHSB, 1965.

Subject Codes: A3, B1, C2, C3, C4, C5, E 09/30/95 Status: Published

Alt. Contact: HMSO

Aspinall, K[ieth] J. "Criticality Detection and Alarm Systems: Design Principles." In *Criticality Control of Fissile Materials, Stockholm Sweden, Nov. 1965*. IAEA, 1966, pp. 701-716.

Subject Codes: A3, C2, C3, C5, E 09/30/95 Status: Published

Austin, T[im] B., C[hristopher] R. J. Sunman, and S[tephan] J. Walls. "Aspects of Criticality Emergency Planning - Criticality Excursion Yields and Criticality Incident Detection and Alarm System Reliabilities." In *ICNC'95 Proceedings of the Fifth International Conference on Nuclear Criticality Safety, Albuquerque, New Mexico USA, Sept. 1995*, Vol. II. UNM, Sept. 1995, pp. 13•7-13•15.

Subject Codes: A3, C1, C3, E2 09/30/95 Status: Published

Baker, J[ames] S., and J[acquelyn] A. Smith. "Estimating Radius of Coverage of the Y-12 Plant Criticality Accident Alarm System from Experiments at the Los Alamos Critical Experiments Facility." In *ICNC'95 Proceedings of the Fifth International Conference on Nuclear Criticality Safety, Albuquerque, New Mexico USA, Sept. 1995*, Vol. II. UNM, Sept. 1995, pp. 11•126-11•130.

Subject Codes: A3, C1, C4, D 09/30/95 Status: Published

Barbry, F[rancis Y.] "Note de Synthèse Concernant les Observations Effectuées sur la Formation de Gaz de Radiolyse et de leurs Conséquences," CEA/DSN 115. Sécurité Nucléaire et Criticité CEA, May 1973.

Subject Codes: (A3) 09/30/95 Status: Issued

Later Work: —, CEA/DSN/SEESNC 117, Sept. 1973, listed separately.

○ —, CEA/SRSC 89.08, Nov. 1989, listed separately.

Notes: Author translated into English for LANL and UA personnel.

Subject Codes: (see full subject code list in the front matter for additional description)

A through A3 = criticality accidents

B1 or B2 = extensive bibliography or references

C1 through C5 = CASS

D = dose, dosimetry, distance and shielding

E through E4 = emergency management

H1 and H2 = hazard-, risk-, and safety-analysis

M = medical

O = other

R = releases and release dispersion

T = computational methods, tools, validation

Parenthesis indicate that the code(s) were assigned based on the document title or on its use as a reference in another document.

Barbry, F[rancis Y.], D. Mangin, and H. Revol. "CRAC - Récapitulation des Résultats Expérimentaux," CEA/DSN 116. Sûreté Nucléaire et Criticité CEA, Aug. 1973.

Subject Codes: A3

09/30/95 Status: Issued

- Full Reports: Barbry, F[rancis Y.], et al. "Experience CRAC.02 Resultats," CEA/DPSR 59; "Experience CRAC.03.04 Resultats," CEA/DPSR 60; "Experience CRAC.09.10.11 Resultats," CEA/DPSR 69; "Experience CRAC.12.13.14 Resultats," CEA/DPSR 70. Service d' Études de Criticité, CEA, Jan. 1959; March 1969; Aug. 1969; Oct. 1969.
- ———. "Experience CRAC.15.16.17 Resultats," CEA/SEEC 74; "Experience CRAC.18.19 Resultats," CEA/SEEC 77; "Experience CRAC.20.1,2,3,4,5 Resultats," CEA/SEEC 79; "Experience CRAC.21.22.23 Resultats," CEA/SEEC 83; "Experience CRAC.24.25.26 Resultats," CEA/SEEC 91; "Experience CRAC.27.28.29 Resultats," CEA/SEEC 92. Service d' Études de Criticité, Direction de la Protections et de la Sûreté Radiologiques, CEA, Jan. 1970; Feb. 1970; March 1970; May 1970; July 1970; Aug. 1970.
 - Barbry, F[rancis Y.], et al. "Experience CRAC.37.38 Resultats," CEA/SEEC 96; "Experience CRAC.39.40.41 Resultats," CEA/SEEC 98. Service d' Études de Criticité, Direction de la Protections et de la Sûreté Radiologiques, CEA, Dec. 1970; March 1971.
 - ———. "Experience CRAC.42.43.44 Resultats," CEA/DSN/SEEC 103; "Experience CRAC.45.46.47 Resultats," CEA/DSN/SEEC 106; "Experience CRAC.48.50.52 Resultats," CEA/DSN/SEEC 108. Département de Sûreté Nucléaire, CEA, Aug. 1971; Dec. 1971; April 1972.
 - Barbry, F[rancis Y.], D. Magnin, and H. Revol. "Experience CRAC.53.54.55.56.57 Resultats," CEA/DSN/SEEC 109; "Experience C.R.A.C 63 (1-2-3-4)," CEA/DSN/SEEC 113; "Experience CRAC.58.61.62.63 Resultats," CEA/DSN/SE 111; "Experience CRAC.59.59bis60.60 Resultats," CEA/DSN/SE 114. Département de Sûreté Nucléaire, CEA, Sept. 1972; Jan. 1973; Feb. 1973; March 1973.
- Summary: Lécorché and Seale, Y-CDC-12, Nov. 1973, listed separately.
- Notes: Francis Y. Barbry translated all of the French reports into English for LANL Critical Facilities, LANL Criticality Safety and UA Nuclear Engineering personnel.

Barbry, F[rancis Y.] "Essais de Synthèse Partielle des Resultats Experimentaux," CEA/DSN/SEESNC 117. CEA, Sept. 1973.

Subject Codes: (A3)

09/30/95 Status: Issued

Earlier Work: ———, CEA/DSN 115, May 1973, listed separately.

Later Work: ———, CEA/SRSC 89.08, Nov. 1989, listed separately.

Notes: Author translated into English for LANL Critical Facilities, LANL Criticality Safety and UA Nuclear Engineering personnel.

Barbry, F[rancis Y.], and R. Médioni. "Dosimétrie d'Accidents de Criticité: Synthèse de Résultats Acquis sur CRAC et Silene," CEA/SEESNC 33. CEA, Nov. 1980.

Subject Codes: (A3, C1, D)

09/30/95 Status: Issued

English Ed.: Barbry, CEA 205/91, 1991, listed separately.

Barbry, F[rancis Y.], and A. Woillard. "Accidents de Criticité en Solution: Valeurs Envelopes Résultant des Expériences Menées sur CRAC et Silene in Matières de Cinétique et de Dosimétrie," CEA/SEESNC 82/23. CEA, Dec. 1982.

Subject Codes: (A3)

09/30/95 Status: Issued

Notes: Barbry translated into English for LANL Critical Facilities, LANL Criticality Safety and UA Nuclear Engineering personnel.

Barbry, F[rancis Y.] "Slow Kinetics Power Excursions Performed on the Silene Reactor," CEA/IPSN/SRSC 83.33. CEA, Dec. 1983.

Subject Codes: A3, T

09/30/95 Status: Issued

Barbry, F[rancis Y.], et al. "Fuel Solution Criticality Accident Studies with the Silene Reactor: Phenomenology, Consequence, and Simulated Intervention." In *Proceedings of the International Seminar on Criticality Studies Programs and Needs, Dijon France, Sept. 1983*. Centre d' Études de Valduc, France: CEA, 1984, pp. 36-52.

Subject Codes: A3, E2

09/30/95 Status: Published

Later Work: Barbry, CEA/SRSC 223, Sept. 1994, listed separately.

Barbry, F[rancis Y.], et al. "Criticality Accident Studies in France Experimental Programmes and Modelisation." In *Proceedings of ISCS'87 International Seminar on Nuclear Criticality Safety, Tokyo Japan, Oct. 1987*. PNC, Sept. 1987, pp. 423-426.

Subject Codes: A3, T

09/30/95 Status: Published

Barbry, F[rancis Y.], et al. "Theoretical Studies of Transient Criticality of Irradiated Fuel Elements." In *ANS Trans.*, Vol. 55. ANS, Nov. 1987, pp. 410-411.

Subject Codes: A3, T

09/30/95 Status: Published

Barbry, F[rancis Y.] "Model To Estimate the Maximum Fission Yield in Accident Solution Excursions." In *ANS Trans.*, Vol. 55. ANS, Nov. 1987, pp. 413-414.

Subject Codes: A3, T

09/30/95 Status: Published

Barbry, F[rancis Y.], and J[ean] P[ierre] Rozain. "Objectives and Summary of Experiments on the Formation of Radiolysis Gas Carried Out Using the Silene Reactor," CEA/SRSC 89.08. CEA/IPSN/SRSC, Nov. 1989.

Subject Codes: A3, T

09/30/95 Status: Issued

Earlier Work: Barbry, CEA/DSN 115, May 1973, listed separately.

○ ———, CEA/DSN/SEESNC 117, Sept. 1973, listed separately.

Replaces: ———. "Point sur les Connaissances en Matière de Formation de Gas de Radiolyse Lors d'une Excursion de Criticité en Solution," CEA/SRSC 87/83. CEA, Feb. 1987.

Summary: Barbry, Francis [Y.], and Jean Pierre Rozain. "Radiolysis Gas Formation and Pressure Increase During A Criticality Excursion." In *ANS Trans.*, Vol. 59. ANS, June 1989, pp. 181-182.

Barbry, F[rancis Y.] "Dosimetry of Neutron and Gamma Radiation in the CRAC and SILENE Criticality Accident Study Program," CEA 205/91. CEA/IPSN/SRSC, 1991.

Subject Codes: (A3, C1, D)

09/30/95 Status: Published

French Ed.: Barbry and Médioni, CEA/SEESNC 33, Nov. 1980, listed separately.

Subject Codes: (see full subject code list in the front matter for additional description)

A through A3 = criticality accidents

B1 or B2 = extensive bibliography or references

C1 through C5 = CASSs

D = dose, dosimetry, distance and shielding

E through E4 = emergency management

H1 and H2 = hazard-, risk-, and safety-analysis

M = medical

O = other

R = releases and release dispersion

T = computational methods, tools, validation

Parenthesis indicate that the code(s) were assigned based on the document title or on its use as a reference in another document.

Barbry, Francis Y. "Exposure Risks and Possibilities of Intervention and Diagnosis in Criticality Accidents." In *Proceedings of ICNC'91 International Conference on Nuclear Criticality Safety, Oxford England, Sept. 1991*, Vol. 2. UKAEA Tech., Sept. 1991, pp. VII-33 - VII-40.

Subject Codes: A3, C3, D, E2, E3 09/30/95 Status: Published

Summary: Barbry, Francis Y. "Exposure Risks and Possibilities of Intervention and Diagnosis in Criticality Accidents." In *ANS Trans.*, Vol. 63. ANS, June 1991, pp. 228-231.

Barbry, Francis Y., and Richard E. Malenfant. "Need for a Revision of the Standard on Criticality Accident Detection System." In *Proceedings of the 1993 Topical Meeting on Physics and Methods in Criticality Safety, Nashville, Tennessee USA, Sept. 1993*. ANS, Sept. 1993, pp. 21-25.

Subject Codes: A3, C3, C5 09/30/95 Status: Published

Earlier Work: Malenfant, *ICNC'91, England, Sept. 1991*, Vol. 2, pp. VII-51 - VII-54, listed separately.

Barby, Francis [Y.] "SILENE Reactor: Results of Selected Typical Experiments," CEA/SRSC 223. CEA/SRSC, Sept. 1994.

Subject Codes: A3 09/30/95 Status: Issued

Alt. Contact: LANL Critical Experiments Facility, UA

Earlier Work: Barby, F[rancis Y.], and Jean[-]C[laude] Manaranche. "Criticality Accident Experimental Studies with High-Enriched Uranium Solutions." In *ANS Trans.*, Vol. 41. ANS, June 1982, pp. 358-359.

- Barbry, *Proceedings of the International...Sept 1983, 1984*, pp. 36-52, listed separately.
- ———. "A Review of the Silene Criticality Excursion Experiments." In *Proceedings of the 1993 Topical Meeting on Physics and Methods in Criticality Safety, Nashville, Tennessee USA, Sept. 1993*. ANS, Sept. 1993, pp. 34-40.

Basoglu, B[enan], et al. "Simulation of Hypothetical Criticality Accidents Involving Homogenous Damp Low-Enriched UO₂ Powder Systems." *Nuclear Technology* (ANS), Vol. 105, No. 1 (Jan. 1994): pp. 14-30.

Subject Codes: A3, B1, T, O 09/30/95 Status: Published

Full Thesis: Basoglu, Benan. "Analysis of a Hypothetical Criticality Accident Involving Damp Low Enriched UO₂ Powder." Master's thesis, University of Tennessee - Knoxville, Aug. 1992.

Bentley, C[hables L.], et al. "Shutdown Mechanisms for a Hypothetical Criticality Accident Involving HEU Powder: Preliminary Results." In *ANS Trans.*, Vol. 70. ANS, June 1994, pp. 188-189.

Subject Codes: A3 09/30/95 Status: Published

Bhanot, K[athleen] E., R[ussell] L. Bowden, and P[eter] R. Thorne. "Development of a Criticality Emergency Planning Programme." In *ICNC'95 Proceedings of the Fifth International Conference on Nuclear Criticality Safety, Albuquerque, New Mexico USA, Sept. 1995*, Vol. II. UNM, Sept. 1995, pp. 13•3-13•6.

Subject Codes: A3, C2, C3, E2 09/30/95 Status: Published

Brewer, R[oger] W., et al. "Transient Analysis of a Hypothetical Array Criticality Accident." *Proceedings of the 1993 Topical Meeting on Physics and Methods in Criticality Safety, Nashville, Tennessee USA, Sept. 1993*. ANS, Sept. 1993, pp. 160-166.

Subject Codes: A3, T 09/30/95 Status: Published

Thesis: Brewer, Roger W. "Analysis of a Hypothetical Array Criticality Accident Involving Units of Aqueous Uranyl Fluoride." Master's thesis, University of Tennessee - Knoxville, May 1993.

Briggs, J. Blair, et al. "International Handbook of Evaluated Criticality Safety Benchmark Experiments," NEA/NCS/DOC(95)03/I-VI, Vol. I through VI. Paris France: OECD-NEA, March 31, 1995.

Subject Codes: A3, T

09/30/95 Status: Published

Notes: Generally more useful for criticality prevention analysis than accident analysis or detector placement analysis.

Broadhead, B[ryan] L., et al. "Evaluation of Criticality Alarm Response at the WEMCO Fernald Site," ORNL/TM-55. ORNL, Nov. 1992.

Subject Codes: (A3, C2, C3, C4, D)

09/30/95 Status: Issued

Alt. Contact: NTIS, OSTI

Summary: Broadhead, B[ryan] L., R[obert] L. Childs, and R[obert] M[ichael] Westfall. "Evaluation of Fernald Plant 6 Criticality Alarm Response." In *ANS Trans.*, Vol. 70. ANS, June 1994, pp. 206-208.

Broadhead, B[ryan] L., and C[alvin] M. Hopper. "Updated Tool for Nuclear Criticality Accident Emergency Response." In *ANS Trans.*, Vol. 72. ANS, June 1995, pp. 218-220.

Subject Codes: A3, D, T

09/30/95 Status: Published

Related Work: Wilkinson, *Nuclear Technology*, Vol. 111, No. 2, pp. 227-240, listed separately

Notes: Part of investigation to update Hopper, Y-DD-145, 1974, listed separately.

Choi, Jor-Shan, J. Walter Thompson, and Raymond [L.] Reed. "Estimates of Fission Yields in Nuclear Criticality Excursions." In *ANS Trans.*, Vol. 72. ANS, June 1995, pp. 217-218.

Subject Codes: A3, E2

09/30/95 Status: Published

Delafield, H[oward] J., and J. J. Clifton. "Design Criteria and Principles for Criticality Detection and Alarm Systems," SRD R 309. Culcheth, Warrington UK: UKAEA SRD, Oct. 1984.

Subject Codes: A3, C1, C2, C3, C5, E2

09/30/95 Status: Published

Alt. Contact: HMSO

Delafield, H[oward] J. "Design Criteria and the Principles Underlying the UKAEA Code of Practice on the Provision of Criticality Alarm Systems." In *Transactions of the Criticality Accident Alarm Systems Workshop, Richland, Washington USA, Sept. 1988*, DOE/NCT-05. LLNL, 1988, pp. 111-124.

Subject Codes: A, C1, C2, O

09/30/95 Status: Published

Alt. Contact: LLNL, NTIS, OSTI

Dietrich, J[oseph] R. (compiler). "Experimental Investigation of the Self-Limitation of Power During Reactivity Transients in a Subcooled, Water-Moderated Reactor, Borax-I Experiments, 1954," ANL-5323. ANL-E, 1954.

Subject Codes: A3

09/30/95 Status: Published

Alt. Contact: NTIS

Subject Codes: (see full subject code list in the front matter for additional description)

A through A3 = criticality accidents

B1 or B2 = extensive bibliography or references

C1 through C5 = CASs

D = dose, dosimetry, distance and shielding

E through E4 = emergency management

H1 and H2 = hazard-, risk-, and safety-analysis

M = medical

O = other

R = releases and release dispersion

T = computational methods, tools, validation

Parenthesis indicate that the code(s) were assigned based on the document title or on its use as a reference in another document.

Summary: ———. "Experimental Determination of the Self Regulation and Safety of Operating Water-Moderated Reactors." In *Proceedings of the International Conference on the Peaceful Uses of Atomic Energy, Geneva Switzerland, Aug. 1955*, Vol. 13. UN, 1956, pp. 88-101.

Dunenfeld, M. S., and R. K. Stitt. "Summary Review of the Kinetics Experiments on Water Boilers," NAA-SR-7087. California USA: Atomics International, Feb. 1, 1963.

Subject Codes: A3, T

09/30/95 Status: Published

Alt. Contact: NTIS

Evans, Dennis R., Paul J. Sentieri, and James R. Wilson. "Evaluating the Consequences of a Repository Criticality." In *Proceedings of the Topical Meeting on DOE Spent Nuclear Fuel - Challenges and Initiatives, Salt Lake City, Utah USA, Dec. 1994*. ANS, Dec. 1994, pp. 389-393.

Subject Codes: A3, D, R

09/30/95 Status: Published

Notes: Well shielded underground accident. Included for general interest and for fission yield and shielding considerations; not for CASs or emergency planning.

Fisher, S[tephen] E., and K[atey] E. Lenox. "An Assessment of the Radiological Doses Resulting From Accidental Uranium Aerosol Releases and Fission Product Releases from a Postulated Criticality Accident at the Oak Ridge Y-12 Plant," Y/TS-1272. Y-12 Plant, Oak Ridge, Tennessee USA, March 1995.

Subject Codes: (A3, D, R, T)

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Notes: Author indicates that a technical editing error occurred in Table 3: "months" should be "minutes." Dose calculations apply to inhalation and fission products, not the prompt neutron-gamma dose.

Forehand, Jr., H. M. "Effect of Radiolytic Gas on Nuclear Excursions in Aqueous Solutions," NUREG/CR-2517. NRC, Jan. 1982.

Subject Codes: (A3, T)

09/30/95 Status: Published

Dissertation: ———. "Effect of Radiolytic Gas on Nuclear Excursions in Aqueous Solutions." Ph.D. dissertation, University of Arizona, 1981.

Earlier Work: ———. "Analytical Studies of Criticality Accidents in Aqueous Solutions." In *ANS Trans.*, Vol 19. ANS, Oct. 1974, pp. 191-193.

Fruchard, Y., and J. M. Lavie. "Prevention des Causes et des Consequence d'un Accidente de Criticite: Solutions Adoptees in France." In *Criticality Control of Fissile Materials, Stockholm Sweden, Nov. 1965*. IAEA, 1966, pp. 717-736.

Subject Codes: A3, C2, C3, E1, O

09/30/95 Status: Published

Fuchs, K. "Efficiency for Very Slow Assembly," LA-569. LASL, August 2, 1946.

Subject Codes: A3

09/30/95 Status: Published

Alt. Contact: LANL, NTIS, OSTI

Geller, L., and H[ugh] F. Henry. "Analysis of a Possible Radiation Burst," K-1095. UCNC, June 2, 1953.

Subject Codes: A3, D, T

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Golinelli, C. "Evolution du Parc Electronucléaire et ses Conséquences sur la Criticité en France." In *Proceedings of the International Seminar on Criticality Studies Programs and Needs, Dijon France, Sept, 1983*. Centre d' Études de Valduc, France: CEA, 1984, pp. 447-454.

Subject Codes: A3

09/30/95 Status: Published

Hankins, Dale E. "Effect of Reactivity Addition Rate and of Weak Neutron Source on the Fission Yield of Uranium Solutions." *Nuclear Science and Engineering* (ANS), Vol. 26, No. 1 (Sept. 1966): pp. 26, 110-116.

Subject Codes: A3, T

09/30/95 Status: Published

Major Work: Hansen, *Nuclear Science and Engineering*, Vol. 8, pp. 709-719, listed separately.

Hankins, Dale E. "Dosimetry of Criticality Accidents Using Activations of the Blood and Hair." *Health Physics* (Pergamon Press), Vol. 38, (April 1980): pp. 529-541.

Subject Codes: A3, B1, D

09/30/95 Status: Published

Alt. Contact: HPS

Hankins, Dale E. "Neutron and Gamma-Ray Dose Measurements at the Los Alamos Critical Assembly SHEBA." In *ANS Trans.*, Vol. 39. ANS, Nov. 1981, pp. 559-560.

Subject Codes: A3, C3, D

09/30/95 Status: Published

Hansen, G[ordon] E. "Burst Characteristics Associated with the Slow Assembly of Fissionable Materials," LA-1441. LASL, July 1952.

Subject Codes: A3, T

09/30/95 Status: Published

Alt. Contact: LANL, NTIS, OSTI

Hansen, G[ordon] E. "Assembly of Fissionable Material in the Presence of a Weak Neutron Source." *Nuclear Science and Engineering* (ANS), Vol. 8, No. 6 (Dec. 1960): pp. 709-719.

Subject Codes: A3, T

09/30/95 Status: Published

Haight, C[hristopher] F., et al. "Analysis of Hypothetical Criticality Excursion Accidents in 10- and 20-MW Freezer/Sublimers." *Nuclear Technology* (ANS), Vol. 111, No. 2 (Aug. 1995): pp. 197-218.

Subject Codes: A3, B1, T

09/30/95 Status: Published

Summary: Haight, C[hristopher] F., et al. "Analysis of Hypothetical Criticality Excursion Accidents in 10- and 20-MW Freezer/Sublimers." In *ANS Trans.*, Vol. 70. ANS, June 1994, pp. 187-188.

Earlier Work: Haight, C[hristopher] F. "Analysis of Hypothetical Criticality Excursion Accidents in 10- and 20-MW Freezer/Sublimers." Master's Practice Project, University of Tennessee - Knoxville, May 1993.

Henry, Hugh F. "Planning for Control of Criticality Emergencies." In *Progress in Nuclear Energy Series IV: Technology, Engineering, and Safety*, edited by C. M. Nicholle. New York USA: Pergamon Press, 1960, pp. 206-227.

Subject Codes: A3, C2, C5, E, H1, O

09/30/95 Status: Published

Subject Codes: (see full subject code list in the front matter for additional description)

A through A3 = criticality accidents	H1 and H2 = hazard-, risk-, and safety-analysis
B1 or B2 = extensive bibliography or references	M = medical
C1 through C5 = CASs	O = other
D = dose, dosimetry, distance and shielding	R = releases and release dispersion
E through E4 = emergency management	T = computational methods, tools, validation

Parenthesis indicate that the code(s) were assigned based on the document title or on its use as a reference in another document.

Hetrick, David L., and Adrienne B. Smith. "Nuclear Excursions in Aqueous Solutions of Fissile Material." In *ANS Trans.*, Vol. 55. ANS, Nov. 1987, pp. 407-408.

Subject Codes: A3

09/30/95 Status: Published

Hetrick, David L. "Simulation of Power Pulses in Criticality Accidents with Fissile Solutions." In *International Meeting on Safety Margins in Criticality Safety, San Francisco, California USA, Nov. 1989*. ANS, Nov. 1989, pp. 70-78.

Subject Codes: A3, T

09/30/95 Status: Published

Hetrick, David L. "Computer Simulation of Hypothetical Criticality Accidents." In *Proceedings of ICNC'91 International Conference on Nuclear Criticality Safety, Oxford England, Sept. 1991*, Vol. 2. UKAEA Tech., Sept. 1991, pp. VII-72 - VII-84.

Subject Codes: A3, T

09/30/95 Status: Published

Summary: —. "Computer Simulation of Hypothetical Criticality Accidents in Aqueous Fissile Solutions." In *ANS Trans.*, Vol. 63. ANS, June 1991, pp. 226-228.

Hetrick, David L., and Drew E. Kornreich. "Hypothetical Criticality Accidents in Dilute Plutonium-Water Solutions: A Potential Trans-Uranic Storage Hazard." In *Proceedings of the WM'93 Symposium on Waste Management, Tucson, Arizona, USA, Feb.-Mar. 1993*. ANS, 1993, pp. 1267-1270.

Subject Codes: A3, T

09/30/95 Status: Published

Hetrick, D[avid] L., R[obert] H. Kimpland, and D[rew] E. Kornreich. "Computer Model for Predicting the Effects of Criticality Accidents in Solution." In *Proceedings of the 1993 Topical Meeting on Physics and Methods in Criticality Safety, Nashville, Tennessee USA, Sept. 1993*. ANS, Sept. 1993, pp. 80-86.

Subject Codes: A3, T

09/30/95 Status: Published

Later Work: —. "Computer Simulations of Homogeneous Water Solution Pulse Reactors and Criticality Accidents." In *ANS Topical Meeting on Physics, Safety, and Applications of Pulse Reactors, Washington DC USA, Nov. 1994*. ANS, 1994.

Hetrick, D[avid] L., and T[homas] P. McLaughlin. "Estimating Maximum Pulse Yields for Solution Criticality Accidents." In *ANS Trans.*, Vol. 69. ANS, Nov. 1993, pp. 249-250.

Subject Codes: A3, T

09/30/95 Status: Published

Hetrick, David [L.], and Sung Lee. "Progress Toward a Method of Estimating Maximum Pulse Yields for Solution Criticality Accidents." In *ICNC'95 Proceedings of the Fifth International Conference on Nuclear Criticality Safety, Albuquerque, New Mexico USA, Sept. 1995*, Vol. II. UNM, Sept. 1995, pp. 11•131-11•136.

Subject Codes: A3, T

09/30/95 Status: Published

Hobson, J[ohn] M[urray] "Definition of Areas Requiring Criticality Alarm Annunciation and Emergency Control." In *Transactions of the Criticality Accident Alarm Systems Workshop, Richland, Washington USA, Sept. 1988*, DOE/NCT-05. LLNL, 1988, pp. 163-171.

Subject Codes: A3, C3, E2, O, T

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Hopper, C[alvin] M. "A Slide Rule for Estimating Nuclear Criticality Information," Y-DD-145. UCNC Y-12 Plant, Jan. 7, 1974.

Subject Codes: A3, B1, D, T

09/30/95 Status: Issued

Alt. Contact: NTIS, OSTI

Further Work: Wilkinson et al, *Nuclear Technology*, Vol. 111, No. 2, pp. 227-240, listed separately.

○ Broadhead and Hopper, *ANS Trans.*, Vol. 72, pp. 218-220, listed separately.

Notes: Revision due to be issued in 1996.

Hurst, D. G., et al. "Panel Discussion on Criticality Control of Fissile Materials." *Criticality Control of Fissile Materials, Stockholm Sweden, Nov. 1965*. IAEA, 1966, pp. 739-746.

Subject Codes: A3, C3, O

09/30/95 Status: Published

Ing, H., and S. Makra. "Compendium of Neutron Spectra in Criticality Accident Dosimetry." IAEA Technical Report Series No. 180. IAEA, 1987.

Subject Codes: A3, B1, T, O

09/30/95 Status: Published

IOS. "International Standard, Nuclear Energy - Performance and Testing Requirements for Criticality Detection and Alarm Systems," ISO 7753: 1987 (E). IOS, Aug. 1, 1987.

Subject Codes: A3, C1, C2, C3, C5

09/30/95 Status: Active

Kato, R., T. Naramura, and Y. Senda. "The Code CREST to Simulate Criticality Accident Power Excursion in Fuel Solution." In *International Meeting on Safety Margins in Criticality Safety, San Francisco, California USA, Nov. 1989*. ANS, Nov. 1989, pp. 79-88.

Subject Codes: A3, T

09/30/95 Status: Published

Code Ref.: ———. "The Code CREST to Simulate Criticality Accident Power Excursion in Fuel Solution" (in Japanese?). Mitsubishi Atomic Power Industries, Japan, no date.

Notes: CREST might not be available to the public.

Kornreich, D[rew] E. "Reactivity Feedback Mechanisms in Aqueous Fissile Solutions." *Nuclear Science and Engineering* (ANS), Vol. 115, No. 1 (Sept. 1993): pp. 50-61.

Subject Codes: A3, T

09/30/95 Status: Published

Krug, H., and W. Thomas. "Criticality Safety in the Federal Republic of Germany." In *Proceedings, Nuclear Criticality Safety, El Paso, Texas USA, April 1990*, SAND80-1675. Albuquerque, New Mexico USA: Sandia National Laboratories, 1990, pp. 141-165.

Subject Codes: A3, T, O

09/30/95 Status: Published

Alt. Contact: NTIS

Lécorché, Pierre [R.], and Robert L. Seale. "A Review of the Experiments Performed to Determine the Radiological Consequences of a Criticality Accident," Y-CDC-12. UCNC, Nov. 1973.

Subject Codes: A3

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Full Reports: CEA/DPSR/SEEC reports 57, 59, 60, 69, 70, 74, 77, 79, 83, 91, 92, 96, and 98; and CEA/DSN/SEEC report 103. All are listed separately here (see Barbry).

Subject Codes: (see full subject code list in the front matter for additional description)

A through A3 = criticality accidents

B1 or B2 = extensive bibliography or references

C1 through C5 = CASs

D = dose, dosimetry, distance and shielding

E through E4 = emergency management

H1 and H2 = hazard-, risk-, and safety-analysis

M = medical

O = other

R = releases and release dispersion

T = computational methods, tools, validation

Parenthesis indicate that the code(s) were assigned based on the document title or on its use as a reference in another document.

- Earlier Ed.s: Lécorché, P[ierre] R., and H. F. Revol. "CRAC - Experimental Study of Criticality Accidents." In *ANS Trans.*, Vol. 14, No. 1. ANS, June 1971, pp. 33-34.
- Seale, R[obert] L. "A Review of the CRAC Experiments." In *ANS Trans.*, Vol. 14, No. 1. ANS, June 1971, pp. 34-35.
 - Lécorché, P[ierre] R. "CRAC Experimental Study of Criticality Accidents." In *ANS Trans.*, Vol. 16, No. 1. ANS, June 1973, pp. 163-164.
- Lee, [Jr.], Billy L., et al. "Calculated In-Air Leakage Spectra and Power Levels for the ANSI Standard Minimum Accident of Concern." In *ANS Trans.*, Vol. 71. ANS, Nov. 1994, pp. 286-287.
Subject Codes: A3, D, O 09/30/95 Status: Published
- Lee, Jr., Billy L., et al. "Evaluation of Coverage of Enriched UF₆ Cylinder Storage Lots by Existing Criticality Accident Alarms," POEF-SH-29. Martin Marietta Energy Systems, Inc., Piketon, Ohio USA, March 1995.
Subject Codes: (A3, C2, C4, D) 09/30/95 Status: Published
Alt. Contact: NTIS, OSTI
- Lee, Sung, and David [L.] Hetrick. "Effect of Axial Expansion on the Reactivity of a Cylindrical Fissile Solution Assembly." In *ANS Trans.*, Vol. 72. ANS, June 1995, pp. 203-204.
Subject Codes: A3, T 09/30/95 Status: Published
- Lutz, H[arry]. F. "Nuclear Criticality Safety Assessment: Part I. Calculating Power Histories in Nuclear Excursions," M-164. LLNL, June 17, 1985.
Subject Codes: A3, T 09/30/95 Status: Issued
Alt. Contact: NTIS, OSTI
- Lutz, Harry F. "Predicting Accident Characteristics by Calculations." In *ANS Trans.*, Vol. 55. ANS, Nov. 1987, pp. 408-409.
Subject Codes: A3, T 09/30/95 Status: Published
- Malenfant, Richard E., and H. M. Forehand. "Facility Description of a Solution Critical Assembly: SHEBA." In *ANS Trans.*, Vol. 39. ANS, Nov. 1981, pp. 555-557.
Subject Codes: A3, C1, O 09/30/95 Status: Published
- Malenfant, R[ichard] E., and H. M. Forehand, Jr. "Simulation of Process Plant Accidents." In *ANS Trans.*, Vol. 43. ANS, June 1982, p. 405.
Subject Codes: A3 09/30/95 Status: Published
Duplicate: LA-UR-82-1988. LANL, 1982.
- Malenfant, Richard E. "Self Limiting Features of Accidental Criticality in a Solution System." In *Transactions of the Criticality Accident Alarm Systems Workshop, Richland, Washington USA, Sept. 1988*, DOE/NCT-05. LLNL, 1988, pp. 27-34.
Subject Codes: A3 09/30/95 Status: Published
Alt. Contact: NTIS, OSTI Duplicate: LA-UR-88-3124. LANL, Sept. 1988.
- Malenfant, Richard E. "Criticality Accident Alarm System." In *Proceedings of ICNC'91 International Conference on Nuclear Criticality Safety, Oxford England, Sept. 1991*, Vol. 2. UKAEA Tech., Sept. 1991, pp. VII-51 - VII-54.
Subject Codes: A3, C3, C5 09/30/95 Status: Published

Summary: ———. "A Criticism of ANSI/ANS-8.3-1986: Criticality Accident Alarm System." In *ANS Trans.*, Vol. 64. ANS, Nov. 1991, p. 327.
 Later Work: Barbry and Malenfant, *Proceedings of the 1993 Topical ...*, pp. 21-25, listed separately.

Mather, D[onald] J., and P. M. Shaw. "Calculations of Criticality Excursions in Fissile Liquid Solutions," SRD-R-308. UKAEA, July 1984.

Subject Codes: (A3, T) 09/30/95 Status: Issued
 Alt. Contact: HMSO, UKAEA Tech.

Mather, D[onald] J., and P. Hague. "The Analysis of Transient Criticality in Wetted Uranium Dioxide Systems and in Fissile Solutions." In *ANS Trans.*, Vol. 55. ANS, Nov. 1987, pp. 414-415.

Subject Codes: A3, T 09/30/95 Status: Published

Mather, D[onald] J., et al. "Examination of Some Fissile Solution Scenarios Using Critex." In *Proceedings of ICNC'91 International Conference on Nuclear Criticality Safety, Oxford England, Sept. 1991*, Vol. 2. UKAEA Tech., Sept. 1991, pp. VII-85 - VII-96.

Subject Codes: A3, T 09/30/95 Status: Published
 Replaces: Mather, D[onald] J., and P. M. Shaw. "Calculations of Criticality Excursions in Fissile Liquid Solutions." In *Proceedings of the International Seminar on Criticality Studies Programs and Needs, Dijon France, Sept. 1983*. Centre d' Études de Valduc, France: CEA, 1984, pp. 485-515.

Mather, D[onald] J. "Analysis of Radiolytic Gas Nucleation during Criticality Transients." In *ICNC'95 Proceedings of the Fifth International Conference on Nuclear Criticality Safety, Albuquerque, New Mexico USA, Sept. 1995*, Vol. II. UNM, Sept. 1995, pp. 10•11-10•18.

Subject Codes: A3, T 09/30/95 Status: Published

McLaughlin, Thomas P. "Process Criticality Accident Likelihoods, Consequences and Emergency Planning." *Proceedings of ICNC'91 International Conference on Nuclear Criticality Safety, Oxford England, Sept. 1991*, Vol. 2. UKAEA Tech., Sept. 1991, pp. VII-1 - VII-11.

Subject Codes: A3, C3, H1 09/30/95 Status: Published

Mee, W[illiam] T., D[avis] A. Reed, and R[ichard] G. Taylor. "Consequences of a Postulated, Moderated Criticality Accident at the Oak Ridge Y-12 Plant," Y/DD-384. Martin Marietta Energy Systems, Inc., Oak Ridge, Tennessee USA, Sept. 1988.

Subject Codes: A3, D, R, T 09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Notes: Authors indicate there are a few minor errors with the release calculations.

Nakajima, Ken, and Yeong-Chan Kim. "Comparisons of Void-Models and Effects of Initial Neutron Density in Criticality Accident Analysis." In *Proceedings of ICNC'91 International Conference on Nuclear Criticality Safety, Oxford England, Sept. 1991*, Vol. 2. UKAEA Tech., Sept. 1991, pp. VII-25 - VII-32.

Subject Codes: A3, T 09/30/95 Status: Published

Subject Codes: (see full subject code list in the front matter for additional description)

A through A3 = criticality accidents	H1 and H2 = hazard-, risk-, and safety-analysis
B1 or B2 = extensive bibliography or references	M = medical
C1 through C5 = CASs	O = other
D = dose, dosimetry, distance and shielding	R = releases and release dispersion
E through E4 = emergency management	T = computational methods, tools, validation

Parenthesis indicate that the code(s) were assigned based on the document title or on its use as a reference in another document.

Negron, Scott B., and Robert W. Tayloe, Jr. "Analysis of the Proposed Relocation of Neutron Criticality Clusters in the Process Buildings for the Portsmouth Gaseous Diffusion Plant," POEF-SH-12. Martin Marietta Energy Systems, Inc., Piketon, Ohio USA, Jan. 1994.

Subject Codes: (A3, C1, C2, C4, D)

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Summary: Negron, Scott B., Robert W. Tayloe, Jr., and Donna M. D'Aquila. "Proposed Relocation of Neutron Criticality Clusters for the PGDP." In *ANS Trans.*, Vol. 70. ANS, June 1994, pp. 209-210.

Negron, Scott B., Robert W. Tayloe, Jr., and M. C. Dobelbower "Analysis of Criticality Alarm System Response to an Accidental Criticality Outside the Cascade Process Buildings at the Portsmouth Gaseous Diffusion Plant," POEF-SH-19. Martin Marietta Energy Systems, Inc., Piketon, Ohio USA, July 1994.

Subject Codes: (A3, C2, C4, D)

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Newlon, C[harles] E., A[nn] H. Hansen, and C[raig] Fithian. "An Assessment of the Minimum Critical Accident of Concern," H&R 82-2. Oak Ridge, Tennessee USA: H&R Technical Associates, April 1982.

Subject Codes: (A3)

09/30/95 Status: Issued

Alt. Contact: K-25 Plant at Oak Ridge, Tennessee USA; NTIS, OSTI

Newmyer, William D. "Analysis of a Hypothetical Criticality Accident Involving Dry Highly Enriched Uranium Powder." Master's thesis, University of Tennessee - Knoxville, Dec. 1991.

Subject Codes: (A3, T)

09/30/95 Status: Published

Summary: ——. "Analysis of a Hypothetical Criticality Accident Involving Dry Highly Enriched Uranium Powder." In *ANS Trans.*, Vol. 64. ANS, Nov. 1991, p. 344-346.

Nguyen, Dong H. "Source Term Analysis for a Criticality Accident in Metal Production Line Glove Boxes." *Proceedings of ICNC'91 International Conference on Nuclear Criticality Safety, Oxford England, Sept. 1991*, Vol. 2. UKAEA Tech., Sept. 1991, pp. VII-17 - VII-24.

Subject Codes: A3, T

09/30/95 Status: Published

NRC Office of Standards Development. "Assumptions Used for Evaluating the Potential Radiological Consequences of Accidental Nuclear Criticality in a Uranium Fuel Fabrication Plant," NRC Regulatory Guide 3.34 (Rev. 1). NRC, July 1979.

Subject Codes: A3, B1, C5, D, E1, T

09/30/95 Status: Active

NRC Office of Standards Development. "Assumptions Used for Evaluating the Potential Radiological Consequences of Accidental Nuclear Criticality in a Plutonium Processing and Fuel Fabrication Plant," NRC Regulatory Guide 3.35 (Rev. 1). NRC, July 1979.

Subject Codes: A3, B1, C5, D, E1, T

09/30/95 Status: Active

NRC Office of Standards Development. "Assumptions Used for Evaluating the Potential Radiological Consequences of Accidental Nuclear Criticality in a Fuel Processing Plant," NRC Regulatory Guide 3.33 (Rev. 0). NRC, April 1987.

Subject Codes: A3, B1, C5, D, E1, T

09/30/95 Status: Active

Okuno, H[iroshi], et al. "Supplement to the Nuclear Criticality Safety Handbook of Japan" (in Japanese), JAERI-xxxx. JAERI, to be published in 1995.

Subject Codes: (A3, C2, C5, O, T) 09/30/95 Status: To be published
 Notes: Supplement will contain Chapter 6, "Criticality Accidents and Their Evaluation Methods," and Chapter 7, "Basic Principles on Design and Installation of Criticality Alarm System."
 Supplement to: Science and Technology Agency. *Nuclear Criticality Safety Handbook* (in Japanese). Tokyo Japan: Nikkan Shobo, 1988. The handbook is also published in English with the same authoring institution and title, translated by Yoshitaka Naito and Hiroshi Okuno, JAERI-Review 95-013. Tokyo Japan: Nikkan Shobo, Sept. 1995.

Olsen, A. R., et al. "Empirical Model to Estimate Energy Release from Accidental Criticality." In *ANS Trans.* Vol. 19. ANS, Oct. 1974, p. 189-191.

Subject Codes: A3, T 09/30/95 Status: Published

Paxton, Hugh C. "The Nature and Consequences of Nuclear Accidents." In *Proceedings of the National Topical Meeting on Nuclear Criticality Safety, Las Vegas, Nevada USA, Dec. 1966*, SC-DC--67-1305.

No publication data, pp. 213-218.

Subject Codes: (A3, D, E2, E3, E4) 09/30/95 Status: Published
 Alt. Contact: possibly ANS or NTIS

Plaster, M[ichael] J., et al. "Analysis of a Hypothetical Criticality Accident in a Waste Super-Compactor." *Nuclear Technology* (ANS), Vol. 111, No. 2 (Aug. 1995): pp. 219-226.

Subject Codes: A3, T 09/30/95 Status: Published
 Summary: Plaster, M[ichael] J., et al. "Analysis of a Hypothetical Criticality Accident in a Waste Super-Compactor." In *ANS Trans.*, Vol. 70. ANS, June 1994, pp. 189-191.
 Full Thesis: Plaster, Michael J. "Analysis of a Hypothetical Criticality Accident in a Waste Super-Compactor." Master's thesis, University of Tennessee - Knoxville, Dec. 1993.

Prignet, Raymond and Martial Huver. "Detection of Criticality Accidents, The Intertechnique EDAC II System." In *Proceedings of ICNC'91 International Conference on Nuclear Criticality Safety, Oxford England, Sept. 1991*, Vol. 2. UKAEA Tech., Sept. 1991, pp. VII-104 - VII-123.

Subject Codes: A3, C1, C2, C3, C4 09/30/95 Status: Published
 Earlier Sys.: Debrie, *Proceedings of the Third United Nations... Aug.-Sept. 1964*, Vol. 13, pp. 244-251, listed separately.
 ○ Prignet and Renard, CEA-R-4784, 1976, listed separately.
 Other Work: Barbry and Prignet, *Nuclear Technology*, Vol. 78, pp. 320-325, listed separately.

"Le Programme CRAC - Études d'Accidents de Criticité en Solution." *Bulletin d'Informations Scientifiques et Techniques*, Vol. 172 (July-Aug. 1972): no page data.

Subject Codes: (A3, T) 09/30/95 Status: Published

Subject Codes: (see full subject code list in the front matter for additional description)

A through A3 = criticality accidents	H1 and H2 = hazard-, risk-, and safety-analysis
B1 or B2 = extensive bibliography or references	M = medical
C1 through C5 = CASs	O = other
D = dose, dosimetry, distance and shielding	R = releases and release dispersion
E through E4 = emergency management	T = computational methods, tools, validation

Parenthesis indicate that the code(s) were assigned based on the document title or on its use as a reference in another document.

Pryor, William A. "Accident Consequences and Emergency Planning." In *Proceedings, Nuclear Criticality Safety, El Paso, Texas USA, April 1990*, SAND80-1675. Albuquerque, New Mexico USA: Sandia National Laboratories, 1990, pp. 301-316.

Subject Codes: A3, D, E2, E3, O

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Notes: Overview of criticality accident and emergency planning history, with emphasis on developing emergency management resources including REAC/TS

Rozain, J[ean] P[ierre], et al. "Criticality Excursions in Wetted UO₂ Powder." In *Proceedings of ICNC'91 International Conference on Nuclear Criticality Safety, Oxford England, Sept. 1991*, Vol. 2. UKAEA Tech., Sept. 1991, pp. VII-40 - VII-50.

Subject Codes: A3, T

09/30/95 Status: Published

Summary: Rozain, J[ean] P[ierre], et al. "Criticality Excursions in Wetted UO₂ Powder." In *ANS Trans.*, Vol. 63. ANS, June 1991, p. 228.

Seale, Robert L. "Consequences of Criticality Accidents." In *Nuclear Criticality Safety Proceedings of a Short Course, Taos, New Mexico USA, May 1973*, TID-26286. UNM, 1974, pp. 16-24.

Subject Codes: A3, O, T

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Seale, R[obert] L. "Kinetics Calculations." In *Proceedings of the International Seminar on Criticality Studies Programs and Needs, Dijon France, Sept. 1983*. Centre d' Études de Valduc, France: CEA, 1984, pp. 300-341.

Subject Codes: A3, T

09/30/95 Status: Published

Seale, Robert L. "Criticality Alarms: How Sensitive to What?" In *Transactions of the Criticality Alarm Systems Workshop, Richland, Washington USA, Sept. 1988*, DOE/NCT-05. LLNL, 1988, pp. 5-12.

Subject Codes: A3, C5, T

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Singleterry, Jr., R. C. "Parameter Study for Dynamic Models of Power Bursts for the KEWB5, CRAC, and Silene Experiments." Master's thesis, University of Arizona, 1990.

Subject Codes: (A3, B1, T)

09/30/95 Status: Published

Stratton, William R. "A Review of Criticality Accidents," revised by David R. Smith, DOE/NCT-04. LLNL and DOE, March 1989.

Subject Codes: A, B1, T

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Notes: Known as *Stratton Report*

Previous Ed.s: ——. "A Review of Criticality Accidents." In *Progress in Nuclear Energy Series IV: Technology, Engineering, and Safety*, edited by C. M. Nicholle. New York USA: Pergamon Press, 1960, pp. 163-205.

○ ——. "A Review of Criticality of Criticality Accidents." In *ANS Trans.*, Vol. 3. ANS, 1960, pp. 290-292.

○ ——. "A Review of Criticality Incidents." In *Criticality Control in Chemical and Metallurgical Plant, Karlsruhe Symposium, Karlsruhe Germany, May 1961*. OECD, Nov. 1961, pp. 491-533.

○ ——. "A Review of Criticality Accidents," LA-3611. LASL, Jan. 1967.

○ ——. "Criticality Accident Experience: Heterogenous Water-Moderated Systems." In *ANS Trans.*, Vol. 46. ANS, June 1984, pp. 460-462.

Stratton, W[illiam] R., T. H. Colvin, and R. B. Lazarus. "Analyses of Prompt Excursions in Simple Systems and Idealized Fast Reactors." In *Proceedings of the Second United Nations International Conference on Peaceful Uses of Atomic Energy, Geneva Switzerland, Sept. 1958*, Vol. 12. UN, 1959, pp. 196-206.

Subject Codes: A3, T

09/30/95 Status: Published

Schwinkendorf, K[evin] N. "Dose Calculations for Nuclear Criticality Accidents that Occur Under Large Amounts of Water." In *ANS Trans.*, Vol. 66. ANS, Nov. 1992, pp. 292-293.

Subject Codes: A3, D

09/30/95 Status: Published

Thorngate, John H., Duane W. Rueppel, and Richard V. Griffith. "Neutron and Gamma Spectrum Measurements at the Los Alamos Critical Assembly SHEBA." In *ANS Trans.*, Vol. 39. ANS, Nov. 1981, pp. 557-559.

Subject Codes: A3, C3, D

09/30/95 Status: Published

Tuck, Grover "Simplified Methods of Estimating the Results of Accidental Solution Excursions." *Nuclear Technology* (ANS), Vol. 23 (Aug. 1974): pp. 177-188.

Subject Codes: A3, T

09/30/95 Status: Published

Vasilik, D. G., R. W. Martin, and D. Fuller. "Nuclear Accident Dosimetry: Measurements at the Los Alamos SHEBA Critical Assembly," LA-8911-MS. LANL, July 1981.

Subject Codes: A3, C1, D

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Volshin, N[ikolay] P., I. S. Pogrebov, and V. A. Teryokhin. "RFNC-VNIITF Physical Experimental Division and a Historical Sketch of Critical Mass Measurements." In *ICNC'95 Proceedings of the Fifth International Conference on Nuclear Criticality Safety, Albuquerque, New Mexico USA, Sept. 1995*, Vol. I. UNM, Sept. 1995, pp. P-31-P-36.

Subject Codes: A2, A3, O

09/30/95 Status: Published

Notes: Incident date 04/05/68.

Walls, Stephen J., and Peter R. Thorne. "The Integration of Probabilistic Assessment into Traditional Criticality Safety." In *ICNC'95 Proceedings of the Fifth International Conference on Nuclear Criticality Safety, Albuquerque, New Mexico USA, Sept. 1995*, Vol. II. UNM, Sept. 1995, pp. 7-3-7-6.

Subject Codes: A3, H1, O

09/30/95 Status: Published

Whitesides, G. E[lliott]. "The Need for Radiation Field Measurements from a Low-Enriched Critical Assembly." In *ANS Trans.*, Vol. 39. ANS, Nov. 1981, p. 554.

Subject Codes: A3, D

09/30/95 Status: Published

Wilkinson, A[lan], et al. "Improved Dose Estimates for Nuclear Criticality Accidents." *Nuclear Technology* (ANS), Vol. 111, No. 2 (Aug. 1995): pp. 227-240.

Subject Codes: A3, B1, D, T

09/30/95 Status: Published

Subject Codes: (see full subject code list in the front matter for additional description)

A through A3 = criticality accidents

B1 or B2 = extensive bibliography or references

C1 through C5 = CASS

D = dose, dosimetry, distance and shielding

E through E4 = emergency management

H1 and H2 = hazard-, risk-, and safety-analysis

M = medical

O = other

R = releases and release dispersion

T = computational methods, tools, validation

Parenthesis indicate that the code(s) were assigned based on the document title or on its use as a reference in another document.

- Earlier Work: Wilkinson, A[lan], et al. "Improved Dose Estimates for Nuclear Criticality Accidents: Preliminary Results." In *ANS Trans.*, Vol. 70. ANS, June 1994, pp. 191-192.
- Wilkinson, A[lan] "Improved Dose Estimates for Nuclear Criticality Accidents." Master's thesis, University of Tennessee - Knoxville, 1994
- Related Work: Broadhead and Hopper, *ANS Trans.*, Vol. 72, pp. 218-220, listed separately.
- Notes: Part of investigation to update: Hopper, Y-DD-145, 1974, listed separately

Wimett, T[homas] F. "Time Behavior of Godiva Through Prompt Critical," LA-2029. LASL, April 1956.
Subject Codes: A3, T 09/30/95 Status: Issued
Alt. Contact: NTIS, OSTI

Woodcock, E. R. "Potential Magnitude of Criticality Accidents," AHSB (RP) R 14. UKAEA, Jan. 1966.
Subject Codes: A3 09/30/95 Status: Published
Alt. Contact: HMSO

Yamamoto, T[oshihiro]. "Space-Dependent Kinetics Analysis of a Hypothetical Criticality Accident Involving Units of Aqueous Uranyl Fluoride." In *ICNC'95 Proceedings of the Fifth International Conference on Nuclear Criticality Safety, Albuquerque, New Mexico USA, Sept. 1995*, Vol. II. UNM, Sept. 1995, pp. 10•19-10•24.
Subject Codes: A3, T 09/30/95 Status: Published
Notes: Analysis includes use of TDKENO which might not be available to the public.

3.4 Codes B1 and B2: Extensive Bibliography or References

AEC Division of Operational Safety. "Operational Accidents and Radiation Exposure Experience within the United States Atomic Energy Commission 1943-1975," WASH-1192. AEC, fall 1975.

- Subject Codes: A1, A2, B2, O 09/30/95 Status: Published
Alt. Contact: NTIS, OSTI Notes: See *Stratton Report* instead
- Earlier Works: Hayes, Daniel F. "A Summary of Accidents and Incidents Involving Radiation in Atomic Energy Activities, June 1945 through December 1955," TID-5360. USAEC and GPO, Aug. 1956.
- Hayes, Daniel F. "A Summary of Accidents and Incidents Involving Radioactive Material in Atomic Energy Activities, January - December 1956," TID-5360 Supplement. USAEC and GPO, Aug. 1957.
 - AEC Division of Operational Safety. "A Summary of Industrial Accidents in USAEC Facilities 1956," TID-5360 (Supplement 1) (Revised). AEC, Aug. 1967.
 - AEC Office of Industrial Relations. "A Summary of Industrial Accidents in USAEC Facilities," TID-5360 (Supplement 2); (Supplement 3); (Supplement 3) (Revised); (Supplement 4); and (Supplement 5). AEC, Sept. 1959; Aug. 1961; Dec. 1961; Dec. 1963; and Dec. 1965.

Aspinall, K[ieth] J., and J. T. Daniels. "Review of UKAEA Criticality Detection and Alarm Systems 1963/64 Part 1: Provision and Design Principles," AHSB (S) R 92. London UK: UKAEA AHSB, 1965.
Subject Codes: A, B1, C2, C3, C4, C5, E 09/30/95 Status: Published
Alt. Contact: HMSO

Basoglu, B[enan], et al. "Simulation of Hypothetical Criticality Accidents Involving Homogenous Damp Low-Enriched UO₂ Powder Systems." *Nuclear Technology* (ANS), Vol. 105, No. 1 (Jan. 1994): pp. 14-30.
Subject Codes: A3, B1, T, O 09/30/95 Status: Published

Full Thesis: Basoglu, Benan. "Analysis of a Hypothetical Criticality Accident Involving Damp Low Enriched UO₂ Powder." Master's thesis, University of Tennessee - Knoxville, Aug. 1992.

Cember, Herman. "Chapter 9: Health Physics Instrumentation." In *Introduction to Health Physics*, Second Ed. Elmsford, New York USA: Pergamon Press, 1989.

Subject Codes: B1, C2, D, O 09/30/95 Status: Published

Notes: Principles and types of radiation level and radiation rate detectors.

Gibson, J. A. B., and E. Piesch. "Neutron Monitoring for Radiological Protection," IAEA Technical Report Series No. 252. IAEA, 1985.

Subject Codes: B1, C1, C2, D, O, T 09/30/95 Status: Published

Griffith, R. V., J. Palfalvi, U. Madhvanath. "Compendium of Neutron Spectra and Detector Responses for Radiation Protection Purposes," IAEA Technical Report Series No. 318. IAEA, 1990.

Subject Codes: B1, C2, D, O 09/30/95 Status: Published

Hankins, Dale E. "A Study of Selected Criticality Dosimetry Methods," LA-3910. LASL, June 1968.

Subject Codes: B1, D 09/30/95 Status: Issued

Alt. Contact: LANL, NTIS, OSTI

Hankins, Dale E. "Dosimetry of Criticality Accidents Using Activations of the Blood and Hair." *Health Physics* (Pergamon Press), Vol. 38, (April 1980): pp. 529-541.

Subject Codes: A3, B1, D 09/30/95 Status: Published

Alt. Contact: HPS

Haight, C[hristopher] F., et al. "Analysis of Hypothetical Criticality Excursion Accidents in 10- and 20-MW Freezer/Sublimers." *Nuclear Technology* (ANS), Vol. 111, No. 2 (Aug. 1995): pp. 197-218.

Subject Codes: A3, B1, T 09/30/95 Status: Published

Summary: Haight, C[hristopher] F., et al. "Analysis of Hypothetical Criticality Excursion Accidents in 10- and 20-MW Freezer/Sublimers." In *ANS Trans.*, Vol. 70. ANS, June 1994, pp. 187-188.

Earlier Work: Haight, C[hristopher] F. "Analysis of Hypothetical Criticality Excursion Accidents in 10- and 20-MW Freezer/Sublimers." Master's Practice Project, University of Tennessee - Knoxville, May 1993.

Haywood, F. F., et al. "Dosimetry for Criticality Accidents: A Manual," IAEA Technical Report Series No. 211. IAEA, Feb. 1982.

Subject Codes: B1, D, T 09/30/95 Status: Active

Hopper, C[alvin] M. "A Slide Rule for Estimating Nuclear Criticality Information," Y-DD-145. UCNC Y-12 Plant, Jan. 7, 1974.

Subject Codes: A3, B1, D, T 09/30/95 Status: Issued

Alt. Contact: NTIS, OSTI

Subject Codes: (see full subject code list in the front matter for additional description)

A through A3 = criticality accidents	H1 and H2 = hazard-, risk-, and safety-analysis
B1 or B2 = extensive bibliography or references	M = medical
C1 through C5 = CASs	O = other
D = dose, dosimetry, distance and shielding	R = releases and release dispersion
E through E4 = emergency management	T = computational methods, tools, validation

Parenthesis indicate that the code(s) were assigned based on the document title or on its use as a reference in another document.

Further Work: Wilkinson, et al, *Nuclear Technology*, Vol. 111, No. 2, pp. 227-240, listed separately.

○ Broadhead and Hopper, *ANS Trans.*, Vol. 72. pp. 218-220, listed separately.

Notes: Revision due to be issued in 1996.

Hübner, Karl F., and Shirley A. Fry (editors). *The Medical Basis for Radiation Accident Preparedness: Proceedings of the REAC/TS International Conference, Oak Ridge, Tennessee USA, Oct. 1979*. New York, New York USA: Elsevier/North-Holland, 1980, pp. 297-310.

Subject Codes: A2, B2, D, M, O

09/30/95 Status: Published

IAEA. "Recommendations, Medical Handling of Accidentally Exposed Individuals." IAEA Safety Series No. 88. IAEA, Aug. 1988.

Subject Codes: B1, M, O

09/30/95 Status: Published

ICRU. "Tissue Substitutes in Radiation Dosimetry and Measurement." ICRU Report No. 44. ICRU Publications, Jan. 15, 1989.

Subject Codes: B1, T, O

09/30/95 Status: Active

Notes: Gamma and neutron flux-to-dose conversion factors.

Ing, H., and S. Makra. "Compendium of Neutron Spectra in Criticality Accident Dosimetry." IAEA Technical Report Series No. 180. IAEA, 1987.

Subject Codes: A3, B1, T, O

09/30/95 Status: Published

Mazzola, Carl A., Robert B. Addis, and the Emergency Management Laboratory of the Oak Ridge Institute for Science and Education. *Atmospheric Dispersion Modeling Resources*, 2nd Ed. ORAU, March 1995.

Subject Codes: (B1, R, T)

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Notes: Critical review with supporting bibliography for most methods of estimating and predicting atmospheric dispersion.

NCRP. "Protection Against Neutron Radiation, Recommendations" NCRP Report No. 38. NCRP, issued Jan. 4, 1971.

Subject Codes: B1, D, O, T

09/30/95 Status: Active

Notes: Especially see Appendix F, "Accident Dosimetry."

NCRP. "Basic Radiation Protection Criteria," NCRP Report No. 39. NCRP, issued Jan. 15, 1971.

Subject Codes: B1, D, M, O, T

09/30/95 Status: Superseded by NCRP Report No. 91

Notes: The 12 rad threshold specified in ANSI/ANS-8.3-1986 is loosely based on 1/2 the NCRP No. 39 reported 25 rad dose at which temporary changes to whole blood cells were barely detectable.

NCRP. "Recommendations on Limits for Exposure to Ionizing Radiation," NCRP Report No. 91. NCRP, issued June 1, 1987.

Subject Codes: B1, D, O, T

09/30/95 Status: Active

Notes: Limit recommendations supersede those of NCRP Report No. 39.

NRC Office of Standards Development. "Assumptions Used for Evaluating the Potential Radiological Consequences of Accidental Nuclear Criticality in a Uranium Fuel Fabrication Plant," NRC Regulatory Guide 3.34 (Rev. 1). NRC, July 1979.

Subject Codes: A3, B1, C5, D, E1, T

09/30/95 Status: Active

NRC Office of Standards Development. "Assumptions Used for Evaluating the Potential Radiological Consequences of Accidental Nuclear Criticality in a Plutonium Processing and Fuel Fabrication Plant," NRC Regulatory Guide 3.35 (Rev. 1). NRC, July 1979.

Subject Codes: A3, B1, C5, D, E1, T

09/30/95 Status: Active

NRC Office of Standards Development. "Assumptions Used for Evaluating the Potential Radiological Consequences of Accidental Nuclear Criticality in a Fuel Processing Plant," NRC Regulatory Guide 3.33 (Rev. 0). NRC, April 1987.

Subject Codes: A3, B1, C5, D, E1, T

09/30/95 Status: Active

REAC/TS. "Radiation Accident Registries: Serious Radiation Accidents Worldwide." ORAU, updated periodically.

Subject Codes: (A1, A2, B2, D, M, O) 09/30/95 Status: Ongoing project

Notes: REAC/TS database maintained in conjunction with site for maintaining and training responders for radiation emergencies.

Description: Fry, Shirley A. "The United States Radiation Accident and Other Registries of the REAC/TS Registry System: Their Functions and Current Status." In *The Medical Basis for Radiation Accident Preparedness: Proceedings of the REAC/TS International Conference, Oak Ridge, Tennessee USA, Oct. 1979*, edited by Karl F. Hübner and Shirley A. Fry. New York, New York USA: Elsevier/North-Holland, 1980, pp. 451-468.

Example: An example of the data were included on pages 6-16 of the same proceedings.

Simpkins, W. M., H. L[ee] Dodds, [Jr.]; and R[obert] S[herwood] Howell. "Investigation of the Validity of the Point Kinetics Model During the Initiating Phase of a Hypothetical Core Disruptive Accident (HCDA) in the Clinch River Breeder Reactor," R-82-036. Knoxville, Tennessee USA: Technology for Energy Corporation, Nov. 1982.

Subject Codes: (A3, T)

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI, University of Tennessee - Knoxville

Notes: Dr. Dodds indicates the calculation model is very similar to models for criticality accidents outside reactors.

Singleterry, Jr., R. C. "Parameter Study for Dynamic Models of Power Bursts for the KEWB5, CRAC, and Silene Experiments." Master's thesis, University of Arizona, 1990.

Subject Codes: (A3, B1, T)

09/30/95 Status: Published

Swaja, R. E., and R. T. Greene. "Neutron and Gamma Attenuation Characteristics of Various Shields During Nuclear Criticality Accidents." In *ANS Trans.*, Vol. 39. ANS, Nov. 1981, pp. 521-522.

Subject Codes: A3, C2, C4, D

09/30/95 Status: Published

Wilkinson, A[lan], et al. "Improved Dose Estimates for Nuclear Criticality Accidents." *Nuclear Technology* (ANS), Vol. 111, No. 2 (Aug. 1995): pp. 227-240.

Subject Codes: A3, B1, D, T

09/30/95 Status: Published

Subject Codes: (see full subject code list in the front matter for additional description)

A through A3 = criticality accidents

B1 or B2 = extensive bibliography or references

C1 through C5 = CASs

D = dose, dosimetry, distance and shielding

E through E4 = emergency management

H1 and H2 = hazard-, risk-, and safety-analysis

M = medical

O = other

R = releases and release dispersion

T = computational methods, tools, validation

Parenthesis indicate that the code(s) were assigned based on the document title or on its use as a reference in another document.

- Earlier Work: Wilkinson, A[lan], et al. "Improved Dose Estimates for Nuclear Criticality Accidents: Preliminary Results." In *ANS Trans.*, Vol. 70. ANS, June 1994, pp. 191-192.
- Wilkinson, A[lan] "Improved Dose Estimates for Nuclear Criticality Accidents." Master's thesis, University of Tennessee - Knoxville, 1994
- Related Work: Broadhead and Hopper, *ANS Trans.*, Vol. 72, pp. 218-220, listed separately.
- Notes: Part of investigation to update: Hopper, Y-DD-145, 1974, listed separately

3.5 Code C1: CAS Calibration, Maintenance, and Testing

ANS. "American National Standard: Immediate Evacuation Signal for Use in Industrial Installations Where Radiation Exposure May Occur," ANSI N2.3-1979. ANS, 1979.

- Subject Codes: C1, C2, C5 09/30/95 Status: Withdrawn 08/29/86
- Notes: Superseded ANSI N2.3-1967, which was partial basis of 10 CFR 1910.96 (f).
Incorporated into ANSI/ANS-8.3-1986.
Endorsed by NRC Reg. Guide 8.5 (Rev. 1), which is active.

ANS. "Criticality Accident Alarm System, An American National Standard," ANSI/ANS-8.3-1986. ANS, approved Aug. 29, 1986.

- Subject Codes: A3, C1, C2, C3, C5, E3, T 09/30/95 Status: Active, under revision
- Notes: Superseded documents are ANSI N16.2-1969, ANSI/ANS-8.3-1979, ANSI/ANS N2.3-1967, and ANSI/ANS N2.3-1979.
Endorsed by NRC Reg. Guide 8.12 (Rev. 2) which is active.
Compliance required by DOE Order 5480.24 which is active.
Calculation techniques of Appendix B are not universally applicable.

ANS. "Criticality Accident Alarm System, An American National Standard," ANSI/ANS-8.3-199x. Draft, May 1995.

- Subject Codes: A3, C1, C2, C3, C5, T 09/30/95 Status: Draft, under review
- Notes: Calculation techniques of Appendix B are not universally applicable.

Aspinall, K[ieth] J. "Criticality Detection and Alarm Systems: Design Principles." In *Criticality Control of Fissile Materials, Stockholm Sweden, Nov. 1965*. IAEA, 1966, pp. 701-716.

- Subject Codes: A, C2, C3, C5, E 09/30/95 Status: Published

Austin, T[im] B., C[hristopher] R. J. Sunman, and S[tephan] J. Walls. "Aspects of Criticality Emergency Planning - Criticality Excursion Yields and Criticality Incident Detection and Alarm System Reliabilities." In *ICNC'95 Proceedings of the Fifth International Conference on Nuclear Criticality Safety, Albuquerque, New Mexico USA, Sept. 1995*, Vol. II. UNM, Sept. 1995, pp. 13•7-13•15.

- Subject Codes: A3, C1, C3, E2 09/30/95 Status: Published

Baker, J[ames] S., J[acquelyn] A. Smith, and D[onald] T. Berry. "Testing of the Y-12 Criticality Accident Alarm System Detectors at the Sandia Pulsed Reactor Facility," Y/DD-626. Y-12 Plant, Oak Ridge, Tennessee USA, Jan. 6, 1994.

- Subject Codes: (C1, C4) 09/30/95 Status: Published
- Alt. Contact: NTIS, OSTI
- Summary: —. "Testing of the Y-12 Criticality Accident Alarm System Detectors at the Sandia Pulsed Reactor Facility." In *ANS Trans.*, Vol. 70. ANS, June 1994, pp. 210-211.

Baker, J[ames] S., and J[acquelyn] A. Smith. "Estimating Radius of Coverage of the Y-12 Plant Criticality Accident Alarm System from Experiments at the Los Alamos Critical Experiments Facility." In *ICNC'95 Proceedings of the Fifth International Conference on Nuclear Criticality Safety, Albuquerque, New Mexico USA, Sept. 1995*, Vol. II. UNM, Sept. 1995, pp. 11•126-11•130.

Subject Codes: A3, C1, C4, D

09/30/95 Status: Published

Barbry, F[rancis Y.], and R. Médioni. "Dosimétrie d'Accidents de Criticité: Synthèse de Résultats Acquis sur CRAC et Silene," CEA/SEESNC 33. CEA, Nov. 1980.

Subject Codes: (A3, C1, D)

09/30/95 Status: Issued

English Ed.: Barbry, CEA205/91, 1991, listed separately.

Barbry, Francis [Y.], and Raymond Prignet. "The EDAC System and New Developments Under Consideration at the CEA for Criticality Accident Detection." *Nuclear Technology (ANS)*, Vol. 78 (Sept. 1987): pp. 320-325.

Subject Codes: C1, C2, C4

09/30/95 Status: Published

Other Ed.s: ———. "The EDAC (Ensemble de Detection et d'Alarme de Criticité) and New Developments Under Consideration at the CEA for Criticality Accident Detection." In *Proceedings of ISCS'87 International Seminar on Nuclear Criticality Safety, Tokyo Japan, Oct. 1987*. PNC, Sept. 1987, pp. 475-478.

○ ———. "The EDAC System and New Developments Under Consideration at the Commissariat à l'Énergie for Criticality Accident Detection." In *Transactions of the Criticality Accident Alarm Systems Workshop, Richland, Washington USA, Sept. 1988*, DOE/NCT-05. LLNL, 1988, pp. 103-110.

○ ———. "Characteristics of French Criticality Accident Detection Unit (E.D.A.C System)." In *Proceedings of the International Seminar on Criticality Studies Programs and Needs, Dijon France, Sept. 1983*. Centre d' Études de Valduc, France: CEA, 1984, pp.

Earlier Sys: Debrie, *Proceedings of the Third United Nations... Aug.-Sept. 1964*, Vol. 13, pp. 244-251, listed separately.

○ Prignet and Renard, CEA-R-4784, 1976, listed separately.

Later Work: Prignet and Huver, *Proceedings of ICNC'91...*, Vol. 2, pp. VII-104 - VII-123, listed separately.

Barbry, F[rancis Y.] "Dosimetry of Neutron and Gamma Radiation in the CRAC and SILENE Criticality Accident Study Program," CEA 205/91. CEA/IPSN/SRSC, 1991.

Subject Codes: (A3, C1, D)

09/30/95 Status: Published

French Ed.: Barbry and Médioni, CEA/SEESNC 33, Nov. 1980, listed separately.

Crume, E. C[hables]. "Experiments to Determine Sensitivity of NMC Gamma Monitors to Distant Fission Bursts," Y-DD-113. UCNC, Y-12 Plant, Dec. 12, 1974.

Subject Codes: C1, C4

09/30/95 Status: Published

Subject Codes: (see full subject code list in the front matter for additional description)

A through A3 = criticality accidents

B1 or B2 = extensive bibliography or references

C1 through C5 = CASs

D = dose, dosimetry, distance and shielding

E through E4 = emergency management

H1 and H2 = hazard-, risk-, and safety-analysis

M = medical

O = other

R = releases and release dispersion

T = computational methods, tools, validation

Parenthesis indicate that the code(s) were assigned based on the document title or on its use as a reference in another document.

Delafield, H[oward] J., and J. J. Clifton. "Design Criteria and Principles for Criticality Detection and Alarm Systems," SRD R 309. Culcheth, Warrington UK: UKAEA SRD, Oct. 1984.

Subject Codes: A3, C1, C2, C3, C5, E2 09/30/95 Status: Published

Alt. Contact: HMSO

Delafield, H[oward] J. "Design Criteria and the Principles Underlying the UKAEA Code of Practice on the Provision of Criticality Alarm Systems." In *Transactions of the Criticality Accident Alarm Systems Workshop, Richland, Washington USA, Sept. 1988*, DOE/NCT-05. LLNL, 1988, pp. 111-124.

Subject Codes: A, C1, C2, O 09/30/95 Status: Published

Alt. Contact: LLNL, NTIS, OSTI

Eversole, Michael J., and David J. Lindenschmidt. "Criticality Alarm System Design and Operational Experience at the Westinghouse Materials Company of Ohio." In *Transactions of the Criticality Accident Alarm Systems Workshop, Richland, Washington USA, Sept. 1988*, DOE/NCT-05. LLNL, 1988, pp. 59-66.

Subject Codes: C1, C2, C4, E3 09/30/95 Status: Published

Alt. Contact: LLNL, NTIS, OSTI

Gibson, J. A. B., and E. Piesch. "Neutron Monitoring for Radiological Protection," IAEA Technical Report Series No. 252. IAEA, 1985.

Subject Codes: B1, C1, C2, D, O, T 09/30/95 Status: Published

Handley, G. R[ichard] "The Y-12 Criticality Alarm System." In *Transactions of the Criticality Accident Alarm Systems Workshop, Richland, Washington USA, Sept. 1988*, DOE/NCT-05. LLNL, 1988, pp. 35-45.

Subject Codes: C1, C2, C4 09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Hill, Ernest E., and O. Clinton Kolar. "Criticality Alarm System for the Lawrence Livermore National Laboratory." In *Transactions of the Criticality Accident Alarm Systems Workshop, Richland, Washington USA, Sept. 1988*, DOE/NCT-05. LLNL, 1988, pp. 79-101.

Subject Codes: C1, C2, C4 09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

HPS and IEEE. "American National Standard, Radiation Protection Instrumentation Test and Calibration," ANSI N323-1978 (R1993). IEEE, approved Sept. 13, 1977.

Subject Codes: O; possibly C1, C5 09/30/95 Status: Active

Alt. Contact: ANSI, IEEE Notes: Applies to portable instruments for measuring radiation levels

IEC. "International Standard, Warning Equipment for Criticality Accidents," CEI IEC 860: 1987. IEC, 1987.

Subject Codes: C1, C2, C5 09/30/95 Status: Active

IOS. "International Standard, Nuclear Energy - X and Gamma Reference Radiations for Calibrating Dosimeters and Dose Ratemeters and for Determining their Response as a Function of Photon Energy," ISO 4037: 1979. IOS, 1979.

Subject Codes: (C1, D, T, O) 09/30/95 Status: Active

Notes: Apparently Part I. A draft Part II was available for comment as of June 1995.

IOS. "International Standard, Nuclear Energy - Performance and Testing Requirements for Criticality Detection and Alarm Systems," ISO 7753: 1987 (E). IOS, Aug. 1, 1987.

Subject Codes: A3, C1, C2, C3, C5 09/30/95 Status: Active

Kanamori, M., K. Noda, and O. Nokamura. "The Criticality Detection and Alarm System in PNC Tokai Works." In *Proceedings of ISCS'87 International Seminar on Nuclear Criticality Safety, Tokyo Japan, Oct. 1987*. PNC, Sept. 1987, pp. 471-474.

Subject Codes: C1, C2, C4

09/30/95 Status: Published

Kindleben, Gerd. "Design of and Experience with the Gamma-Detecting Criticality Accident Alarm System at Alkem MOX Fuel Fabrication Plant." In *Transactions of the Criticality Accident Alarm Systems Workshop, Richland, Washington USA, Sept. 1988*, DOE/NCT-05. LLNL, 1988, pp. 103-110.

Subject Codes: C1, C2, C4, O

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Kohnoura, Bunzo, and Kentaro Minami. "Gas Loop Type Criticality Alarm Monitor." In *Proceedings of ISCS'87 International Seminar on Nuclear Criticality Safety, Tokyo Japan, Oct. 1987*. PNC, Sept. 1987, pp. 467-470.

Subject Codes: C1, C2, C4

09/30/95 Status: Published

Malenfant, Richard E., and H. M. Forehand. "Facility Description of a Solution Critical Assembly: SHEBA." In *ANS Trans.*, Vol. 39. ANS, Nov. 1981, pp. 555-557.

Subject Codes: A3, C1, O

09/30/95 Status: Published

Malenfant, Richard E. "Los Alamos Critical Experiments Facility." In *Proceedings of ICNC'91 International Conference on Nuclear Criticality Safety, Oxford England, Sept. 1991*, Vol. 2. UKAEA Tech., Sept. 1991, pp. VII-12 - VII-16.

Subject Codes: C1, O

09/30/95 Status: Published

Marble, Ronald C., Tulanda D. Brown, and Jeff C. Wooldridge. "Criticality Accident Alarm System at the Fernald Environmental Management Project," FEMP-2328. Fernald Environmental Restoration Management Corporation, Cincinnati, Ohio USA, June 1994.

Subject Codes: (C1, C2, C4)

09/30/95 Status: Published

Summary: ———. "Criticality Accident Alarm System at the Fernald Environmental Management Project." In *ANS Trans.*, Vol. 70. ANS, June 1994, p. 206.

McMahan, J[ohn] W., and J. D. Clayton. "Savannah River MIN System Maintenance Program." In *Transactions of the Criticality Accident Alarm Systems Workshop, Richland, Washington USA, Sept. 1988*, DOE/NCT-05. LLNL, 1988, pp. 47-57.

Subject Codes: C1, C2, C4

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Negron, Scott B., and Robert W. Tayloe, Jr. "Analysis of the Proposed Relocation of Neutron Criticality Clusters in the Process Buildings for the Portsmouth Gaseous Diffusion Plant," POEF-SH-12. Martin Marietta Energy Systems, Inc., Piketon, Ohio USA, Jan. 1994.

Subject Codes: (A3, C1, C2, C4, D)

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Subject Codes: (see full subject code list in the front matter for additional description)

A through A3 = criticality accidents	H1 and H2 = hazard-, risk-, and safety-analysis
B1 or B2 = extensive bibliography or references	M = medical
C1 through C5 = CASs	O = other
D = dose, dosimetry, distance and shielding	R = releases and release dispersion
E through E4 = emergency management	T = computational methods, tools, validation

Parenthesis indicate that the code(s) were assigned based on the document title or on its use as a reference in another document.

Summary: Negron, Scott B., Robert W. Tayloe, Jr., and Donna M. D'Aquila. "Proposed Relocation of Neutron Criticality Clusters for the PGDP." In *ANS Trans.*, Vol. 70. ANS, June 1994, pp. 209-210.

Nuclear Installation Inspectorate Health and Safety Executive. *Safety Assessment Principles for Nuclear Plants*. London UK: HSE Books, Oct. 1992.

Subject Codes: (C, E5, H2, O)

09/30/95 Status: Published

Alt. Contact: HMSO

OSHA. "Ionizing Radiation," 29 CFR 1910.96. FR, no date.

Subject Codes: C1, C2, C5, E3, O

09/30/95 Status: Active

Source: *Federal Register* (GPO), Vol. 39 (June 27, 1974): p. 23502; as amended in Vol. 43 (Oct. 24, 1978): p.49746; Vol. 43 (Nov. 7, 1978): p. 51759; and Vol. 49 (April 30, 1984): p. 18295.

Notes: See paragraphs (f), "Immediate evacuation warning signal," and (p), "Atomic Energy Commission licensees - AEC contractors operating AEC plants and facilities - AEC Agreement State licensees or registrants."

Paglieri, [James] N., and R. P. Conner. "Experience with Neutron Criticality Alarm Systems at Westinghouse Hanford Company." In *Transactions of the Criticality Accident Alarm Systems Workshop, Richland, Washington USA, Sept. 1988*, DOE/NCT-05. LLNL, 1988, pp. 69-78.

Subject Codes: C1, C2, C4

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Plassmann, E[ugene] A., and G[regory] D. Spriggs. "Criticality Alarm System Verification at the Los Alamos Critical Experiments Facility: Past Experience and Present Capabilities." In *Transactions of the Criticality Accident Alarm Systems Workshop, Richland, Washington USA, Sept. 1988*, DOE/NCT-05. LLNL, 1988, pp. 19-26.

Subject Codes: C1, C4

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Prignet, Raymond, and Claude Renard. "E.D.A.C. Ensemble de détection ed d'alarme de criticité, Caractéristiques physiques et électroniques," CEA-R-4784. CEA Department de Protection, Centre Études Nucléaires do Fontenay-aux-Roses, 1976.

Subject Codes: (C1, C2, C4, C5)

09/30/95 Status: Published

Earlier Sys.: Debie, *Proceedings of the Third United Nations... Aug.-Sept. 1964*, Vol. 13, pp. 244-251, listed separately.

Later Sys.: Prignet and Huver, *Proceedings of ICNC'91...*, Vol. 2, pp. VII-104 - VII-123, listed separately.

Other Work: Barbry and Prignet, *Nuclear Technology*, Vol. 78, pp. 320-325, listed separately.

Prignet, Raymond and Martial Huver. "Detection of Criticality Accidents, The Intertechnique EDAC II System." In *Proceedings of ICNC'91 International Conference on Nuclear Criticality Safety, Oxford England, Sept. 1991*, Vol. 2. UKAEA Tech., Sept. 1991, pp. VII-104 - VII-123.

Subject Codes: A3, C1, C2, C3, C4

09/30/95 Status: Published

Earlier Sys.: Debie, *Proceedings of the Third United Nations... Aug.-Sept. 1964*, Vol. 13, pp. 244-251, listed separately.

○ Prignet and Renard, CEA-R-4784, 1976, listed separately.

Other Work: Barbry and Prignet, *Nuclear Technology*, Vol. 78, pp. 320-325, listed separately.

Richey, C. R., and T. W. Jeffs. "Criticality Detection and Alarm System." PNL, Dec. 1977.

Subject Codes: C1, C2, C4

09/30/95 Status: Issued

Rimmer, E., et al. "The Provision of Criticality Incident Detection, Alarm and Warning Systems (Provisional)," AECP 1074. Risley, Warrington UK: UKAEA Standards Section, Feb. 1987.

Subject Codes: C1, C2, C3, C5, E

09/30/95 Status: Indeterminant

Alt. Contact: HMSO

Notes: Never formally issued but in current use at several UK facilities

Tyree, William H. "A Neutron Criticality Alarm System," RFP-1621. Golden, Colorado USA: DOW Chemical USA, Rock Flats Plant, March 21, 1972.

Subject Codes: C1, C2, C4

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Tyree, William H. "Test Procedures for the Neutron Criticality Alarm System at Rocky Flats Plant," RFP-2027. Golden, Colorado USA: DOW Chemical USA, Rock Flats Plant, Aug. 2, 1973.

Subject Codes: C1, C4

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Tyree, W[illiam] H., et al. "An Improved Criticality Alarm System." In *Proceedings of the First Annual Nuclear Criticality Safety Technology Project, Gaithersburg, Maryland USA, May 1992*, LA-12556-C. LANL, 1992, pp. 107-110.

Subject Codes: C1, C2, C4

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Vasilik, D. G., R. W. Martin, and D. Fuller. "Nuclear Accident Dosimetry: Measurements at the Los Alamos SHEBA Critical Assembly," LA-8911-MS. LANL, July 1981.

Subject Codes: A3, C1, D

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Wachter, J. S., B. J. Youghblood, and S. J. Groothuis. "Response of Radiation Monitors to Prompt Critical Bursts," Y-1182. UCNC Y-12 Plant, issued June 4, 1958.

Subject Codes: C1, C4

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Zino, J. F. "Exposure Rate Response Analysis of Criticality Accident Detector at Savannah River Site," WSRC-MS-94-0544. Westinghouse Savannah River Company, Aiken, South Carolina USA, 1995.

Subject Codes: (C1, C4)

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Subject Codes: (see full subject code list in the front matter for additional description)

A through A3 = criticality accidents

B1 or B2 = extensive bibliography or references

C1 through C5 = CASs

D = dose, dosimetry, distance and shielding

E through E4 = emergency management

H1 and H2 = hazard-, risk-, and safety-analysis

M = medical

O = other

R = releases and release dispersion

T = computational methods, tools, validation

Parenthesis indicate that the code(s) were assigned based on the document title or on its use as a reference in another document.

3.6 Code C2: CAS Design

ANS. "American National Standard: Immediate Evacuation Signal for Use in Industrial Installations Where Radiation Exposure May Occur," ANSI N2.3-1979. ANS, 1979.

Subject Codes: C1, C2, C5

09/30/95 Status: Withdrawn 08/29/86

Notes: Superseded ANSI N2.3-1967, which was partial basis of 10 CFR 1910.96 (f).

Incorporated into ANSI/ANS-8.3-1986.

Endorsed by NRC Reg. Guide 8.5 (Rev. 1), which is active.

ANS. "Criticality Accident Alarm System, An American National Standard," ANSI/ANS-8.3-1986. ANS, approved Aug. 29, 1986.

Subject Codes: A3, C1, C2, C3, C5, E3, T 09/30/95 Status: Active, under revision

Notes: Superseded documents are ANSI N16.2-1969, ANSI/ANS-8.3-1979,

ANSI/ANS N2.3-1967, and ANSI/ANS N2.3-1979.

Endorsed by NRC Reg. Guide 8.12 (Rev. 2) which is active.

Compliance required by DOE Order 5480.24 which is active.

Calculation techniques of Appendix B are not universally applicable.

ANS. "Criticality Accident Alarm System, An American National Standard," ANSI/ANS-8.3-199x. Draft, May 1995.

Subject Codes: A3, C1, C2, C3, C5, T 09/30/95 Status: Draft, under review

Notes: Calculation techniques of Appendices B and C are not universally applicable.

Aspinall, K[ieth] J., and J. T. Daniels. "Review of UKAEA Criticality Detection and Alarm Systems 1963/64 Part 1: Provision and Design Principles," AHSB (S) R 92. London UK: UKAEA AHSB, 1965.

Subject Codes: A, B1, C2, C3, C4, C5, E 09/30/95 Status: Published

Alt. Contact: HMSO

Aspinall, K[ieth] J. "Criticality Detection and Alarm Systems: Design Principles." In *Criticality Control of Fissile Materials, Stockholm Sweden, Nov. 1965*. IAEA, 1966, pp. 701-716.

Subject Codes: A, C2, C3, C5, E 09/30/95 Status: Published

Barbry, Francis [Y.], and Raymond Prignet. "The EDAC System and New Developments Under Consideration at the CEA for Criticality Accident Detection." *Nuclear Technology* (ANS), Vol. 78 (Sept. 1987): pp. 320-325.

Subject Codes: C1, C2, C4 09/30/95 Status: Published

Other Ed.s: ——. "The EDAC (Ensemble de Detection et d'Alarme de Criticeté) and New Developments Under Consideration at the CEA for Criticality Accident Detection." In *Proceedings of ISCS'87 International Seminar on Nuclear Criticality Safety, Tokyo Japan, Oct. 1987*. PNC, Sept. 1987, pp. 475-478.

○ ——. "The EDAC System and New Developments Under Consideration at the Commissariat a L'Énergie for Criticality Accident Detection." In *Transactions of the Criticality Accident Alarm Systems Workshop, Richland, Washington USA, Sept. 1988*, DOE/NCT-05. LLNL, 1988, pp. 103-110.

○ ——. "Characteristics of French Criticality Accident Detection Unit (E.D.A.C System)." In *Proceedings of the International Seminar on Criticality Studies Programs and Needs, Dijon France, Sept. 1983*. Centre d' Études de Valduc, France: CEA, 1984, pp.

Earlier Sys: Debrie, *Proceedings of the Third United Nations... Aug.-Sept. 1964*, Vol. 13, pp. 244-251, listed separately.

○ Prignet and Renard, CEA-R-4784, 1976, listed separately.

Later Work: Prignet and Huver, *Proceedings of ICNC'91*..., Vol. 2, pp. VII-104 - VII-123, listed separately.

Bhanot, K[athleen] E., R[ussell] L. Bowden, and P[eter] R. Thorne. "Development of a Criticality Emergency Planning Programme." In *ICNC'95 Proceedings of the Fifth International Conference on Nuclear Criticality Safety, Albuquerque, New Mexico USA, Sept. 1995*, Vol. II. UNM, Sept. 1995, pp. 13•3-13•6.

Subject Codes: A3, C2, C3, E2

09/30/95 Status: Published

Broadhead, B[ryan] L., et al. "Evaluation of Criticality Alarm Response at the WEMCO Fernald Site," ORNL/TM-55. ORNL, Nov. 1992.

Subject Codes: (A3, C2, C3, C4, D)

09/30/95 Status: Issued

Alt. Contact: NTIS, OSTI

Summary: Broadhead, B[ryan] L., R[obert] L. Childs, and R[obert] M. Westfall. "Evaluation of Fernald Plant 6 Criticality Alarm Response." In *ANS Trans.*, Vol. 70. ANS, June 1994, pp. 206-208.

Broadhead, B[ryan] L., R[obert] L. Childs, and C[alvin] M. Hopper. "Verification of Criticality Accident Alarm System for Environmental Restoration Activities." In *ICNC'95 Proceedings of the Fifth International Conference on Nuclear Criticality Safety, Albuquerque, New Mexico USA, Sept. 1995*, Vol. II. UNM, Sept. 1995, pp. 13•16-13•21.

Subject Codes: C2, C4, D

09/30/95 Status: Published

Cember, Herman. "Chapter 9: Health Physics Instrumentation." In *Introduction to Health Physics*, Second Ed. Elmsford, New York USA: Pergamon Press, 1989.

Subject Codes: B1, C2, D, O

09/30/95 Status: Published

Notes: Principles and types of radiation level and radiation rate detectors.

Clem, William E. "Transportable Criticality Alarm System." In *Transactions of the Criticality Accident Alarm Systems Workshop, Richland, Washington USA, Sept. 1988*, DOE/NCT-05. LLNL, 1988, pp. 125-131.

Subject Codes: C2, C4

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Cooper, A[ndrew] J[ames], and J[ohn] M[urray] Hobson. "Assessment of Design Implications of Detecting and Responding to Accidental Criticality Incidents." In *Proceedings of ICNC'91 International Conference on Nuclear Criticality Safety, Oxford England, Sept. 1991*, Vol. 2. UKAEA Tech., Sept. 1991, pp. VII-55 - VII-61.

Subject Codes: C2, C3, C4, E2, T

09/30/95 Status: Published

Debie, G., et al. "Détection des Accidents de Criticité ed des Ruptures de Gaines au Commissariat à l'Énergie Atomique," (in French; summary in English). In *Proceedings of the Third United Nations International Conference on Peaceful Uses of Atomic Energy, Geneva Switzerland, Aug.-Sept. 1964*, Vol. 13. UN, 1965, pp. 244-251.

Subject Codes: C2, C4, C5

09/30/95 Status: Published

Subject Codes: (see full subject code list in the front matter for additional description)

A through A3 = criticality accidents

B1 or B2 = extensive bibliography or references

C1 through C5 = CASs

D = dose, dosimetry, distance and shielding

E through E4 = emergency management

H1 and H2 = hazard-, risk-, and safety-analysis

M = medical

O = other

R = releases and release dispersion

T = computational methods, tools, validation

Parenthesis indicate that the code(s) were assigned based on the document title or on its use as a reference in another document.

- Later System: Prignet and Renard, CEA-R-4784, 1976, listed separately.
○ Barbry and Prignet, *Nuclear Technology*, Vol. 78, pp. 320-325, listed separately.
Later Work: Prignet and Huver, *Proceedings of ICNC'91...*, Vol. 2, pp. VII-104 - VII-123, listed separately.

Delafield, H[oward] J., and J. J. Clifton. "Design Criteria and Principles for Criticality Detection and Alarm Systems," SRD R 309. Culcheth, Warrington UK: UKAEA SRD, Oct. 1984.

Subject Codes: A3, C1, C2, C3, C5, E2 09/30/95 Status: Published
Alt. Contact: HMSO

Delafield, H[oward] J. "Design Criteria and the Principles Underlying the UKAEA Code of Practice on the Provision of Criticality Alarm Systems." In *Transactions of the Criticality Accident Alarm Systems Workshop, Richland, Washington USA, Sept. 1988*, DOE/NCT-05. LLNL, 1988, pp. 111-124.

Subject Codes: A, C1, C2, O 09/30/95 Status: Published
Alt. Contact: LLNL, NTIS, OSTI

DOE Office of Environment, Safety and Health. "Safety of Nuclear Facilities," DOE Order 5480.5. DOE, Sept. 23, 1986.

Subject Codes: C2, C3, C5, O 09/30/95 Status: Cancelled
Notes: For CAS requirements see paragraphs 11c(3)(g) and 11c(3)(h).
Interest depends on the design date of an exiting CAS.

DOE Office of Nuclear Energy. "Nuclear Criticality Safety," DOE Order 5480.24. DOE, Aug. 12, 1992.

Subject Codes: C2, C3, C5, O 09/30/95 Status: Active, under revision
Notes: For CAS requirements see paragraphs 7a, 7a(1), 7b through 7b(4).
Requires compliance with ANSI/ANS-8.1, -8.3, -8.5, -8.7, -8.15, and -8.19.

Eversole, Michael J., and David J. Lindenschmidt. "Criticality Alarm System Design and Operational Experience at the Westinghouse Materials Company of Ohio." In *Transactions of the Criticality Accident Alarm Systems Workshop, Richland, Washington USA, Sept. 1988*, DOE/NCT-05. LLNL, 1988, pp. 59-66.

Subject Codes: C1, C2, C4, E3 09/30/95 Status: Published
Alt. Contact: LLNL, NTIS, OSTI

Fruchard, Y., and J. M. Lavie. "Prevention des Causes et des Consequence d'un Accidente de Criticite: Solutions Adoptees in France." In *Criticality Control of Fissile Materials, Stockholm Sweden, Nov. 1965*. IAEA, 1966, pp. 717-736.

Subject Codes: A3, C2, C3, E1, O 09/30/95 Status: Published

Gibson, J. A. B., and E. Piesch. "Neutron Monitoring for Radiological Protection," IAEA Technical Report Series No. 252. IAEA, 1985.

Subject Codes: B1, C1, C2, D, O, T 09/30/95 Status: Published

Griffith, R. V., J. Palfalvi, U. Madhvanath. "Compendium of Neutron Spectra and Detector Responses for Radiation Protection Purposes," IAEA Technical Report Series No. 318. IAEA, 1990.

Subject Codes: B1, C2, D, O 09/30/95 Status: Published

Handley, G. R[ichard] "The Y-12 Criticality Alarm System." In *Transactions of the Criticality Accident Alarm Systems Workshop, Richland, Washington USA, Sept. 1988*, DOE/NCT-05. LLNL, 1988, pp. 35-45.

Subject Codes: C1, C2, C4 09/30/95 Status: Published
Alt. Contact: NTIS, OSTI

Henry, Hugh F. "Planning for Control of Criticality Emergencies." In *Progress in Nuclear Energy Series IV: Technology, Engineering, and Safety*, edited by C. M. Nicholle. New York USA: Pergamon Press, 1960, pp. 206-227.

Subject Codes: A3, C2, C5, E, H1, O 09/30/95 Status: Published

Hill, Ernest E., and O. Clinton Kolar. "Criticality Alarm System for the Lawrence Livermore National Laboratory." In *Transactions of the Criticality Accident Alarm Systems Workshop, Richland, Washington USA, Sept. 1988*, DOE/NCT-05. LLNL, 1988, pp. 79-101.

Subject Codes: C1, C2, C4 09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Howells, H., and J. T. Daniels. "Organization for Operational Control of Criticality." In *Criticality Control in Chemical and Metallurgical Plant, Karlsruhe Symposium, Karlsruhe Germany, May 1961*. OECD, Nov. 1961, pp. 465-476.

Subject Codes: C2, C3, E2, E3, O 09/30/95 Status: Published

Notes: Criticality safety program overview

IEC. "International Standard, Supply Voltages for Transistorized Nuclear Instruments," CEI IEC 293: 1968. IEC, 1968.

Subject Codes: (C2, C5) 09/30/95 Status: Not determined

IEC. "International Standard, Warning Equipment for Criticality Accidents," CEI IEC 860: 1987. IEC, 1987.

Subject Codes: C1, C2, C5 09/30/95 Status: Active

IOS. "International Standard, Nuclear Energy - Performance and Testing Requirements for Criticality Detection and Alarm Systems," ISO 7753: 1987 (E). IOS, Aug. 1, 1987.

Subject Codes: A3, C1, C2, C3, C5 09/30/95 Status: Active

Jones, S. A. "Technology Assessment for Improved Criticality Radiation Alarm Monitors," GAT-T-3133. Piketon, Ohio USA: Goodyear Atomic Corporation, January 29, 1982.

Subject Codes: C2, C4 09/30/95 Status: Issued

Alt. Contact: NTIS, OSTI

Kanamori, M., K. Noda, and O. Nokamura. "The Criticality Detection and Alarm System in PNC Tokai Works." In *Proceedings of ISCS'87 International Seminar on Nuclear Criticality Safety, Tokyo Japan, Oct. 1987*. PNC, Sept. 1987, pp. 471-474.

Subject Codes: C1, C2, C4 09/30/95 Status: Published

Kindleben, Gerd. "Design of and Experience with the Gamma-Detecting Criticality Accident Alarm System at Alkem MOX Fuel Fabrication Plant." In *Transactions of the Criticality Accident Alarm Systems Workshop, Richland, Washington USA, Sept. 1988*, DOE/NCT-05. LLNL, 1988, pp. 133-144.

Subject Codes: C1, C2, C4, O 09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Subject Codes: (see full subject code list in the front matter for additional description)

A through A3 = criticality accidents

B1 or B2 = extensive bibliography or references

C1 through C5 = CASs

D = dose, dosimetry, distance and shielding

E through E4 = emergency management

H1 and H2 = hazard-, risk-, and safety-analysis

M = medical

O = other

R = releases and release dispersion

T = computational methods, tools, validation

Parenthesis indicate that the code(s) were assigned based on the document title or on its use as a reference in another document.

Kohnoura, Bunzo, and Kentaro Minami. "Gas Loop Type Criticality Alarm Monitor." In *Proceedings of ISCS'87 International Seminar on Nuclear Criticality Safety, Tokyo Japan, Oct. 1987*. PNC, Sept. 1987, pp. 467-470.

Subject Codes: C1, C2, C4

09/30/95 Status: Published

Kolar, O. Clinton, et al. "Installation of and Experience with a New Standard Criticality Alarm System." In *Proceedings of ISCS'87 International Seminar on Nuclear Criticality Safety, Tokyo Japan, Oct. 1987*. PNC, Sept. 1987, pp. 479-483.

Subject Codes: C2, C4, O

09/30/95 Status: Published

Lee, Jr., Billy L., et al. "Evaluation of Coverage of Enriched UF₆ Cylinder Storage Lots by Existing Criticality Accident Alarms," POEF-SH-29. Martin Marietta Energy Systems, Inc., Piketon, Ohio USA, March 1995.

Subject Codes: (A3, C2, C4, D)

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Maceda, E. L., and D[on] K. Sgarlata. "Radius of Coverage of Nuclear Criticality Detectors." In *ANS Trans.*, Vol. 34. ANS, 1980, pp. 330-331.

Subject Codes: C2, D, T

09/30/95 Status: Published

Marble, Ronald C., Tulanda D. Brown, and Jeff C. Wooldridge. "Criticality Accident Alarm System at the Fernald Environmental Management Project," FEMP--2328. Fernald Environmental Restoration Management Corporation, Cincinnati, Ohio USA, June 1994.

Subject Codes: (C1, C2, C4)

09/30/95 Status: Published

Summary: ———. "Criticality Accident Alarm System at the Fernald Environmental Management Project." In *ANS Trans.*, Vol. 70. ANS, June 1994, p. 206.

McMahan, J[ohn] W., and J. D. Clayton. "Savannah River MIN System Maintenance Program." In *Transactions of the Criticality Accident Alarm Systems Workshop, Richland, Washington USA, Sept. 1988*, DOE/NCT-05. LLNL, 1988, pp. 47-57.

Subject Codes: C1, C2, C4

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Negron, Scott B., and Robert W. Tayloe, Jr. "Analysis of the Proposed Relocation of Neutron Criticality Clusters in the Process Buildings for the Portsmouth Gaseous Diffusion Plant," POEF-SH-12. Martin Marietta Energy Systems, Inc., Piketon, Ohio USA, Jan. 1994.

Subject Codes: (A3, C1, C2, C4, D)

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Summary: Negron, Scott B., Robert W. Tayloe, Jr., and Donna M. D'Aquila. "Proposed Relocation of Neutron Criticality Clusters for the PGDP." In *ANS Trans.*, Vol. 70. ANS, June 1994, pp. 209-210.

Negron, Scott B., Robert W. Tayloe, Jr., and M. C. Dobelbower "Analysis of Criticality Alarm System Response to an Accidental Criticality Outside the Cascade Process Buildings at the Portsmouth Gaseous Diffusion Plant," POEF-SH-19. Martin Marietta Energy Systems, Inc., Piketon, Ohio USA, July 1994.

Subject Codes: (A3, C2, C4, D)

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

NRC. "Criticality Accident Requirements," 10 CFR 70.24. FR, no date.

Subject Codes: C2, C3, C5, E 09/30/95 Status: Active

Source: *Federal Register* (GPO), Vol. 39 (Nov. 5, 1974): p. 39021; as amended in Vol. 41 (July 29, 1976): p. 31522, and in Vol. 53 (May 27, 1988): p. 19252.

NRC Office of Standards Development. "Criticality and Other Interior Evacuation Signals," NRC Regulatory Guide 8.5 (Rev. 1). NRC, March 1981.

Subject Codes: C2, C3, C5 09/30/95 Status: Active

Notes: Endorses ANSI N2.3-1975.

Nuclear Installation Inspectorate Health and Safety Executive. *Safety Assessment Principles for Nuclear Plants*. London UK: HSE Books, Oct. 1992.

Subject Codes: (C, E5, H2, O) 09/30/95 Status: Published

Alt. Contact: HMSO

O'Dell, A[ustin] A., and O. C[linton] Kolar. "A New Criticality Alarm System." In *Proceedings of the International Seminar on Criticality Studies Programs and Needs, Dijon France, Sept. 1983*. Centre d' Études de Valduc, France: CEA, 1984, pp. 28-35.

Subject Codes: C2, C4 09/30/95 Status: Published

OSHA. "Ionizing Radiation," 29 CFR 1910.96. FR, no date.

Subject Codes: C1, C2, C5, E3, O 09/30/95 Status: Active

Source: *Federal Register* (GPO), Vol. 39 (June 27, 1974): p. 23502; as amended in Vol. 43 (Oct. 24, 1978): p. 49746; Vol. 43 (Nov. 7, 1978): p. 51759; and Vol. 49 (April 30, 1984): p. 18295.

Notes: See paragraphs (f), "Immediate evacuation warning signal," and (p), "Atomic Energy Commission licensees - AEC contractors operating AEC plants and facilities - AEC Agreement State licensees or registrants."

Okuno, H[iroshi], et al. "Supplement to the Nuclear Criticality Safety Handbook of Japan" (in Japanese), JAERI-xxxx. JAERI, to be published in 1995.

Subject Codes: (A3, C2, C5, O, T) 09/30/95 Status: To be published

Notes: Supplement will contain Chapter 6, "Criticality Accidents and Their Evaluation Methods," and Chapter 7, "Basic Principles on Design and Installation of Criticality Alarm System."

Supplement to: Science and Technology Agency. *Nuclear Criticality Safety Handbook* (in Japanese). Tokyo Japan: Nikkan Shobo, 1988. The handbook is also published in English with the same authoring institution and title, translated by Yoshitaka Naito and Hiroshi Okuno, JAERI-Review 95-013. Tokyo Japan: Nikkan Shobo, Sept. 1995.

Subject Codes: (see full subject code list in the front matter for additional description)

A through A3 = criticality accidents

B1 or B2 = extensive bibliography or references

C1 through C5 = CASs

D = dose, dosimetry, distance and shielding

E through E4 = emergency management

H1 and H2 = hazard-, risk-, and safety-analysis

M = medical

O = other

R = releases and release dispersion

T = computational methods, tools, validation

Parenthesis indicate that the code(s) were assigned based on the document title or on its use as a reference in another document.

Pagliari, J[ames] N., and R. P. Conner. "Experience with Neutron Criticality Alarm Systems at Westinghouse Hanford Company." In *Transactions of the Criticality Accident Alarm Systems Workshop, Richland, Washington USA, Sept. 1988*, DOE/NCT-05. LLNL, 1988, pp. 69-78.

Subject Codes: C1, C2, C4

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Prignet, Raymond, and Claude Renard. "E.D.A.C. Ensemble de détection ed d'alarme de criticité, Caractéristiques physiques et électroniques," CEA-R-4784. CEA Department de Protection, Centre d'Études Nucléaires do Fontenay-aux-Roses, 1976.

Subject Codes: (C1, C2, C4, C5)

09/30/95 Status: Published

Earlier Sys.: Debrie, *Proceedings of the Third United Nations... Aug.-Sept. 1964*, Vol. 13, pp. 244-251, listed separately.

Later Sys.: Prignet and Huver, *Proceedings of ICNC'91...*, Vol. 2, pp. VII-104 - VII-123, listed separately.

Other Work: Barbry and Prignet, *Nuclear Technology*, Vol. 78, pp. 320-325, listed separately.

Prignet, Raymond and Martial Huver. "Detection of Criticality Accidents, The Intertechnique EDAC II System." In *Proceedings of ICNC'91 International Conference on Nuclear Criticality Safety, Oxford England, Sept. 1991*, Vol. 2. UKAEA Tech., Sept. 1991, pp. VII-104 - VII-123.

Subject Codes: A3, C1, C2, C3, C4

09/30/95 Status: Published

Earlier Sys.: Debrie, *Proceedings of the Third United Nations... Aug.-Sept. 1964*, Vol. 13, pp. 244-251, listed separately.

○ Prignet and Renard, CEA-R-4784, 1976, listed separately.

Other Work: Barbry and Prignet, *Nuclear Technology*, Vol. 78, pp. 320-325, listed separately.

Pruvost, Norman L., and John C. Tsitouras. "A Study of Some Current Technologies for Criticality Alarm Systems." In *ANS Trans.*, Vol. 39. ANS, Nov. 1981, p. 561.

Subject Codes: C2, C4

09/30/95 Status: Published

Pruvost, Norman L., and John A. Schlessor. "MCNP Transport Calculations for Detector Locations." In *Transactions of the Criticality Accident Alarm Systems Workshop, Richland, Washington USA, Sept. 1988*, DOE/NCT-05. LLNL, 1988, pp. 145-155.

Subject Codes: C2, T

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Richey, C. R., and T. W. Jeffs. "Criticality Detection and Alarm System." PNL, Dec. 1977.

Subject Codes: C1, C2, C4

09/30/95 Status: Issued

Rimmer, E., et al. "The Provision of Criticality Incident Detection, Alarm and Warning Systems (Provisional)," AECF 1074. Risley, Warrington UK: UKAEA Standards Section, Feb. 1987.

Subject Codes: C1, C2, C3, C5, E

09/30/95 Status: Indeterminant

Alt. Contact: HMSO

Notes: Never formally issued but in current use at several UK facilities

Swaja, R. E., and R. T. Greene. "Neutron and Gamma Attenuation Characteristics of Various Shields During Nuclear Criticality Accidents." In *ANS Trans.*, Vol. 39. ANS, Nov. 1981, pp. 521-522.

Subject Codes: A3, C2, C4, D

09/30/95 Status: Published

Tyree, William H. "A Neutron Criticality Alarm System," RFP-1621. Golden, Colorado USA: DOW Chemical USA, Rock Flats Plant, March 21, 1972.

Subject Codes: C1, C2, C4

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Tyree, W[illiam] H., and Henry Urano. "A Criticality Alarm System for Plutonium Process Operations." In *ANS Trans.*, Vol. 39. ANS, Nov. 1981, p. 561.

Subject Codes: C2, C4

09/30/95 Status: Published

Tyree, W[illiam] H., et al. "An Improved Criticality Alarm System." In *Proceedings of the First Annual Nuclear Criticality Safety Technology Project, Gaithersburg, Maryland USA, May 1992*, LA-12556-C. LANL, 1992, pp. 107-110.

Subject Codes: C1, C2, C4

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

3.7 Code C3: Determining If a CAS Is Needed

ANS. "Criticality Accident Alarm System, An American National Standard," ANSI/ANS-8.3-1986. ANS, approved Aug. 29, 1986.

Subject Codes: A3, C1, C2, C3, C5, E3, T 09/30/95 Status: Active, under revision

Notes: Superseded documents are ANSI N16.2-1969, ANSI/ANS-8.3-1979, ANSI/ANS N2.3-1967, and ANSI/ANS N2.3-1979.

Endorsed by NRC Reg. Guide 8.12 (Rev. 2) which is active.

Compliance required by DOE Order 5480.24 which is active.

Calculation techniques of Appendix B are not universally applicable.

ANS. "Criticality Accident Alarm System, An American National Standard," ANSI/ANS-8.3-199x. Draft, May 1995.

Subject Codes: A3, C1, C2, C3, C5, T 09/30/95 Status: Draft, under review

Notes: Calculation techniques of Appendices B and C are not universally applicable.

Aspinall, K[ith] J., and J. T. Daniels. "Review of UKAEA Criticality Detection and Alarm Systems 1963/64 Part 1: Provision and Design Principles," AHSB (S) R 92. London UK: UKAEA AHSB, 1965.

Subject Codes: A, B1, C2, C3, C4, C5, E 09/30/95 Status: Published

Alt. Contact: HMSO

Austin, T[im] B., C[hristopher] R. J. Sunman, and S[tephan] J. Walls. "Aspects of Criticality Emergency Planning - Criticality Excursion Yields and Criticality Incident Detection and Alarm System Reliabilities." In *ICNC'95 Proceedings of the Fifth International Conference on Nuclear Criticality Safety, Albuquerque, New Mexico USA, Sept. 1995*, Vol. II. UNM, Sept. 1995, pp. 13•7-13•15.

Subject Codes: A3, C1, C3, E2

09/30/95 Status: Published

Subject Codes: (see full subject code list in the front matter for additional description)

A through A3 = criticality accidents

B1 or B2 = extensive bibliography or references

C1 through C5 = CASs

D = dose, dosimetry, distance and shielding

E through E4 = emergency management

H1 and H2 = hazard-, risk-, and safety-analysis

M = medical

O = other

R = releases and release dispersion

T = computational methods, tools, validation

Parenthesis indicate that the code(s) were assigned based on the document title or on its use as a reference in another document.

Barbry, Francis Y. "Exposure Risks and Possibilities of Intervention and Diagnosis in Criticality Accidents." In *Proceedings of ICNC'91 International Conference on Nuclear Criticality Safety, Oxford England, Sept. 1991*, Vol. 2. UKAEA Tech., Sept. 1991, pp. VII-33 - VII-40.

Subject Codes: A3, C3, D, E2, E3 09/30/95 Status: Published

Summary: Barbry, Francis Y. "Exposure Risks and Possibilities of Intervention and Diagnosis in Criticality Accidents." In *ANS Trans.*, Vol. 63. ANS, June 1991, pp. 228-231.

Bhanot, K[athleen] E., R[ussell] L. Bowden, and P[eter] R. Thorne. "Development of a Criticality Emergency Planning Programme." In *ICNC'95 Proceedings of the Fifth International Conference on Nuclear Criticality Safety, Albuquerque, New Mexico USA, Sept. 1995*, Vol. II. UNM, Sept. 1995, pp. 13•3-13•6.

Subject Codes: A3, C2, C3, E2 09/30/95 Status: Published

Broadhead, B[ryan] L., et al. "Evaluation of Criticality Alarm Response at the WEMCO Fernald Site," ORNL/TM-55. ORNL, Nov. 1992.

Subject Codes: (A3, C2, C3, C4, D) 09/30/95 Status: Issued

Alt. Contact: NTIS, OSTI

Summary: Broadhead, B[ryan] L., R[obert] L. Childs, and R[obert] M. Westfall. "Evaluation of Fernald Plant 6 Criticality Alarm Response." In *ANS Trans.*, Vol. 70. ANS, June 1994, pp. 206-208.

Cooper, A[ndrew] J[ames], and J[ohn] M[urray] Hobson. "Assessment of Design Implications of Detecting and Responding to Accidental Criticality Incidents." In *Proceedings of ICNC'91 International Conference on Nuclear Criticality Safety, Oxford England, Sept. 1991*, Vol. 2. UKAEA Tech., Sept. 1991, pp. VII-55 - VII-61.

Subject Codes: C2, C3, C4, E2, T 09/30/95 Status: Published

Delafield, H[oward] J., and J. J. Clifton. "Design Criteria and Principles for Criticality Detection and Alarm Systems," SRD R 309. Culcheth, Warrington UK: UKAEA SRD, Oct. 1984.

Subject Codes: A3, C1, C2, C3, C5, E2 09/30/95 Status: Published

Alt. Contact: HMSO

DOE Office of Environment, Safety and Health. "Safety of Nuclear Facilities," DOE Order 5480.5. DOE, Sept. 23, 1986.

Subject Codes: C2, C3, C5, O 09/30/95 Status: Cancelled

Notes: For CAS requirements see paragraphs 11c(3)(g) and 11c(3)(h).
Interest depends on the design date of an exiting CAS.

DOE Office of Nuclear Energy. "Nuclear Criticality Safety," DOE Order 5480.24. DOE, Aug. 12, 1992.

Subject Codes: C2, C3, C5, O 09/30/95 Status: Active, under revision

Notes: For CAS requirements see paragraphs 7a, 7a(1), 7b through 7b(4).
Requires compliance with ANSI/ANS-8.1, -8.3, -8.5, -8.7, -8.15, and -8.19.

Fruchard, Y., and J. M. Lavie. "Prevention des Causes et des Consequence d'un Accidente de Criticite: Solutions Adoptees in France." In *Criticality Control of Fissile Materials, Stockholm Sweden, Nov. 1965*. IAEA, 1966, pp. 717-736.

Subject Codes: A3, C2, C3, E1, O 09/30/95 Status: Published

Hankins, Dale E. "Neutron and Gamma-Ray Dose Measurements at the Los Alamos Critical Assembly SHEBA." In *ANS Trans.*, Vol. 39. ANS, Nov. 1981, pp. 559-560.

Subject Codes: A3, C3, D 09/30/95 Status: Published

Hobson, J[ohn] M[urray] "Definition of Areas Requiring Criticality Alarm Annunciation and Emergency Control." In *Transactions of the Criticality Accident Alarm Systems Workshop, Richland, Washington USA, Sept. 1988*, DOE/NCT-05. LLNL, 1988, pp. 163-171.

Subject Codes: A3, C3, E2, O, T

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Howells, H., and J. T. Daniels. "Organization for Operational Control of Criticality." In *Criticality Control in Chemical and Metallurgical Plant, Karlsruhe Symposium, Karlsruhe Germany, May 1961*. OECD, Nov. 1961, pp. 465-476.

Subject Codes: C2, C3, E2, E3, O

09/30/95 Status: Published

Notes: Criticality safety program overview

Hurst, D. G., et al. "Panel Discussion on Criticality Control of Fissile Materials." *Criticality Control of Fissile Materials, Stockholm Sweden, Nov. 1965*. IAEA, 1966, pp. 739-746.

Subject Codes: A3, C3, O

09/30/95 Status: Published

IOS. "International Standard, Nuclear Energy - Performance and Testing Requirements for Criticality Detection and Alarm Systems," ISO 7753: 1987 (E). IOS, Aug. 1, 1987.

Subject Codes: A3, C1, C2, C3, C5

09/30/95 Status: Active

Malenfant, Richard E. "Criticality Accident Alarm System." In *Proceedings of ICNC'91 International Conference on Nuclear Criticality Safety, Oxford England, Sept. 1991*, Vol. 2. UKAEA Tech., Sept. 1991, pp. VII-51 - VII-54.

Subject Codes: A3, C3, C5

09/30/95 Status: Published

Summary: —. "A Criticism of ANSI/ANS-8.3-1986: Criticality Accident Alarm System." In *ANS Trans.*, Vol. 64. ANS, Nov. 1991, p. 327.

Later Work: Barbry and Malenfant, *Proceedings of the 1993 Topical ...*, pp. 21-25, listed separately.

McLaughlin, Thomas P. "Process Criticality Accident Likelihoods, Consequences and Emergency Planning." *Proceedings of ICNC'91 International Conference on Nuclear Criticality Safety, Oxford England, Sept. 1991*, Vol. 2. UKAEA Tech., Sept. 1991, pp. VII-1 - VII-11.

Subject Codes: A3, C3, H1

09/30/95 Status: Published

NRC. "Criticality Accident Requirements," 10 CFR 70.24. FR, no date.

Subject Codes: C2, C3, C5, E

09/30/95 Status: Active

Source: *Federal Register* (GPO), Vol. 39 (Nov. 5, 1974): p. 39021; as amended in Vol. 41 (July 29, 1976): p. 31522, and in Vol. 53 (May 27, 1988): p. 19252.

NRC Office of Standards Development. "Criticality and Other Interior Evacuation Signals," NRC Regulatory Guide 8.5 (Rev. 1). NRC, March 1981.

Subject Codes: C2, C3, C5

09/30/95 Status: Active

Notes: Endorses ANSI N2.3-1975.

Subject Codes: (see full subject code list in the front matter for additional description)

A through A3 = criticality accidents

B1 or B2 = extensive bibliography or references

C1 through C5 = CASs

D = dose, dosimetry, distance and shielding

E through E4 = emergency management

H1 and H2 = hazard-, risk-, and safety-analysis

M = medical

O = other

R = releases and release dispersion

T = computational methods, tools, validation

Parenthesis indicate that the code(s) were assigned based on the document title or on its use as a reference in another document.

Nuclear Installation Inspectorate Health and Safety Executive. *Safety Assessment Principles for Nuclear Plants*. London UK: HSE Books, Oct. 1992.

Subject Codes: (C, E5, H2, O)

09/30/95 Status: Published

Alt. Contact: HMSO

Payne, Jon (editor). Standards, Standards Actions, "Clarification." *Nuclear News (ANS)*, Vol. 35, No. 9 (July 1992): p. 76.

Subject Codes: C3, C5, E1, E2

09/30/95 Status: Published

Notes: Clarification to paragraph 4.2 of ANSI/ANS-8.3-1986.

Prignet, Raymond and Martial Huver. "Detection of Criticality Accidents, The Intertechnique EDAC II System." In *Proceedings of ICNC'91 International Conference on Nuclear Criticality Safety, Oxford England, Sept. 1991*, Vol. 2. UKAEA Tech., Sept. 1991, pp. VII-104 - VII-123.

Subject Codes: A3, C1, C2, C3, C4

09/30/95 Status: Published

Earlier Sys.: Debie, *Proceedings of the Third United Nations... Aug.-Sept. 1964*, Vol. 13, pp. 244-251, listed separately.

o Prignet and Renard, CEA-R-4784, 1976, listed separately.

Other Work: Barbry and Prignet, *Nuclear Technology*, Vol. 78, pp. 320-325, listed separately.

Rimmer, E., et al. "The Provision of Criticality Incident Detection, Alarm and Warning Systems (Provisional)," AECF 1074. Risley, Warrington UK: UKAEA Standards Section, Feb. 1987.

Subject Codes: C1, C2, C3, C5, E

09/30/95 Status: Indeterminant

Alt. Contact: HMSO

Notes: Never formally issued but in current use at several UK facilities

Thorngate, John H., Duane W. Rueppel, and Richard V. Griffith. "Neutron and Gamma Spectrum Measurements at the Los Alamos Critical Assembly SHEBA." In *ANS Trans.*, Vol. 39. ANS, Nov. 1981, pp. 557-559.

Subject Codes: A3, C3, D

09/30/95 Status: Published

Westfall, R[obert] M[ichael], and J[ohn] R. Knight. "Radiation Levels in a Gaseous Diffusion Plant Assuming a Low-Enriched Criticality Event Corresponding to the ANSI-Standard Minimum Accident of Concern," K/CSD/TM-55. UCNC, Feb. 1984.

Subject Codes: C3, D

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

3.8 Code C4: CAS Field Experience

Aspinall, K[ith] J., and J. T. Daniels. "Review of UKAEA Criticality Detection and Alarm Systems 1963/64 Part 1: Provision and Design Principles," AHSB (S) R 92. London UK: UKAEA AHSB, 1965.

Subject Codes: A, B1, C2, C3, C4, C5, E

09/30/95 Status: Published

Alt. Contact: HMSO

Baker, J[ames] S., J[acquelyn] A. Smith, and D[onald] T. Berry. "Testing of the Y-12 Criticality Accident Alarm System Detectors at the Sandia Pulsed Reactor Facility," Y/DD-626. Y-12 Plant, Oak Ridge, Tennessee USA, Jan. 6, 1994.

Subject Codes: (C1, C4)

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Summary: —. "Testing of the Y-12 Criticality Accident Alarm System Detectors at the Sandia Pulsed Reactor Facility." In *ANS Trans.*, Vol. 70. ANS, June 1994, pp. 210-211.

Baker, J[ames] S., and J[acquelyn] A. Smith. "Estimating Radius of Coverage of the Y-12 Plant Criticality Accident Alarm System from Experiments at the Los Alamos Critical Experiments Facility." In *ICNC'95 Proceedings of the Fifth International Conference on Nuclear Criticality Safety, Albuquerque, New Mexico USA, Sept. 1995*, Vol. II. UNM, Sept. 1995, pp. 11•126-11•130.

Subject Codes: A3, C1, C4, D

09/30/95 Status: Published

Barbry, Francis [Y.], and Raymond Prignet. "The EDAC System and New Developments Under Consideration at the CEA for Criticality Accident Detection." *Nuclear Technology (ANS)*, Vol. 78 (Sept. 1987): pp. 320-325.

Subject Codes: C1, C2, C4

09/30/95 Status: Published

Other Ed.s: —. "The EDAC (Ensemble de Detection et d'Alarme de Criticeté) and New Developments Under Consideration at the CEA for Criticality Accident Detection." In *Proceedings of ISCS'87 International Seminar on Nuclear Criticality Safety, Tokyo Japan, Oct. 1987*. PNC, Sept. 1987, pp. 475-478.

○ —. "The EDAC System and New Developments Under Consideration at the Commissariat a L'Énergie for Criticality Accident Detection." In *Transactions of the Criticality Accident Alarm Systems Workshop, Richland, Washington USA, Sept. 1988*, DOE/NCT-05. LLNL, 1988, pp. 103-110.

○ —. "Characteristics of French Criticality Accident Detection Unit (E.D.A.C System)." In *Proceedings of the International Seminar on Criticality Studies Programs and Needs, Dijon France, Sept. 1983*. Centre d' Études de Valduc, France: CEA, 1984, pp.

Earlier Sys: Debrie, *Proceedings of the Third United Nations... Aug.-Sept. 1964*, Vol. 13, pp. 244-251, listed separately.

○ Prignet and Renard, CEA-R-4784, 1976, listed separately.

Later Work: Prignet and Huver, *Proceedings of ICNC'91...*, Vol. 2, pp. VII-104 - VII-123, listed separately.

Barbry, Francis Y., and Richard E. Malenfant. "Need for a Revision of the Standard on Criticality Accident Detection System." In *Proceedings of the 1993 Topical Meeting on Physics and Methods in Criticality Safety, Nashville, Tennessee USA, Sept. 1993*. ANS, Sept. 1993, pp. 21-25.

Subject Codes: A3, C3, C5

09/30/95 Status: Published

Earlier Work: Malenfant, *ICNC'91, England, Sept. 1991*, Vol. 2, pp. VII-51 - VII-54, listed separately.

Broadhead, B[ryan] L., et al. "Evaluation of Criticality Alarm Response at the WEMCO Fernald Site," ORNL/TM-55. ORNL, Nov. 1992.

Subject Codes: (A3, C2, C3, C4, D)

09/30/95 Status: Issued

Alt. Contact: NTIS, OSTI

Summary: Broadhead, B[ryan] L., R[obert] L. Childs, and R[obert] M. Westfall. "Evaluation of Fernald Plant 6 Criticality Alarm Response." In *ANS Trans.*, Vol. 70. ANS, June 1994, pp. 206-208.

Subject Codes: (see full subject code list in the front matter for additional description)

A through A3 = criticality accidents

B1 or B2 = extensive bibliography or references

C1 through C5 = CASs

D = dose, dosimetry, distance and shielding

E through E4 = emergency management

H1 and H2 = hazard-, risk-, and safety-analysis

M = medical

O = other

R = releases and release dispersion

T = computational methods, tools, validation

Parenthesis indicate that the code(s) were assigned based on the document title or on its use as a reference in another document.

Broadhead, B[ryan] L., R[obert] L. Childs, and C[alvin] M. Hopper. "Verification of Criticality Accident Alarm System for Environmental Restoration Activities." In *ICNC'95 Proceedings of the Fifth International Conference on Nuclear Criticality Safety, Albuquerque, New Mexico USA, Sept. 1995*, Vol. II. UNM, Sept. 1995, pp. 13•16-13•21.

Subject Codes: C2, C4, D

09/30/95 Status: Published

Clem, William E. "Transportable Criticality Alarm System." In *Transactions of the Criticality Accident Alarm Systems Workshop, Richland, Washington USA, Sept. 1988*, DOE/NCT-05. LLNL, 1988, pp. 125-131.

Subject Codes: C2, C4

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Cooper, A[ndrew] J[ames], and J[ohn] M[urray] Hobson. "Assessment of Design Implications of Detecting and Responding to Accidental Criticality Incidents." In *Proceedings of ICNC'91 International Conference on Nuclear Criticality Safety, Oxford England, Sept. 1991*, Vol. 2. UKAEA Tech., Sept. 1991, pp. VII-55 - VII-61.

Subject Codes: C2, C3, C4, E2, T

09/30/95 Status: Published

Crume, E. C[harles]. "Experiments to Determine Sensitivity of NMC Gamma Monitors to Distant Fission Bursts," Y-DD-113. UCNC, Y-12 Plant, Dec. 12, 1974.

Subject Codes: C1, C4

09/30/95 Status: Published

Debrie, G., et al. "Détection des Accidents de Criticité ed des Ruptures de Gaines au Commissariat à l'Énergie Atomique," (in French; summary in English). In *Proceedings of the Third United Nations International Conference on Peaceful Uses of Atomic Energy, Geneva Switzerland, Aug.-Sept. 1964*, Vol. 13. UN, 1965, pp. 244-251.

Subject Codes: C2, C4, C5

09/30/95 Status: Published

Later System: Prignet and Renard, CEA-R-4784, 1976, listed separately.

○ Barbry and Prignet, *Nuclear Technology*, Vol. 78, pp. 320-325, listed separately.

Later Work: Prignet and Huver, *Proceedings of ICNC'91...*, Vol. 2, pp. VII-104 - VII-123, listed separately.

Eversole, Michael J., and David J. Lindenschmidt. "Criticality Alarm System Design and Operational Experience at the Westinghouse Materials Company of Ohio." In *Transactions of the Criticality Accident Alarm Systems Workshop, Richland, Washington USA, Sept. 1988*, DOE/NCT-05. LLNL, 1988, pp. 59-66.

Subject Codes: C1, C2, C4, E3

09/30/95 Status: Published

Alt. Contact: LLNL, NTIS, OSTI

Handley, G. R[ichard] "The Y-12 Criticality Alarm System." In *Transactions of the Criticality Accident Alarm Systems Workshop, Richland, Washington USA, Sept. 1988*, DOE/NCT-05. LLNL, 1988, pp. 35-45.

Subject Codes: C1, C2, C4

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Hill, Ernest E., and O. Clinton Kolar. "Criticality Alarm System for the Lawrence Livermore National Laboratory." In *Transactions of the Criticality Accident Alarm Systems Workshop, Richland, Washington USA, Sept. 1988*, DOE/NCT-05. LLNL, 1988, pp. 79-101.

Subject Codes: C1, C2, C4

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Jones, S. A. "Technology Assessment for Improved Criticality Radiation Alarm Monitors," GAT-T-3133. Piketon, Ohio USA: Goodyear Atomic Corporation, January 29, 1982.

Subject Codes: C2, C4

09/30/95 Status: Issued

Alt. Contact: NTIS, OSTI

Kanamori, M., K. Noda, and O. Nokamura. "The Criticality Detection and Alarm System in PNC Tokai Works." In *Proceedings of ISCS'87 International Seminar on Nuclear Criticality Safety, Tokyo Japan, Oct. 1987*. PNC, Sept. 1987, pp. 471-474.

Subject Codes: C1, C2, C4

09/30/95 Status: Published

Kindleben, Gerd. "Design of and Experience with the Gamma-Detecting Criticality Accident Alarm System at Alkem MOX Fuel Fabrication Plant." In *Transactions of the Criticality Accident Alarm Systems Workshop, Richland, Washington USA, Sept. 1988*, DOE/NCT-05. LLNL, 1988, pp. 133-144.

Subject Codes: C1, C2, C4, O

09/30/95 Status: Published

Kohnoura, Bunzo, and Kentaro Minami. "Gas Loop Type Criticality Alarm Monitor." In *Proceedings of ISCS'87 International Seminar on Nuclear Criticality Safety, Tokyo Japan, Oct. 1987*. PNC, Sept. 1987, pp. 467-470.

Subject Codes: C1, C2, C4

09/30/95 Status: Published

Kolar, O. Clinton, et al. "Installation of and Experience with a New Standard Criticality Alarm System." In *Proceedings of ISCS'87 International Seminar on Nuclear Criticality Safety, Tokyo Japan, Oct. 1987*. PNC, Sept. 1987, pp. 479-483.

Subject Codes: C2, C4, O

09/30/95 Status: Published

Lee, Jr., Billy L., et al. "Evaluation of Coverage of Enriched UF₆ Cylinder Storage Lots by Existing Criticality Accident Alarms," POEF-SH-29. Martin Marietta Energy Systems, Inc., Piketon, Ohio USA, March 1995.

Subject Codes: (A3, C2, C4, D)

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Marble, Ronald C., Tulanda D. Brown, and Jeff C. Wooldridge. "Criticality Accident Alarm System at the Fernald Environmental Management Project," FEMP-2328. Fernald Environmental Restoration Management Corporation, Cincinnati, Ohio USA, June 1994.

Subject Codes: (C1, C2, C4)

09/30/95 Status: Published

Summary: ———. "Criticality Accident Alarm System at the Fernald Environmental Management Project." In *ANS Trans.*, Vol. 70. ANS, June 1994, p. 206.

McMahan, J[ohn] W., and J. D. Clayton. "Savannah River MIN System Maintenance Program." In *Transactions of the Criticality Accident Alarm Systems Workshop, Richland, Washington USA, Sept. 1988*, DOE/NCT-05. LLNL, 1988, pp. 47-57.

Subject Codes: C1, C2, C4

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Subject Codes: (see full subject code list in the front matter for additional description)

A through A3 = criticality accidents

B1 or B2 = extensive bibliography or references

C1 through C5 = CASs

D = dose, dosimetry, distance and shielding

E through E4 = emergency management

H1 and H2 = hazard-, risk-, and safety-analysis

M = medical

O = other

R = releases and release dispersion

T = computational methods, tools, validation

Parenthesis indicate that the code(s) were assigned based on the document title or on its use as a reference in another document.

Negron, Scott B., and Robert W. Tayloe, Jr. "Analysis of the Proposed Relocation of Neutron Criticality Clusters in the Process Buildings for the Portsmouth Gaseous Diffusion Plant," POEF-SH-12. Martin Marietta Energy Systems, Inc., Piketon, Ohio USA, Jan. 1994.

Subject Codes: (A3, C1, C2, C4, D) 09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Summary: Negron, Scott B., Robert W. Tayloe, Jr., and Donna M. D'Aquila. "Proposed Relocation of Neutron Criticality Clusters for the PGDP." In *ANS Trans.*, Vol. 70. ANS, June 1994, pp. 209-210.

Negron, Scott B., Robert W. Tayloe, Jr., and M. C. Dobelbower "Analysis of Criticality Alarm System Response to an Accidental Criticality Outside the Cascade Process Buildings at the Portsmouth Gaseous Diffusion Plant," POEF-SH-19. Martin Marietta Energy Systems, Inc., Piketon, Ohio USA, July 1994.

Subject Codes: (A3, C2, C4, D) 09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

O'Dell, A[ustin] A., and O. C[linton] Kolar. "A New Criticality Alarm System." In *Proceedings of the International Seminar on Criticality Studies Programs and Needs, Dijon France, Sept. 1983*. Centre d' Études de Valduc, France: CEA, 1984, pp. 28-35.

Subject Codes: C2, C4 09/30/95 Status: Published

Paglieri, J[ames] N., and R. P. Conner. "Experience with Neutron Criticality Alarm Systems at Westinghouse Hanford Company." In *Transactions of the Criticality Accident Alarm Systems Workshop, Richland, Washington USA, Sept. 1988*, DOE/NCT-05. LLNL, 1988, pp. 69-78.

Subject Codes: C1, C2, C4 09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Plassmann, E[ugene] A., and G[regory] D. Spriggs. "Criticality Alarm System Verification at the Los Alamos Critical Experiments Facility: Past Experience and Present Capabilities." In *Transactions of the Criticality Accident Alarm Systems Workshop, Richland, Washington USA, Sept. 1988*, DOE/NCT-05. LLNL, 1988, pp. 19-26.

Subject Codes: C1, C4 09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Prignet, Raymond, and Claude Renard. "E.D.A.C. Ensemble de détection ed d'alarme de criticité, Caractéristiques physiques et électroniques," CEA-R-4784. CEA Department de Protection, Centre d'Études Nucléaires do Fontenay-aux-Roses, 1976.

Subject Codes: (C1, C2, C4, C5) 09/30/95 Status: Published

Earlier Sys.: Debrie, *Proceedings of the Third United Nations... Aug.-Sept. 1964*, Vol. 13, pp. 244-251, listed separately.

Later Sys.: Prignet and Huver, *Proceedings of ICNC'91...*, Vol. 2, pp. VII-104 - VII-123, listed separately.

Other Work: Barbry and Prignet, *Nuclear Technology*, Vol. 78, pp. 320-325, listed separately.

Prignet, Raymond and Martial Huver. "Detection of Criticality Accidents, The Intertechnique EDAC II System." In *Proceedings of ICNC'91 International Conference on Nuclear Criticality Safety, Oxford England, Sept. 1991*, Vol. 2. UKAEA Tech., Sept. 1991, pp. VII-104 - VII-123.

Subject Codes: A3, C1, C2, C3, C4 09/30/95 Status: Published

Earlier Sys.: Debrie, *Proceedings of the Third United Nations... Aug.-Sept. 1964*, Vol. 13, pp. 244-251, listed separately.

○ Prignet and Renard, CEA-R-4784, 1976, listed separately.

Other Work: Barbry and Prignet, *Nuclear Technology*, Vol. 78, pp. 320-325, listed separately.

Pruvost, Norman L., and John C. Tsitouras. "A Study of Some Current Technologies for Criticality Alarm Systems." In *ANS Trans.*, Vol. 39. ANS, Nov. 1981, p. 561.

Subject Codes: C2, C4

09/30/95 Status: Published

Richey, C. R., and T. W. Jeffs. "Criticality Detection and Alarm System." PNL, Dec. 1977.

Subject Codes: C1, C2, C4

09/30/95 Status: Issued

Schuske, C. L. "Administrative and Operational Nuclear Criticality Safety Controls in a Chemical Processing Plant." In *Criticality Control in Chemical and Metallurgical Plant, Karlsruhe Symposium, Karlsruhe Germany, May 1961*. OECD, Nov. 1961, pp. 477-490.

Subject Codes: C4, C5, O

09/30/95 Status: Published

Notes: Includes review of commercially available CASs for 1961

Swaja, R. E., and R. T. Greene. "Neutron and Gamma Attenuation Characteristics of Various Shields During Nuclear Criticality Accidents." In *ANS Trans.*, Vol. 39. ANS, Nov. 1981, pp. 521-522.

Subject Codes: A3, C2, C4, D

09/30/95 Status: Published

Tyree, William H. "A Neutron Criticality Alarm System," RFP-1621. Golden, Colorado USA: DOW Chemical USA, Rock Flats Plant, March 21, 1972.

Subject Codes: C1, C2, C4

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Tyree, William H. "Test Procedures for the Neutron Criticality Alarm System at Rocky Flats Plant," RFP-2027. Golden, Colorado USA: DOW Chemical USA, Rock Flats Plant, Aug. 2, 1973.

Subject Codes: C1, C4

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Tyree, William H., and Henry Urano. "A Criticality Alarm System for Plutonium Process Operations." In *ANS Trans.*, Vol. 39. ANS, Nov. 1981, p. 561.

Subject Codes: C2, C4

09/30/95 Status: Published

Tyree, William H., et al. "An Improved Criticality Alarm System." In *Proceedings of the First Annual Nuclear Criticality Safety Technology Project, Gaithersburg, Maryland USA, May 1992*, LA-12556-C. LANL, 1992, pp. 107-110.

Subject Codes: C1, C2, C4

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Wachter, J. S., B. J. Youghblood, and S. J. Groothuis. "Response of Radiation Monitors to Prompt Critical Bursts," Y-1182. UCNC Y-12 Plant, issued June 4, 1958.

Subject Codes: C1, C4

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Subject Codes: (see full subject code list in the front matter for additional description)

A through A3 = criticality accidents

B1 or B2 = extensive bibliography or references

C1 through C5 = CASs

D = dose, dosimetry, distance and shielding

E through E4 = emergency management

H1 and H2 = hazard-, risk-, and safety-analysis

M = medical

O = other

R = releases and release dispersion

T = computational methods, tools, validation

Parenthesis indicate that the code(s) were assigned based on the document title or on its use as a reference in another document.

Zino, J. F. "Exposure Rate Response Analysis of Criticality Accident Detector at Savannah River Site," WSRC-MS-94-0544. Westinghouse Savannah River Company, Aiken, South Carolina USA, 1995.

Subject Codes: (C1, C4)

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

3.9 Code C5: CAS Guidance, Requirements, and Associated Comments

ANS. "American National Standard: Immediate Evacuation Signal for Use in Industrial Installations Where Radiation Exposure May Occur," ANSI N2.3-1979. ANS, 1979.

Subject Codes: C1, C2, C5

09/30/95 Status: Withdrawn 08/29/86

Notes: Superseded ANSI N2.3-1967, which was partial basis of 10 CFR 1910.96 (f).

Incorporated into ANSI/ANS-8.3-1986.

Endorsed by NRC Reg. Guide 8.5 (Rev. 1), which is active.

ANS. "Criticality Accident Alarm System, An American National Standard," ANSI/ANS-8.3-1986. ANS, approved Aug. 29, 1986.

Subject Codes: A3, C1, C2, C3, C5, E3, T

09/30/95 Status: Active, under revision

Notes: Superseded documents are ANSI N16.2-1969, ANSI/ANS-8.3-1979,

ANSI/ANS N2.3-1967, and ANSI/ANS N2.3-1979.

Endorsed by NRC Reg. Guide 8.12 (Rev. 2) which is active.

Compliance required by DOE Order 5480.24 which is active.

Calculation techniques of Appendix B are not universally applicable.

ANS. "Criticality Accident Alarm System, An American National Standard," ANSI/ANS-8.3-199x. Draft, May 1995.

Subject Codes: A3, C1, C2, C3, C5, T

09/30/95 Status: Draft, under review

Notes: Calculation techniques of Appendices B and C are not universally applicable.

Aspinall, K[ieth] J., and J. T. Daniels. "Review of UKAEA Criticality Detection and Alarm Systems 1963/64 Part 1: Provision and Design Principles," AHSB (S) R 92. London UK: UKAEA AHSB, 1965.

Subject Codes: A, B1, C2, C3, C4, C5, E

09/30/95 Status: Published

Alt. Contact: HMSO

Aspinall, K[ieth] J. "Criticality Detection and Alarm Systems: Design Principles." In *Criticality Control of Fissile Materials, Stockholm Sweden, Nov. 1965*. IAEA, 1966, pp. 701-716.

Subject Codes: A, C2, C3, C5, E

09/30/95 Status: Published

Barbry, Francis Y., and Richard E. Malenfant. "Need for a Revision of the Standard on Criticality Accident Detection System." In *Proceedings of the 1993 Topical Meeting on Physics and Methods in Criticality Safety, Nashville, Tennessee USA, Sept. 1993*. ANS, Sept. 1993, pp. 21-25.

Subject Codes: A3, C3, C5

09/30/95 Status: Published

Earlier Work: Malenfant, *ICNC'91, England, Sept. 1991*, Vol. 2, pp. VII-51 - VII-54, listed separately.

Debrie, G., et al. "Détection des Accidents de Criticité et des Ruptures de Gaines au Commissariat à l'Énergie Atomique," (in French; summary in English). In *Proceedings of the Third United Nations International Conference on Peaceful Uses of Atomic Energy, Geneva Switzerland, Aug.-Sept. 1964*, Vol. 13. UN, 1965, pp. 244-251.

Subject Codes: C2, C4, C5

09/30/95 Status: Published

Later System: Prignet and Renard, CEA-R-4784, 1976, listed separately.

- Barbry and Prignet, *Nuclear Technology*, Vol. 78, pp. 320-325, listed separately.
 Later Work: Prignet and Huver, *Proceedings of ICNC'91...*, Vol.2, pp. VII-104 - VII-123, listed separately.

Delafield, H[oward] J., and J. J. Clifton. "Design Criteria and Principles for Criticality Detection and Alarm Systems," SRD R 309. Culcheth, Warrington UK: UKAEA SRD, Oct. 1984.

Subject Codes: A3, C1, C2, C3, C5, E2 09/30/95 Status: Published
 Alt. Contact: HMSO

DOE Office of Environment, Safety and Health. "Safety of Nuclear Facilities," DOE Order 5480.5. DOE, Sept. 23, 1986.

Subject Codes: C2, C3, C5, O 09/30/95 Status: Cancelled
 Notes: For CAS requirements see paragraphs 11c(3)(g) and 11c(3)(h).
 Interest depends on the design date of an exiting CAS.

DOE Office of Nuclear Energy. "Nuclear Criticality Safety," DOE Order 5480.24. DOE, Aug. 12, 1992.

Subject Codes: C2, C3, C5, O 09/30/95 Status: Active, under revision
 Notes: For CAS requirements see paragraphs 7a, 7a(1), 7b through 7b(4).
 Requires compliance with ANSI/ANS-8.1, -8.3, -8.5, -8.7, -8.15, and -8.19.

DOE Office of Nuclear Safety. "Preparation Guide for U. S. Department of Energy Nonreactor Nuclear Facility Safety Analysis Reports," DOE-STD-3009-94. DOE, Aug. 1994.

Subject Codes: C5, H2, O 09/30/95 Status: Active
 Alt. Contact: NTIS, OSTI

Goldenberg, Neal, memorandum to distribution. "Interpretive Guidance for DOE Order 5480.24, 'Nuclear Criticality Safety'," NE-70. DOE, Feb. 17, 1993.

Subject Codes: C5, H1, O 09/30/95 Status: Active
 Alt. Contact: DOE, NTIS

Henry, Hugh F. "Planning for Control of Criticality Emergencies." In *Progress in Nuclear Energy Series IV: Technology, Engineering, and Safety*, edited by C. M. Nicholle. New York USA: Pergamon Press, 1960, pp. 206-227.

Subject Codes: A3, C2, C5, E, H1, O 09/30/95 Status: Published

HPS and IEEE. "American National Standard, Radiation Protection Instrumentation Test and Calibration," ANSI N323-1978 (R1993). IEEE, approved Sept. 13, 1977.

Subject Codes: O; possibly C1, C5 09/30/95 Status: Active
 Alt. Contact: ANSI, IEEE Notes: Applies to portable instruments for measuring radiation levels

Subject Codes: (see full subject code list in the front matter for additional description)

A through A3 = criticality accidents	H1 and H2 = hazard-, risk-, and safety-analysis
B1 or B2 = extensive bibliography or references	M = medical
C1 through C5 = CASs	O = other
D = dose, dosimetry, distance and shielding	R = releases and release dispersion
E through E4 = emergency management	T = computational methods, tools, validation

Parenthesis indicate that the code(s) were assigned based on the document title or on its use as a reference in another document.

IEC. "International Standard, Supply Voltages for Transistorized Nuclear Instruments," CEI IEC 293: 1968. IEC, 1968.

Subject Codes: (C2, C5)

09/30/95 Status: Not determined

IEC. "International Standard, Warning Equipment for Criticality Accidents," CEI IEC 860: 1987. IEC, 1987.

Subject Codes: C1, C2, C5

09/30/95 Status: Active

IOS. "International Standard, Nuclear Energy - Performance and Testing Requirements for Criticality Detection and Alarm Systems," ISO 7753: 1987 (E). IOS, Aug. 1, 1987.

Subject Codes: A3, C1, C2, C3, C5

09/30/95 Status: Active

Malenfant, Richard E. "Criticality Accident Alarm System." In *Proceedings of ICNC'91 International Conference on Nuclear Criticality Safety, Oxford England, Sept. 1991*, Vol. 2. UKAEA Tech., Sept. 1991, pp. VII-51 - VII-54.

Subject Codes: A3, C3, C5

09/30/95 Status: Published

Summary: —. "A Criticism of ANSI/ANS-8.3-1986: Criticality Accident Alarm System." In *ANS Trans.*, Vol. 64. ANS, Nov. 1991, p. 327.

Later Work: Barbry and Malenfant, *Proceedings of the 1993 Topical ...*, pp. 21-25, listed separately.

NRC. "Criticality Accident Requirements," 10 CFR 70.24. FR, no date.

Subject Codes: C2, C3, C5, E

09/30/95 Status: Active

Source: *Federal Register* (GPO), Vol. 39 (Nov. 5, 1974): p. 39021; as amended in Vol. 41 (July 29, 1976): p. 31522, and in Vol. 53 (May 27, 1988): p. 19252.

NRC Office of Standards Development. "Assumptions Used for Evaluating the Potential Radiological Consequences of Accidental Nuclear Criticality in a Uranium Fuel Fabrication Plant," NRC Regulatory Guide 3.34 (Rev. 1). NRC, July 1979.

Subject Codes: A3, B1, C5, D, E1, T

09/30/95 Status: Active

NRC Office of Standards Development. "Assumptions Used for Evaluating the Potential Radiological Consequences of Accidental Nuclear Criticality in a Plutonium Processing and Fuel Fabrication Plant," NRC Regulatory Guide 3.35 (Rev. 1). NRC, July 1979.

Subject Codes: A3, B1, C5, D, E1, T

09/30/95 Status: Active

NRC Office of Standards Development. "Criticality and Other Interior Evacuation Signals," NRC Regulatory Guide 8.5 (Rev. 1). NRC, March 1981.

Subject Codes: C2, C3, C5

09/30/95 Status: Active

Notes: Endorses ANSI N2.3-1975.

NRC Office of Standards Development. "Assumptions Used for Evaluating the Potential Radiological Consequences of Accidental Nuclear Criticality in a Fuel Processing Plant," NRC Regulatory Guide 3.33 (Rev. 0). NRC, April 1987.

Subject Codes: A3, B1, C5, D, E1, T

09/30/95 Status: Active

NRC Office of Standards Development. "Criticality Accident Alarm System," NRC Regulatory Guide 8.12 (Rev. 2). NRC, Oct. 1988.

Subject Codes: C5

09/30/95 Status: Active

Notes: Endorses ANSI/ANS-8.3-1986.

Nuclear Installation Inspectorate Health and Safety Executive. *Safety Assessment Principles for Nuclear Plants*. London UK: HSE Books, Oct. 1992.

Subject Codes: (C, E5, H2, O)

09/30/95 Status: Published

Alt. Contact: HMSO

OSHA. "Ionizing Radiation," 29 CFR 1910.96. FR, no date.

Subject Codes: C1, C2, C5, E3, O

09/30/95 Status: Active

Source: *Federal Register* (GPO), Vol. 39 (June 27, 1974): p. 23502; as amended in Vol. 43 (Oct. 24, 1978): p. 49746; Vol. 43 (Nov. 7, 1978): p. 51759; and Vol. 49 (April 30, 1984): p. 18295.

Notes: See paragraphs (f), "Immediate evacuation warning signal," and (p), "Atomic Energy Commission licensees - AEC contractors operating AEC plants and facilities - AEC Agreement State licensees or registrants."

Okuno, H[iroshi], et al. "Supplement to the Nuclear Criticality Safety Handbook of Japan" (in Japanese), JAERI-xxxx. JAERI, to be published in 1995.

Subject Codes: (A3, C2, C5, O, T)

09/30/95 Status: To be published

Notes: Supplement will contain Chapter 6, "Criticality Accidents and Their Evaluation Methods," and Chapter 7, "Basic Principles on Design and Installation of Criticality Alarm System."

Supplement to: Science and Technology Agency. *Nuclear Criticality Safety Handbook* (in Japanese). Tokyo Japan: Nikkan Shobo, 1988. The handbook is also published in English with the same authoring institution and title, translated by Yoshitaka Naito and Hiroshi Okuno, JAERI-Review 95-013. Tokyo Japan: Nikkan Shobo, Sept. 1995.

Payne, Jon (editor). Standards, Standards Actions, "Clarification." *Nuclear News* (ANS), Vol. 35, No. 9 (July 1992): p. 76.

Subject Codes: C3, C5, E1, E2

09/30/95 Status: Published

Notes: Clarification to paragraph 4.2 of ANSI/ANS-8.3-1986.

Prignet, Raymond, and Claude Renard. "E.D.A.C. Ensemble de détection ed d'alarme de criticité, Caractéristiques physiques et électroniques," CEA-R-4784. CEA Department de Protection, Centre d'Études Nucléaires do Fontenay-aux-Roseš, 1976.

Subject Codes: (C1, C2, C4, C5)

09/30/95 Status: Published

Earlier Sys.: Debrie, *Proceedings of the Third United Nations... Aug.-Sept. 1964*, Vol. 13, pp. 244-251, listed separately.

Later Sys.: Prignet and Huver, *Proceedings of ICNC'91...*, Vol. 2, pp. VII-104 - VII-123, listed separately.

Other Work: Barbry and Prignet, *Nuclear Technology*, Vol. 78, pp. 320-325, listed separately.

Putman, Valerie L. "Consensus Standard Requirements and Guidance," INEL-95/00426. INEL, Sept. 1995.

Subject Codes: C5

09/30/95 Status: Published

Subject Codes: (see full subject code list in the front matter for additional description)

A through A3 = criticality accidents	H1 and H2 = hazard-, risk-, and safety-analysis
B1 or B2 = extensive bibliography or references	M = medical
C1 through C5 = CASs	O = other
D = dose, dosimetry, distance and shielding	R = releases and release dispersion
E through E4 = emergency management	T = computational methods, tools, validation

Parenthesis indicate that the code(s) were assigned based on the document title or on its use as a reference in another document.

Reed, Davis A. "ANSI/ANS-8.3-1986: American National Standard Criticality Accident Alarm System." In *ANS Trans.*, Vol. 64. ANS, Nov. 1991, p. 325.

Subject Codes: C5

09/30/95 Status: Published

Rimmer, E., et al. "The Provision of Criticality Incident Detection, Alarm and Warning Systems (Provisional)," AECF 1074. Risley, Warrington UK: UKAEA Standards Section, Feb. 1987.

Subject Codes: C1, C2, C3, C5, E

09/30/95 Status: Indeterminant

Alt. Contact: HMSO

Notes: Never formally issued but in current use at several UK facilities

Schuske, C. L. "Administrative and Operational Nuclear Criticality Safety Controls in a Chemical Processing Plant." In *Criticality Control in Chemical and Metallurgical Plant, Karlsruhe Symposium, Karlsruhe Germany, May 1961*. OECD, Nov. 1961, pp. 477-490.

Subject Codes: C4, C5, O

09/30/95 Status: Published

Notes: Includes review of commercially available CASs for 1961

Seale, Robert L. "Criticality Alarms: How Sensitive to What?" In *Transactions of the Criticality Alarm Systems Workshop, Richland, Washington USA, Sept. 1988*, DOE/NCT-05. LLNL, 1988, pp. 5-12.

Subject Codes: A3, C5, T

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Smith, D[avid] R. "ANSI/ANS-1983-1979 - American National Standard Criticality Accident Alarm System." In *ANS Trans.*, Vol. 39. ANS, Nov. 1981, pp. 545.

Subject Codes: C5

09/30/95 Status: Published

Smith, D[avid] R. "The Function and Characteristics of Criticality Accident Alarm Systems." In *ANS Trans.*, Vol. 39. ANS, Nov. 1981, pp. 554-555.

Subject Codes: C5, E2, E3, O

09/30/95 Status: Published

Smith, David R. "The Development of Criticality Accident Alarm System Standards." In *Transactions of the Criticality Accident Alarm Systems Workshop, Richland, Washington USA, Sept. 1988*, DOE/NCT-05. LLNL, 1988, pp. 13-17.

Subject Codes: C5, O

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

3.10 Code D: Doses and Dosimetry

Andrews, G[ould] A., et al. "Accidental Radiation Excursion at the Oak Ridge Y-12 Plant, IV. Preliminary Report on Clinical and Laboratory Effects in the Irradiated Employees." *Health Physics* (Pergamon Press), Vol. 2, No. 2, 1959: pp. 134-138.

Subject Codes: A1, D, M

09/30/95 Status: Published

Alt. Contact: HPS

Notes: Incident date 06/16/58
4th of 4 part series of articles

ANS. "American National Standard: Neutron and Gamma-Ray Flux-to-Dose Rate Factors," ANSI/ANS-6.1.1-1977 [N666]. ANS, 1977.

Subject Codes: (D, T)

09/30/95 Status: Withdrawn 08/31/89

Notes: Reported data are a basis for dose estimates specified in many references included here.

ANS. "Criteria for Emergency Radiological Field Monitoring, Sampling, and Analysis,"
ANSI/ANS-3.8.5-1992. ANS, 1992.

Subject Codes: (D, E5, R)

09/30/95 Status: Active

Auxier, J[ohn] A., et al. "Nuclear Accident Dosimetry Intercomparison Study." In *Health Physics Division Annual Progress Report for Period Ending July 31, 1965*, ORNL-3849. ORNL, 1965.

Subject Codes: (D)

09/30/95 Status: Issued

Alt. Contact: NTIS, OSTI

Baker, J[ames] S., and J[acquelyn] A. Smith. "Estimating Radius of Coverage of the Y-12 Plant Criticality Accident Alarm System from Experiments at the Los Alamos Critical Experiments Facility." In *ICNC'95 Proceedings of the Fifth International Conference on Nuclear Criticality Safety, Albuquerque, New Mexico USA, Sept. 1995*, Vol. II. UNM, Sept. 1995, pp. 11•126-11•130.

Subject Codes: A3, C1, C4, D

09/30/95 Status: Published

Barbry, Francis Y. "Exposure Risks and Possibilities of Intervention and Diagnosis in Criticality Accidents." In *Proceedings of ICNC'91 International Conference on Nuclear Criticality Safety, Oxford England, Sept. 1991*, Vol. 2. UKAEA Tech., Sept. 1991, pp. VII-33 - VII-40.

Subject Codes: A3, C3, D, E2, E3

09/30/95 Status: Published

Summary: ———. "Exposure Risks and Possibilities of Intervention and Diagnosis in Criticality Accidents." In *ANS Trans.*, Vol. 63. ANS, June 1991, pp. 228-231.

Barbry, F[rancis Y.], and R. Médioni. "Dosimétrie d'Accidents de Criticité: Synthèse de Résultats Acquis sur CRAC et Silene," CEA/SEESNC 33. CEA, Nov. 1980.

Subject Codes: (A3, C1, D)

09/30/95 Status: Issued

English Ed.: Barbry, CEA 205/91, 1991, listed separately.

Barbry, F[rancis Y.] "Dosimetry of Neutron and Gamma Radiation in the CRAC and SILENE Criticality Accident Study Program," CEA 205/91. CEA/IPSN/SRSC, 1991.

Subject Codes: (A3, C1, D)

09/30/95 Status: Published

French Ed.: Barbry and Médioni, CEA/SEESNC 33, Nov. 1980, listed separately.

Bricka, M. "First IAEA Measurement Intercomparison, Valduc, June 1970 - Final Report" (in French?), CEA/SESRCI 71/408M8. CEA, 1971.

Subject Codes: (D)

09/30/95 Status: Issued

Alt. Contact: IAEA

Brittan, R[aymond] O., et al. "Technical Review of ZPR-1 Accidental Transient - The Power Excursion, Exposures, and Clinical Data," ANL-4971. ANL-E, Jan. 26, 1953.

Subject Codes: A2, D, M, T

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Notes: Incident date 06/02/52

Subject Codes: (see full subject code list in the front matter for additional description)

A through A3 = criticality accidents

H1 and H2 = hazard-, risk-, and safety-analysis

B1 or B2 = extensive bibliography or references

M = medical

C1 through C5 = CASs

O = other

D = dose, dosimetry, distance and shielding

R = releases and release dispersion

E through E4 = emergency management

T = computational methods, tools, validation

Parenthesis indicate that the code(s) were assigned based on the document title or on its use as a reference in another document.

Later Work: Brittan, R[aymond] O., L. D. Marinelli, and F. W. Thalgott. "Technical Review of ZPR-1 Accidental Transient - The Power Excursion and Exposures," ANL-4971 (Rev.). ANL-E, 1953. (Referenced in several summaries but apparently not readily retrievable.)

Broadhead, B[ryan] L., et al. "Evaluation of Criticality Alarm Response at the WEMCO Fernald Site," ORNL/TM-55. ORNL, Nov. 1992.

Subject Codes: (A3, C2, C3, C4, D)

09/30/95 Status: Issued

Alt. Contact: NTIS, OSTI

Summary: Broadhead, B[ryan] L., R[obert] L. Childs, and R[obert] M. Westfall. "Evaluation of Fernald Plant 6 Criticality Alarm Response." In *ANS Trans.*, Vol. 70. ANS, June 1994, pp. 206-208.

Broadhead, B[ryan] L., and C[alvin] M. Hopper. "Updated Tool for Nuclear Criticality Accident Emergency Response." In *ANS Trans.*, Vol. 72. ANS, June 1995, pp. 218-220.

Subject Codes: A3, D, T

09/30/95 Status: Published

Related Work: Wilkinson, et al., *Nuclear Technology*, Vol. 111, No. 2, pp. 227-240, listed separately

Notes: Part of investigation to update Hopper, Y-DD-145, 1974, listed separately.

Broadhead, B[ryan] L., R[obert] L. Childs, and C[alvin] M. Hopper. "Verification of Criticality Accident Alarm System for Environmental Restoration Activities." In *ICNC'95 Proceedings of the Fifth International Conference on Nuclear Criticality Safety, Albuquerque, New Mexico USA, Sept. 1995*, Vol. II. UNM, Sept. 1995, pp. 13•16-13•21.

Subject Codes: C2, C4, D

09/30/95 Status: Published

Bruce, Marshall (compiler). "The Acute Radiation Syndrome: A Medical Report on the Y-12 Accident, June 16, 1958," ORINS-25. Oak Ridge Institute of Nuclear Studies, Oak Ridge, Tennessee USA, April 1959.

Subject Codes: A1, D, M

09/30/95 Status: Published

Alt. Contact: NTIS

Cember, Herman. "Chapter 9: Health Physics Instrumentation." In *Introduction to Health Physics*, Second Ed. Elmsford, New York USA: Pergamon Press, 1989.

Subject Codes: B1, C2, D, O

09/30/95 Status: Published

Notes: Principles and types of radiation level and radiation rate detectors.

Delafield, H[oward] J., D. M. Barker, and C. A. Perks. "The Use of an Expert System in Criticality Accident Dosimetry." In *Proceedings of ICNC'91 International Conference on Nuclear Criticality Safety, Oxford England, Sept. 1991*, Vol. 2. UKAEA Tech., Sept. 1991, pp. VII-97 - VII-103.

Subject Codes: D, E2, T

09/30/95 Status: Published

deOliveira, Cassiano R. E., et al. "Three-Dimensional Time-Dependent Finite Element Radiation Transport Methods for Criticality Assessment." In *ICNC'95 Proceedings of the Fifth International Conference on Nuclear Criticality Safety, Albuquerque, New Mexico USA, Sept. 1995*, Vol. I. UNM, Sept. 1995, pp. 6•38-6•43.

Subject Codes: D, T

09/30/95 Status: Published

Evans, Dennis R., Paul J. Sentieri, and James R. Wilson. "Evaluating the Consequences of a Repository Criticality." In *Proceedings of the Topical Meeting on DOE Spent Nuclear Fuel - Challenges and Initiatives, Salt Lake City, Utah USA, Dec. 1994*. ANS, Dec. 1994, pp. 389-393.

Subject Codes: A3, D, R

09/30/95 Status: Published

Notes: Well shielded underground accident. Included for general interest and for fission yield and shielding considerations; not for CASs or emergency planning.

Fisher, S[tephen] E., and K[atey] E. Lenox. "An Assessment of the Radiological Doses Resulting From Accidental Uranium Aerosol Releases and Fission Product Releases from a Postulated Criticality Accident at the Oak Ridge Y-12 Plant," Y/TS-1272. Y-12 Plant, Oak Ridge, Tennessee USA, March 1995.

Subject Codes: (A3, D, R, T)

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Notes: Author indicates that a technical editing error occurred in Table 3: "months" should be "minutes." Dose calculations apply to inhalation and fission products, not the prompt neutron-gamma dose.

Geller, L., and H[ugh] F. Henry. "Analysis of a Possible Radiation Burst," K-1095. UCNC, June 2, 1953.

Subject Codes: A3, D, T

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Gibson, J. A. B., and H[oward] J. Delafield. "The Neutron Capture Probability for Sodium Activation in Man Phantoms," AERE-R-7728. AERE, 1974.

Subject Codes: (D)

09/30/95 Status: Issued

Alt. Contact: HMSO, UKAEA

Gibson, J. A. B., H[oward] J. Delafield, and A. H. Reading. "Nuclear Accident Dosimetry - Report on the 4th IAEA Intercomparison Experiment at Harwell, UK - 7-18 April 1975: Part 1 - Description of the Experiment and Participant Results," AERE-R-8520. AERE, 1976.

Subject Codes: (D)

09/30/95 Status: Issued

Alt. Contact: IAEA, HMSO, UKAEA

Gibson, J. A. B., and E. Piesch. "Neutron Monitoring for Radiological Protection," IAEA Technical Report Series No. 252. IAEA, 1985.

Subject Codes: B1, C1, C2, D, O, T

09/30/95 Status: Published

Goebel, G. R., T. W. Hines, and A. M. Carver. "Radiation Monitoring During Criticality at a Gaseous Diffusion Plant." In *ANS Trans.*, Vol. 70. ANS, June 1994, pp. 208-209.

Subject Codes: D, E2, E4

09/30/95 Status: Published

Griffith, R. V., J. Palfalvi, U. Madhvanath. "Compendium of Neutron Spectra and Detector Responses for Radiation Protection Purposes," IAEA Technical Report Series No. 318. IAEA, 1990.

Subject Codes: B1, C2, D, O

09/30/95 Status: Published

Hankins, Dale E. "A Study of Selected Criticality Dosimetry Methods," LA-3910. LASL, June 1968.

Subject Codes: B1, D

09/30/95 Status: Issued

Alt. Contact: LANL, NTIS, OSTI

Subject Codes: (see full subject code list in the front matter for additional description)

A through A3 = criticality accidents
 B1 or B2 = extensive bibliography or references
 C1 through C5 = CASs
 D = dose, dosimetry, distance and shielding
 E through E4 = emergency management

H1 and H2 = hazard-, risk-, and safety-analysis
 M = medical
 O = other
 R = releases and release dispersion
 T = computational methods, tools, validation

Parenthesis indicate that the code(s) were assigned based on the document title or on its use as a reference in another document.

Hankins, Dale E. "Dosimetry of Criticality Accidents Using Activations of the Blood and Hair." *Health Physics* (Pergamon Press), Vol. 38, (April 1980): pp. 529-541.

Subject Codes: A3, B1, D

09/30/95 Status: Published

Alt. Contact: HPS

Hankins, Dale E. "Neutron and Gamma-Ray Dose Measurements at the Los Alamos Critical Assembly SHEBA." In *ANS Trans.*, Vol. 39. ANS, Nov. 1981, pp. 559-560.

Subject Codes: A3, C3, D

09/30/95 Status: Published

Hasterlik, R. J., and L. D. Marinelli. "Physical Dosimetry and Clinical Observations on Four Human Beings Involved in an Accidental Critical Assembly Excursion." In *Proceedings of the International Conference on Peaceful Uses of Atomic Energy, Geneva Switzerland, Aug. 1955*, Vol. 11. UN, 1956, pp. 25-34.

Subject Codes: A2, D, M

09/30/95 Status: Published

Notes: Incident date 06/02/52

Haywood, F. F., and J. W. Poston. "2nd IAEA Nuclear Accident Dosimetry Coordination Meeting and Intercomparison Experiment, May 3-15, 1971," ORNL-TM-3770. ORNL, 1971.

Subject Codes: (D)

09/30/95 Status: Issued

Alt. Contact: IAEA, NTIS, OSTI

Haywood, F. F., et al. "Dosimetry for Criticality Accidents: A Manual," IAEA Technical Report Series No. 211. IAEA, Feb. 1982.

Subject Codes: B1, D, T

09/30/95 Status: Active

Hempelmann, Louis H., Clarence C. Lushbaugh, and George L. Voelz. "What Happened to the Survivors of the Early Los Alamos Nuclear Accidents?" In *The Medical Basis for Radiation Accident Preparedness: Proceedings of the REAC/TS International Conference, Oak Ridge, Tennessee USA, Oct. 1979*, edited by Karl F. Hübner and Shirley A. Fry. New York, New York USA: Elvsevier/North-Holland, 1980, pp. 17-32.

Subject Codes: A2, D, M

09/30/95 Status: Published

Notes: Includes re-evaluations of doses based on recommendation changes over the years.
Incident dates 08/21/45 and 05/21/46.

Henderson, P. J. "Conversion of Neutron and Gamma-Ray Flux to Absorbed Dose Rate," XDC-59-8-179. Cincinnati, Ohio USA: General Electric Atomic Products Division, Aug. 1959.

Subject Codes: (D, T)

09/30/95 Status: Issued

Notes: Many recommended conversion factors have changed since 1959 but the factors of this report were used extensively.

Henry, H[ugh] F., J. C. Bailey, and R. C. Rohr. "Calibration of Indium Foils for Personnel Monitoring," K-999. UCNC, 1953.

Subject Codes: (D, T)

09/30/95 Status: Issued

Alt. Contact: NTIS, OSTI

Henry, H[ugh] F., J. C. Bailey, and R. C. Rohr. "A Simple Device for Personnel Monitoring of an Accidental Nuclear Reaction." *Nuclear Science and Engineering* (ANS), Vol. 5, No. 5 (1959): pp. 285-290.

Subject Codes: D

09/30/95 Status: Published

Hoffman, Joseph G. "Radiation Doses in the Pajarito Accident of May 21, 1946," LA-687. LASL, May 26, 1948.

Subject Codes: A2, D, T

09/30/95 Status: Published

Alt. Contact: LANL, NTIS, OSTI

Hopper, C[alvin] M. "A Slide Rule for Estimating Nuclear Criticality Information," Y-DD-145. UCNC Y-12 Plant, Jan. 7, 1974.

Subject Codes: A3, B1, D, T

09/30/95 Status: Issued

Alt. Contact: NTIS, OSTI

Further Work: Wilkinson, et al, *Nuclear Technology*, Vol. 111, No. 2, pp. 227-240, listed separately.

○ Broadhead and Hopper, *ANS Trans.*, Vol. 72, pp. 218-220, listed separately.

Notes: Revision due to be issued in 1996.

Hurst, G. S., et al. "Techniques of Measuring Neutron Spectra with Threshold Detectors - Tissue Dose Determination." *Review of Scientific Instruments*, Vol. 27, No. 3 (March 1956): pp. 153-156.

Subject Codes: D

09/30/95 Status: Published

Hurst, G. S., R. H. Ritchie, and L. C. Emerson. "Accidental Radiation Excursion at the Oak Ridge Y-12 Plant, III. Determination of Radiation Doses." *Health Physics* (Pergamon Press), Vol. 2, No. 2 (1959): pp. 121-133.

Subject Codes: A1, D, T

09/30/95 Status: Published

Alt. Contact: HPS

Notes: Incident date 06/16/58

3rd of 4 part series of articles

[HPS]. "American National Standard: Dosimetry for Criticality Accidents," ANSI N13.3-1969 (R1988). ANSI, approved July 17, 1969.

Subject Codes: D, E1, E2, E4, T

09/30/95 Status: Active

Notes: References standards ANSI N16.1-1969 and N16.2-1969 but allows rev.s to apply.

Current rev.s are ANSI/ANS-8.1-1983 (R1988) and -8.3-1986.

IOS. "International Standard, Nuclear Energy - X and Gamma Reference Radiations for Calibrating Dosimeters and Dose Ratemeters and for Determining their Response as a Function of Photon Energy," ISO 4037: 1979. IOS, 1979.

Subject Codes: (C1, D, T, O)

09/30/95 Status: Active

Notes: Apparently Part I. A draft Part II was available for comment as of June 1995.

Kathren, R[onald] L., et al. "Health Physics Following a Nuclear Excursion: The LRL Incident of 26 March 1963," UCRL-7345 (Rev. I). LLNL, June 3, 1963.

Subject Codes: A2, D, M

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Lee, [Jr.], Billy L., et al. "Calculated In-Air Leakage Spectra and Power Levels for the ANSI Standard Minimum Accident of Concern." In *ANS Trans.*, Vol. 71. ANS, Nov. 1994, pp. 286-287.

Subject Codes: A3, D, O

09/30/95 Status: Published

Subject Codes: (see full subject code list in the front matter for additional description)

A through A3 = criticality accidents

B1 or B2 = extensive bibliography or references

C1 through C5 = CASs

D = dose, dosimetry, distance and shielding

E through E4 = emergency management

H1 and H2 = hazard-, risk-, and safety-analysis

M = medical

O = other

R = releases and release dispersion

T = computational methods, tools, validation

Parenthesis indicate that the code(s) were assigned based on the document title or on its use as a reference in another document.

Lee, Jr., Billy L., et al. "Evaluation of Coverage of Enriched UF₆ Cylinder Storage Lots by Existing Criticality Accident Alarms," POEF-SH-29. Martin Marietta Energy Systems, Inc., Piketon, Ohio USA, March 1995.

Subject Codes: (A3, C2, C4, D)

09/30/95 Status: Published

Maceda, E. L., and D[on] K. Sgarlata. "Radius of Coverage of Nuclear Criticality Detectors." In *ANS Trans.*, Vol. 34. ANS, 1980, pp. 330-331.

Subject Codes: C2, D, T

09/30/95 Status: Published

McLendon, J[ack] D. "Accidental Radiation Excursion at the Oak Ridge Y-12 Plant, II. Health Physics Aspects of the Accident." *Health Physics* (Pergamon Press), Vol. 2, No. 1 (1959): pp. 21-29.

Subject Codes: A1, D, M

09/30/95 Status: Published

Alt. Contact: HPS

Notes:

Incident date 06/16/58

2nd of 4 part series of articles

Mee, W[illiam] T., D[avis] A. Reed, and R[ichard] G. Taylor. "Consequences of a Postulated, Moderated Criticality Accident at the Oak Ridge Y-12 Plant," Y/DD-384. Martin Marietta Energy Systems, Inc., Oak Ridge, Tennessee USA, Sept. 1988.

Subject Codes: A3, D, R, T

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Notes: Authors indicate there are a few minor errors with the release calculations.

Mirić, I, and Ž. Ubović. "3rd IAEA Nuclear Accident Intercomparison Experiment, 14-25 May 1973" (probably not in English), IBK-1275. Belgrade Yugoslavia: Boris Kidrič Institute, 1974.

Subject Codes: (D)

09/30/95 Status: Issued

Alt. Contact: IAEA

Monahan, S[hean] P. "The Neutron Physics of Concrete Reflectors." In *ICNC'95 Proceedings of the Fifth International Conference on Nuclear Criticality Safety, Albuquerque, New Mexico USA, Sept. 1995*, Vol. II. UNM, Sept. 1995, pp. 11•158-11•165.

Subject Codes: D

09/30/95 Status: Published

Nakache, F. R., and M. M. Shapiro. "The Nuclear Aspects of the Accidental Criticality at Wood River Junction, Rhode Island, July 24, 1964," TID-21995. New Haven, Connecticut USA: United Nuclear Corporation, Nov. 12, 1964.

Subject Codes: A1, D, T

09/30/95 Status: Published

Alt. Contact: NTIS

Notes:

No. assigned after initial distribution

Summary: Auxier, *Nuclear Safety*, Vol. 6, No. 3, pp. 298-301, listed separately.

Supplement to: Allison, et al., "Nuclear Incident ... July 24, 1964," Aug. 21, 1964, listed separately.

NCRP. "Protection Against Neutron Radiation, Recommendations" NCRP Report No. 38. NCRP, issued Jan. 4, 1971.

Subject Codes: B1, D, O, T

09/30/95 Status: Active

Notes: Especially see Appendix F, "Accident Dosimetry."

NCRP. "Basic Radiation Protection Criteria," NCRP Report No. 39. NCRP, issued Jan. 15, 1971.

Subject Codes: B1, D, M, O, T

09/30/95 Status: Superseded by NCRP Report No. 91

Notes: The 12 rad threshold specified in ANSI/ANS-8.3-1986 is loosely based on ½ the NCRP No. 39 reported 25 rad dose at which temporary changes to whole blood cells were barely detectable.

NCRP. "Recommendations on Limits for Exposure to Ionizing Radiation," NCRP Report No. 91. NCRP, issued June 1, 1987.

Subject Codes: B1, D, O, T

09/30/95 Status: Active

Notes: Limit recommendations supersede those of NCRP Report No. 39.

Negron, Scott B., and Robert W. Tayloe, Jr. "Analysis of the Proposed Relocation of Neutron Criticality Clusters in the Process Buildings for the Portsmouth Gaseous Diffusion Plant," POEF-SH-12. Martin Marietta Energy Systems, Inc., Piketon, Ohio USA, Jan. 1994.

Subject Codes: (A3, C1, C2, C4, D)

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Summary: Negron, Scott B., Robert W. Tayloe, Jr., and Donna M. D'Aquila. "Proposed Relocation of Neutron Criticality Clusters for the PGDP." In *ANS Trans.*, Vol. 70. ANS, June 1994, pp. 209-210.

Negron, Scott B., Robert W. Tayloe, Jr., and M. C. Dobelbower "Analysis of Criticality Alarm System Response to an Accidental Criticality Outside the Cascade Process Buildings at the Portsmouth Gaseous Diffusion Plant," POEF-SH-19. Martin Marietta Energy Systems, Inc., Piketon, Ohio USA, July 1994.

Subject Codes: (A3, C2, C4, D)

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

NRC Office of Standards Development. "Assumptions Used for Evaluating the Potential Radiological Consequences of Accidental Nuclear Criticality in a Uranium Fuel Fabrication Plant," NRC Regulatory Guide 3.34 (Rev. 1). NRC, July 1979.

Subject Codes: A3, B1, C5, D, E1, T

09/30/95 Status: Active

NRC Office of Standards Development. "Assumptions Used for Evaluating the Potential Radiological Consequences of Accidental Nuclear Criticality in a Plutonium Processing and Fuel Fabrication Plant," NRC Regulatory Guide 3.35 (Rev. 1). NRC, July 1979.

Subject Codes: A3, B1, C5, D, E1, T

09/30/95 Status: Active

NRC Office of Standards Development. "Assumptions Used for Evaluating the Potential Radiological Consequences of Accidental Nuclear Criticality in a Fuel Processing Plant," NRC Regulatory Guide 3.33 (Rev. 0). NRC, April 1987.

Subject Codes: A3, B1, C5, D, E1, T

09/30/95 Status: Active

Paine, Jr., Roger W. "A Study of an Accidental Radiation Burst," LA-1289. LASL, March 20, 1951.

Subject Codes: A2, D

09/30/95 Status: Issued

Alt. Contact: LANL, NTIS, OSTI

Notes: Incident date 02/01/51.

Parks, Cecil V., et al. "Assessment of Shielding Analysis Methods, Codes, and Data for Spent Fuel Transport/Storage Applications," ORNL/CSD/TM-246. ORNL, July 1988.

Subject Codes: (D, T)

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Subject Codes: (see full subject code list in the front matter for additional description)

A through A3 = criticality accidents

B1 or B2 = extensive bibliography or references

C1 through C5 = CASs

D = dose, dosimetry, distance and shielding

E through E4 = emergency management

H1 and H2 = hazard-, risk-, and safety-analysis

M = medical

O = other

R = releases and release dispersion

T = computational methods, tools, validation

Parenthesis indicate that the code(s) were assigned based on the document title or on its use as a reference in another document.

Parmentier, N. C., R. Boulenger, and G. Portal. "Problèmes de Dosimétrie lors de l'Accident." In *Proceedings of the First International Congress on Radiation Protection, Rome Italy, Sept. 1966*, edited by W. S. Snyder, et al., Part 2. Pergamon Press, 1967, pp. 1231-1248.

Subject Codes: A2, D, M

09/30/95 Status: Published

Notes: Incident date 12/30/65

Parmentier, N. C., J. C. Nénot, and H. J. Jammet. "A Dosimetric Study of the Belgian (1965) and Italian (1975) Accidents." In *The Medical Basis for Radiation Accident Preparedness: Proceedings of the REAC/TS International Conference, Oak Ridge, Tennessee USA, Oct. 1979*, edited by Karl F. Hübner and Shirley A. Fry. New York, New York USA: Elvsevier/North-Holland, 1980, pp. 105-112.

Subject Codes: A2, D, O

09/30/95 Status: Published

Notes: Incident dates 12/30/65 (criticality accident) and 05/13/75 (cobalt source accident).

[Patton, F. S., et al.] "Accidental Excursion at the Y-12 Plant, June 16, 1958, Final Report," Y-1234. UCNC Y-12 Plant, July 28, 1958.

Subject Codes: A1, D, E2, O

09/30/95 Status: Issued

Alt. Contact: NTIS, OSTI

Summary: Luntz, *Nucleonics*, Vol. 16, No. 1, pp. 138-140 and 200-203, listed separately

Paxton, Hugh C. "The Nature and Consequences of Nuclear Accidents." In *Proceedings of the National Topical Meeting on Nuclear Criticality Safety, Las Vegas, Nevada USA, Dec. 1966*, SC-DC-67-1305.

No publication data, pp. 213-218.

Subject Codes: (A3, D, E2, E3, E4)

09/30/95 Status: Published

Alt. Contact: possibly ANS or NTIS

Profio, A. E. "Experimental Tests of Shielding Codes," AFWL-TR-69-116. San Diego, California USA: Gulf General Atomic, Inc., Dec. 1969.

Subject Codes: D, T

09/30/95 Status: Published

Alt. Contact: NTIS

Pryor, William A. "Accident Consequences and Emergency Planning." In *Proceedings, Nuclear Criticality Safety, El Paso, Texas USA, April 1990*, SAND80-1675. Albuquerque, New Mexico USA: Sandia National Laboratories, 1990, pp. 301-316.

Subject Codes: A3, D, E2, E3, O

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Notes: Overview of criticality accident and emergency planning history, with emphasis on developing emergency management resources including REAC/TS

REAC/TS. "Radiation Accident Registries: Serious Radiation Accidents Worldwide." ORAU, updated periodically.

Subject Codes: (A1, A2, B2, D, M, O)

09/30/95 Status: Ongoing project

Notes: REAC/TS database maintained in conjunction with site for maintaining and training responders for radiation emergencies.

Description: Fry, Shirley A. "The United States Radiation Accident and Other Registries of the REAC/TS Registry System: Their Functions and Current Status." In *The Medical Basis for Radiation Accident Preparedness: Proceedings of the REAC/TS International Conference, Oak Ridge, Tennessee USA, Oct. 1979*, edited by Karl F. Hübner and Shirley A. Fry. New York, New York USA: Elvsevier/North-Holland, 1980, pp. 451-468.

Example: An example of the data were included on pages 6-16 of the same proceedings.

Ricks, Robert C. "REAC/TS: Its Role As a Specialty Referral Center and Training Site." In *The Medical Basis for Radiation Accident Preparedness: Proceedings of the REAC/TS International Conference, Oak Ridge, Tennessee USA, Oct. 1979*, edited by Karl F. Hübner and Shirley A. Fry. New York, New York USA: Elsevier/North-Holland, 1980, pp. 291-296.

Subject Codes: D, E5, M, O 09/30/95 Status: Published

Notes: Describes REAC/TS and other centers as a resource for radiological emergency training, response, and information.

Roesch, R. O., et al. "Dosimetry Investigation of the Recuplex Accident," HW-SA-2730. HW, Aug. 22, 1962.

Subject Codes: (A1, D, T) 09/30/95 Status: Published

Alt. Contact: Hanford, NTIS, OSTI Notes: Incident date 04/07/62

Summary: Hanford Laboratories. "Dosimetry Investigation on the RECUPLEX Criticality Accident." *Health Physics* (Pergamon Press), Vol. 9 (1963): p. 839.

Santoro, R. T., et al. "Nuclear Accident Dosimetry in a Simulated Criticality Accident." In *ANS Trans.*, Vol. 19. ANS, Oct. 1974, pp. 195-196.

Subject Codes: D, E2 09/30/95 Status: Published

Sims, C. S., and H. W. Dickson. "Nuclear Accident Dosimetry Intercomparison Studies at the Health Physics Research Reactor: A Summary (1965-1978)." *Health Physics* (Pergamon Press), Vol. 37 (1979): p. 328.

Subject Codes: (D) 09/30/95 Status: Published

Alt. Contact: HPS

Notes: Apparently Sims published an update in *Health Physics* sometime in 1989 or 1990.

Schwinkendorf, K[evin] N. "Dose Calculations for Nuclear Criticality Accidents that Occur Under Large Amounts of Water." In *ANS Trans.*, Vol. 66. ANS, Nov. 1992, pp. 292-293.

Subject Codes: A3, D 09/30/95 Status: Published

Swaja, R. E., and R. T. Greene. "Neutron and Gamma Attenuation Characteristics of Various Shields During Nuclear Criticality Accidents." In *ANS Trans.*, Vol. 39. ANS, Nov. 1981, pp. 521-522.

Subject Codes: A3, C2, C4, D 09/30/95 Status: Published

Thomas, W., and B. Gamal. "Modeling of Criticality Accidents and Their Environmental Consequences." In *ANS Trans.*, Vol. 55. ANS, Nov. 1987, pp. 409-410.

Subject Codes: D, R, T 09/30/95 Status: Published

Thorngate, John H., Duane W. Rueppel, and Richard V. Griffith. "Neutron and Gamma Spectrum Measurements at the Los Alamos Critical Assembly SHEBA." In *ANS Trans.*, Vol. 39. ANS, Nov. 1981, pp. 557-559.

Subject Codes: A3, C3, D 09/30/95 Status: Published

Subject Codes: (see full subject code list in the front matter for additional description)

A through A3 = criticality accidents

B1 or B2 = extensive bibliography or references

C1 through C5 = CASs

D = dose, dosimetry, distance and shielding

E through E4 = emergency management

H1 and H2 = hazard-, risk-, and safety-analysis

M = medical

O = other

R = releases and release dispersion

T = computational methods, tools, validation

Parenthesis indicate that the code(s) were assigned based on the document title or on its use as a reference in another document.

Vasilik, D. G., R. W. Martin, and D. Fuller. "Nuclear Accident Dosimetry: Measurements at the Los Alamos SHEBA Critical Assembly," LA-8911-MS. LANL, July 1981.

Subject Codes: A3, C1, D

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Westfall, R[obert] M[ichael], and J[ohn] R. Knight. "Radiation Levels in a Gaseous Diffusion Plant Assuming a Low-Enriched Criticality Event Corresponding to the ANSI-Standard Minimum Accident of Concern," K/CSD/TM--55. UCNC, Feb. 1984.

Subject Codes: C3, D

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Whitesides, G. E[lliott]. "The Need for Radiation Field Measurements from a Low-Enriched Critical Assembly." In *ANS Trans.*, Vol. 39. ANS, Nov. 1981, p. 554.

Subject Codes: A3, D

09/30/95 Status: Published

Wilkinson, A[lan], et al. "Improved Dose Estimates for Nuclear Criticality Accidents." *Nuclear Technology* (ANS), Vol. 111, No. 2 (Aug. 1995): pp. 227-240.

Subject Codes: A3, B1, D, T

09/30/95 Status: Published

Earlier Work: Wilkinson, A[lan], et al. "Improved Dose Estimates for Nuclear Criticality Accidents: Preliminary Results." In *ANS Trans.*, Vol. 70. ANS, June 1994, pp. 191-192.

○ Wilkinson, A[lan] "Improved Dose Estimates for Nuclear Criticality Accidents." Master's thesis, University of Tennessee - Knoxville, 1994

Related Work: Broadhead and Hopper, *ANS Trans.*, Vol. 72, pp. 218-220, listed separately.

Notes: Part of investigation to update: Hopper, Y-DD-145, 1974, listed separately

3.11 Code E1: Criticality Accident Emergency Management Guidance, Requirements, and Associated Comments

ANS. "Nuclear Criticality Safety in Operations with Fissionable Materials Outside Reactors, An American National Standard," ANSI/ANS-8.1-1983 (R1988). ANS, approved Oct. 7, 1983.

Subject Codes: E1, E2, O

09/30/95 Status: Active, under revision

Notes: Superseded documents are ANSI N6.1-1964, ANSI N16.1-1969, and ANSI N16.1-1975.

Endorsed by NRC Reg. Guide 3.04 (Rev. 2) which is active.

Compliance required by DOE 5480.24 which is active.

No technical or detailed emergency management/planning guidance.

ANS. "Administrative Practices for Nuclear Criticality Safety, An American National Standard," ANSI/ANS-8.19-1984 (R1988). ANS, approved Oct. 1, 1984.

Subject Codes: E, O

09/30/95 Status: Active, under revision

Notes: Endorsed by NRC Reg. Guide 3.57 (Rev. 0) which is active

Compliance required by DOE 5480.24 which is active.

No technical emergency management guidance.

ANS. "Nuclear Criticality Accident Emergency Planning and Response, An American National Standard," ANSI/ANS-8.23-199x. Draft, June 1995.

Subject Codes: E

09/30/95 Status: Draft, under review

Aspinall, K[ieth] J., and J. T. Daniels. "Review of UKAEA Criticality Detection and Alarm Systems 1963/64 Part 1: Provision and Design Principles," AHSB (S) R 92. London UK: UKAEA AHSB, 1965.

Subject Codes: A, B1, C2, C3, C4, C5, E 09/30/95 Status: Published

Alt. Contact: HMSO

Aspinall, K[ieth] J. "Criticality Detection and Alarm Systems: Design Principles." In *Criticality Control of Fissile Materials, Stockholm Sweden, Nov. 1965*. IAEA, 1966, pp. 701-716.

Subject Codes: A, C2, C3, C5, E 09/30/95 Status: Published

Carson, R. W[illiam], and J[ohn] S. Pearson. "Criticality Safety Drill and Exercise Programs." In *ANS Trans.*, Vol. 72. ANS, June 1995, p. 221-222.

Subject Codes: E1, E3 09/30/95 Status: Published

Fruchard, Y., and J. M. Lavie. "Prevention des Causes et des Consequence d'un Accidente de Criticite: Solutions Adoptees in France." In *Criticality Control of Fissile Materials, Stockholm Sweden, Nov. 1965*. IAEA, 1966, pp. 717-736.

Subject Codes: A3, C2, C3, E1, O 09/30/95 Status: Published

Henry, Hugh F. "Planning for Control of Criticality Emergencies." In *Progress in Nuclear Energy Series IV: Technology, Engineering, and Safety*, edited by C. M. Nicholle. New York USA: Pergamon Press, 1960, pp. 206-227.

Subject Codes: A3, C2, C5, E, H1, O 09/30/95 Status: Published

[HPS]. "American National Standard: Dosimetry for Criticality Accidents," ANSI N13.3-1969 (R1988). ANSI, approved July 17, 1969.

Subject Codes: D, E1, E2, E4, T 09/30/95 Status: Active

Notes: References standards ANSI N16.1-1969 and N16.2-1969 but allows rev.s to apply.

Current rev.s are ANSI/ANS-8.1-1983 (R1988) and -8.3-1986.

McBride, J[ohn] A., et al. "Safety Aspects of U. S. Fuel Reprocessing." In *Proceedings of the Third United Nations International Conference on Peaceful Uses of Atomic Energy, Geneva Switzerland, Aug.-Sept. 1964*, Vol. 13. UN, 1965, pp. 194-203.

Subject Codes: A1, E1, O 09/30/95 Status: Published

McGuire, S. A. "A Regulatory Analysis on Emergency Preparedness for Fuel Cycle Facilities and Other Radioactive Material Licensees, Final Report" NUREG-1140. NRC, Jan. 1985.

Subject Codes: E1, E5 09/30/95 Status: Published

NRC. "Criticality Accident Requirements," 10 CFR 70.24. FR, no date.

Subject Codes: C2, C3, C5, E 09/30/95 Status: Active

Source: *Federal Register* (GPO), Vol. 39 (Nov. 5, 1974): p. 39021; as amended in Vol. 41 (July 29, 1976): p. 31522, and in Vol. 53 (May 27, 1988): p. 19252.

Subject Codes: (see full subject code list in the front matter for additional description)

A through A3 = criticality accidents

B1 or B2 = extensive bibliography or references

C1 through C5 = CASs

D = dose, dosimetry, distance and shielding

E through E4 = emergency management

H1 and H2 = hazard-, risk-, and safety-analysis

M = medical

O = other

R = releases and release dispersion

T = computational methods, tools, validation

Parenthesis indicate that the code(s) were assigned based on the document title or on its use as a reference in another document.

NRC. "Reports of Accidental Criticality or Loss or Theft or Attempted Theft of Special Nuclear Material," 10 CFR 70.52. FR, no date.

Subject Codes: E1, E4, O

09/30/95 Status: Active

Source: *Federal Register* (GPO), Vol. 52 (June 9, 1987): p. 21657.

NRC Office of Standards Development. "Assumptions Used for Evaluating the Potential Radiological Consequences of Accidental Nuclear Criticality in a Uranium Fuel Fabrication Plant," NRC Regulatory Guide 3.34 (Rev. 1). NRC, July 1979.

Subject Codes: A3, B1, C5, D, E1, T

09/30/95 Status: Active

NRC Office of Standards Development. "Assumptions Used for Evaluating the Potential Radiological Consequences of Accidental Nuclear Criticality in a Plutonium Processing and Fuel Fabrication Plant," NRC Regulatory Guide 3.35 (Rev. 1). NRC, July 1979.

Subject Codes: A3, B1, C5, D, E1, T

09/30/95 Status: Active

NRC Office of Standards Development. "Assumptions Used for Evaluating the Potential Radiological Consequences of Accidental Nuclear Criticality in a Fuel Processing Plant," NRC Regulatory Guide 3.33 (Rev. 0). NRC, April 1987.

Subject Codes: A3, B1, C5, D, E1, T

09/30/95 Status: Active

Payne, Jon (editor). Standards, Standards Actions, "Clarification." *Nuclear News* (ANS), Vol. 35, No. 9 (July 1992): p. 76.

Subject Codes: C3, C5, E1, E2

09/30/95 Status: Published

Notes: Clarification to paragraph 4.2 of ANSI/ANS-8.3-1986.

Pruvost, Norman L. "Proposed Standard for Nuclear Criticality Accident Emergency Planning and Response." In *ANS Trans.*, Vol. 72. ANS, June 1995, p. 215.

Subject Codes: E1

09/30/95 Status: Published

Rimmer, E., et al. "The Provision of Criticality Incident Detection, Alarm and Warning Systems (Provisional)," AECF 1074. Risley, Warrington UK: UKAEA Standards Section, Feb. 1987.

Subject Codes: C1, C2, C3, C5, E

09/30/95 Status: Indeterminant

Alt. Contact: HMSO

Notes: Never formally issued but in current use at several UK facilities

3.12 Code E2: Criticality Accident Emergency Planning

ANS. "Administrative Practices for Nuclear Criticality Safety, An American National Standard," ANSI/ANS-8.19-1984 (R1988). ANS, approved Oct. 1, 1984.

Subject Codes: E, O

09/30/95 Status: Active, under revision

Notes: Endorsed by NRC Reg. Guide 3.57 (Rev. 0) which is active
Compliance required by DOE 5480.24 which is active.
No technical emergency management guidance.

ANS. "Nuclear Criticality Safety in Operations with Fissionable Materials Outside Reactors, An American National Standard," ANSI/ANS-8.1-1983 (R1988). ANS, approved Oct. 7, 1983.

Subject Codes: E1, E2, O

09/30/95 Status: Active, under revision

Notes: Superseded documents are ANSI N6.1-1964, ANSI N16.1-1969, and ANSI N16.1-1975.
Endorsed by NRC Reg. Guide 3.04 (Rev. 2) which is active.

Compliance required by DOE 5480.24 which is active.
No technical or detailed emergency management/planning guidance.

ANS. "Nuclear Criticality Accident Emergency Planning and Response, An American National Standard," ANSI/ANS-8.23-199x. Draft, June 1995.

Subject Codes: E

09/30/95 Status: Draft, under review

Aspinall, K[ieth] J., and J. T. Daniels. "Review of UKAEA Criticality Detection and Alarm Systems 1963/64 Part 1: Provision and Design Principles," AHSB (S) R 92. London UK: UKAEA AHSB, 1965.

Subject Codes: A, B1, C2, C3, C4, C5, E

09/30/95 Status: Published

Alt. Contact: HMSO

Aspinall, K[ieth] J. "Criticality Detection and Alarm Systems: Design Principles." In *Criticality Control of Fissile Materials, Stockholm Sweden, Nov. 1965*. IAEA, 1966, pp. 701-716.

Subject Codes: A, C2, C3, C5, E

09/30/95 Status: Published

Austin, T[im] B., C[hristopher] R. J. Sunman, and S[tephan] J. Walls. "Aspects of Criticality Emergency Planning - Criticality Excursion Yields and Criticality Incident Detection and Alarm System Reliabilities." In *ICNC'95 Proceedings of the Fifth International Conference on Nuclear Criticality Safety, Albuquerque, New Mexico USA, Sept. 1995*, Vol. II. UNM, Sept. 1995, pp. 13•7-13•15.

Subject Codes: A3, C1, C3, E2

09/30/95 Status: Published

Barbry, F[rancis Y.], et al. "Fuel Solution Criticality Accident Studies with the Silene Reactor: Phenomenology, Consequence, and Simulated Intervention." In *Proceedings of the International Seminar on Criticality Studies Programs and Needs, Dijon France, Sept. 1983*. Centre d' Études de Valduc, France: CEA, 1984, pp. 36-52.

Subject Codes: A3, E2

09/30/95 Status: Published

Later Work: Barbry, Francis, CEA/SRSC 223, Sept. 1994, listed separately.

Barbry, Francis Y. "Exposure Risks and Possibilities of Intervention and Diagnosis in Criticality Accidents." In *Proceedings of ICNC'91 International Conference on Nuclear Criticality Safety, Oxford England, Sept. 1991*, Vol. 2. UKAEA Tech., Sept. 1991, pp. VII-33 - VII-40.

Subject Codes: A3, C3, D, E2, E3

09/30/95 Status: Published

Summary: Barbry, Francis Y. "Exposure Risks and Possibilities of Intervention and Diagnosis in Criticality Accidents." In *ANS Trans.*, Vol. 63. ANS, June 1991, pp. 228-231.

Bhanot, K[athleen] E., R[ussell] L. Bowden, and P[eter] R. Thorne. "Development of a Criticality Emergency Planning Programme." In *ICNC'95 Proceedings of the Fifth International Conference on Nuclear Criticality Safety, Albuquerque, New Mexico USA, Sept. 1995*, Vol. II. UNM, Sept. 1995, pp. 13•3-13•6.

Subject Codes: A3, C2, C3, E2

09/30/95 Status: Published

Subject Codes: (see full subject code list in the front matter for additional description)

A through A3 = criticality accidents

B1 or B2 = extensive bibliography or references

C1 through C5 = CASs

D = dose, dosimetry, distance and shielding

E through E4 = emergency management

H1 and H2 = hazard-, risk-, and safety-analysis

M = medical

O = other

R = releases and release dispersion

T = computational methods, tools, validation

Parenthesis indicate that the code(s) were assigned based on the document title or on its use as a reference in another document.

Cooper, A[ndrew] J[ames], and J[ohn] M[urray] Hobson. "Assessment of Design Implications of Detecting and Responding to Accidental Criticality Incidents." In *Proceedings of ICNC'91 International Conference on Nuclear Criticality Safety, Oxford England, Sept. 1991*, Vol. 2. UKAEA Tech., Sept. 1991, pp. VII-55 - VII-61.

Subject Codes: C2, C3, C4, E2, T

09/30/95 Status: Published

Choi, Jor-Shan, J. Walter Thompson, and Raymond [L.] Reed. "Estimates of Fission Yields in Nuclear Criticality Excursions." In *ANS Trans.*, Vol. 72. ANS, June 1995, pp. 217-218.

Subject Codes: A3, E2

09/30/95 Status: Published

D'Aquila, Donna [M.], Michael [A.] Austin, and David [L.] Honkonen. "Evacuation, Reentry, and Rescue During Nuclear Criticality Accident Response." In *ANS Trans.*, Vol. 72. ANS, June 1995, pp. 216-217.

Subject Codes: E2, E4

09/30/95 Status: Published

Delafield, H[oward] J., and J. J. Clifton. "Design Criteria and Principles for Criticality Detection and Alarm Systems," SRD R 309. Culcheth, Warrington UK: UKAEA SRD, Oct. 1984.

Subject Codes: A3, C1, C2, C3, C5, E2

09/30/95 Status: Published

Alt. Contact: HMSO

Delafield, H[oward] J., D. M. Barker, and C. A. Perks. "The Use of an Expert System in Criticality Accident Dosimetry." In *Proceedings of ICNC'91 International Conference on Nuclear Criticality Safety, Oxford England, Sept. 1991*, Vol. 2. UKAEA Tech., Sept. 1991, pp. VII-97 - VII-103.

Subject Codes: D, E2, T

09/30/95 Status: Published

Goebel, G. R., T. W. Hines, and A. M. Carver. "Radiation Monitoring During Criticality at a Gaseous Diffusion Plant." In *ANS Trans.*, Vol. 70. ANS, June 1994, pp. 208-209.

Subject Codes: D, E2, E4

09/30/95 Status: Published

Henry, Hugh F. "Planning for Control of Criticality Emergencies." In *Progress in Nuclear Energy Series IV: Technology, Engineering, and Safety*, edited by C. M. Nicholle. New York USA: Pergamon Press, 1960, pp. 206-227.

Subject Codes: A3, C2, C5, E, H1, O

09/30/95 Status: Published

Hobson, J[ohn] M[urray] "Definition of Areas Requiring Criticality Alarm Annunciation and Emergency Control." In *Transactions of the Criticality Accident Alarm Systems Workshop, Richland, Washington USA, Sept. 1988*, DOE/NCT-05. LLNL, 1988, pp. 163-171.

Subject Codes: A3, C3, E2, O, T

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Howells, H., and J. T. Daniels. "Organization for Operational Control of Criticality." In *Criticality Control in Chemical and Metallurgical Plant, Karlsruhe Symposium, Karlsruhe Germany, May 1961*. OECD, Nov. 1961, pp. 465-476.

Subject Codes: C2, C3, E2, E3, O

09/30/95 Status: Published

Notes: Criticality safety program overview

[HPS]. "American National Standard: Dosimetry for Criticality Accidents," ANSI N13.3-1969 (R1988). ANSI, approved July 17, 1969.

Subject Codes: D, E1, E2, E4, T

09/30/95 Status: Active

Notes: References standards ANSI N16.1-1969 and N16.2-1969 but allows rev.s to apply. Current rev.s are ANSI/ANS-8.1-1983 (R1988) and -8.3-1986.

Knief, Ronald A. "Emergency Planning Lessons Learned from TMI-2: Potential Applications for Fuel Facilities." In *ANS Trans.*, Vol. 72. ANS, June 1995, pp. 220-221.

Subject Codes: A2, E2

09/30/95 Status: Published

Mee, W[illiam] T., and J[ack] D. McLendon. "The Oak Ridge Y-12 Plant Criticality Accident Emergency Program." In *ANS Trans.*, Vol. 19. ANS, Oct. 1974, pp. 194-195.

Subject Codes: E2, E3

09/30/95 Status: Published

NRC. "Criticality Accident Requirements," 10 CFR 70.24. FR, no date.

Subject Codes: C2, C3, C5, E

09/30/95 Status: Active

Source: *Federal Register* (GPO), Vol. 39 (Nov. 5, 1974): p. 39021; as amended in Vol. 41 (July 29, 1976): p. 31522, and in Vol. 53 (May 27, 1988): p. 19252.

Rimmer, E., et al. "The Provision of Criticality Incident Detection, Alarm and Warning Systems (Provisional)," AECF 1074. Risley, Warrington UK: UKAEA Standards Section, Feb. 1987.

Subject Codes: C1, C2, C3, C5, E

09/30/95 Status: Indeterminant

Alt. Contact: HMSO

Notes: Never formally issued but in current use at several UK facilities

[Patton, F. S., et al.] "Accidental Excursion at the Y-12 Plant, June 16, 1958, Final Report," Y-1234. UCNC Y-12 Plant, July 28, 1958.

Subject Codes: A1, D, E2, O

09/30/95 Status: Issued

Alt. Contact: NTIS, OSTI

Summary: Luntz, *Nucleonics*, Vol. 16, No. 1, pp. 138-140 and 200-203, listed separately

Payne, Jon (editor). Standards, Standards Actions, "Clarification." *Nuclear News* (ANS), Vol. 35, No. 9 (July 1992): p. 76.

Subject Codes: C3, C5, E1, E2

09/30/95 Status: Published

Notes: Clarification to paragraph 4.2 of ANSI/ANS-8.3-1986.

Paxton, Hugh C. "The Nature and Consequences of Nuclear Accidents." In *Proceedings of the National Topical Meeting on Nuclear Criticality Safety, Las Vegas, Nevada USA, Dec. 1966*, SC-DC-67-1305. No publication data, pp. 213-218.

Subject Codes: (A3, D, E2, E3, E4)

09/30/95 Status: Published

Alt. Contact: possibly ANS or NTIS

Pearson, J[ohn] S., and E[rnest] E. Hill. "Emergency Response Preparation Based on an Internal Exercise Program." In *ANS Trans.*, Vol. 59. ANS, June 1989, pp. 180-181.

Subject Codes: E2, E3

09/30/95 Status: Published

Pryor, William A. "Accident Consequences and Emergency Planning." In *Proceedings, Nuclear Criticality Safety, El Paso, Texas USA, April 1990*, SAND80-1675. Albuquerque, New Mexico USA: Sandia National Laboratories, 1990, pp. 301-316.

Subject Codes: (see full subject code list in the front matter for additional description)

A through A3 = criticality accidents

B1 or B2 = extensive bibliography or references

C1 through C5 = CASs

D = dose, dosimetry, distance and shielding

E through E4 = emergency management

H1 and H2 = hazard-, risk-, and safety-analysis

M = medical

O = other

R = releases and release dispersion

T = computational methods, tools, validation

Parenthesis indicate that the code(s) were assigned based on the document title or on its use as a reference in another document.

Subject Codes: A3, D, E2, E3, O 09/30/95 Status: Published
Alt. Contact: NTIS, OSTI
Notes: Overview of criticality accident and emergency planning history, with emphasis on
developing emergency management resources including REAC/TS

Santoro, R. T., et al. "Nuclear Accident Dosimetry in a Simulated Criticality Accident." In *ANS Trans.*, Vol. 19. ANS, Oct. 1974, pp. 195-196.

Subject Codes: D, E2 09/30/95 Status: Published

Six, D[onald] E. "The Influence of Safeguards and Fire Protection on Criticality Safety." In *Proceedings, Nuclear Criticality Safety, El Paso, Texas USA, April 1990*, SAND80-1675. Albuquerque, New Mexico USA: Sandia National Laboratories, 1990, pp. 277-299.

Subject Codes: E2, E5, H1, H2, O 09/30/95 Status: Published
Alt. Contact: NTIS, OSTI

Smalley, W. M. "The AEC Radiological Assistance Program." In *ANS Trans.*, Vol. 19. ANS, Oct. 1974, pp. 196-197.

Subject Codes: E2 09/30/95 Status: Published

Smith, D[avid] R. "The Function and Characteristics of Criticality Accident Alarm Systems." In *ANS Trans.*, Vol. 39. ANS, Nov. 1981, pp. 554-555.

Subject Codes: C5, E2, E3, O 09/30/95 Status: Published

Toffer, Hans. "Emergency Cadre Take-Along Briefcase." In *ANS Trans.*, Vol. 72. ANS, June 1995, pp. 215-216.

Subject Codes: E2, E4 09/30/95 Status: Published

3.13 Code E3: Criticality Accident Emergency Preparedness

ANS. "Administrative Practices for Nuclear Criticality Safety, An American National Standard," ANSI/ANS-8.19-1984 (R1988). ANS, approved Oct. 1, 1984.

Subject Codes: E, O 09/30/95 Status: Active, under revision

Notes: Endorsed by NRC Reg. Guide 3.57 (Rev. 0) which is active
Compliance required by DOE 5480.24 which is active.
No technical emergency management guidance.

ANS. "Criticality Accident Alarm System, An American National Standard," ANSI/ANS-8.3-1986. ANS, approved Aug. 29, 1986.

Subject Codes: A1, A3, C1, C2, C3, C5, E3, T 09/30/95 Status: Active, under revision

Notes: Superseded documents are ANSI N16.2-1969, ANSI/ANS-8.3-1979,
ANSI/ANS N2.3-1967, and ANSI/ANS N2.3-1979.
Endorsed by NRC Reg. Guide 8.12 (Rev. 2) which is active.
Compliance required by DOE Order 5480.24 which is active.
Calculation techniques of Appendix B are not universally applicable.

ANS. "Nuclear Criticality Accident Emergency Planning and Response, An American National Standard," ANSI/ANS-8.23-199x. Draft, June 1995.

Subject Codes: E 09/30/95 Status: Draft, under review

Aspinall, K[ieth] J., and J. T. Daniels. "Review of UKAEA Criticality Detection and Alarm Systems 1963/64 Part 1: Provision and Design Principles," AHSB (S) R 92. London UK: UKAEA AHSB, 1965.

Subject Codes: A, B1, C2, C3, C4, C5, E 09/30/95 Status: Published

Alt. Contact: HMSO

Aspinall, K[ieth] J. "Criticality Detection and Alarm Systems: Design Principles." In *Criticality Control of Fissile Materials, Stockholm Sweden, Nov. 1965*. IAEA, 1966, pp. 701-716.

Subject Codes: A, C2, C3, C5, E 09/30/95 Status: Published

Barbry, Francis Y. "Exposure Risks and Possibilities of Intervention and Diagnosis in Criticality Accidents." In *Proceedings of ICNC'91 International Conference on Nuclear Criticality Safety, Oxford England, Sept. 1991*, Vol. 2. UKAEA Tech., Sept. 1991, pp. VII-33 - VII-40.

Subject Codes: A3, C3, D, E2, E3 09/30/95 Status: Published

Summary: Barbry, Francis Y. "Exposure Risks and Possibilities of Intervention and Diagnosis in Criticality Accidents." In *ANS Trans.*, Vol. 63. ANS, June 1991, pp. 228-231.

Carson, R. W[illiam], and J[ohn] S. Pearson. "Criticality Safety Drill and Exercise Programs." In *ANS Trans.*, Vol. 72. ANS, June 1995, p. 221-222.

Subject Codes: E1, E3 09/30/95 Status: Published

Eversole, Michael J., and David J. Lindenschmidt. "Criticality Alarm System Design and Operational Experience at the Westinghouse Materials Company of Ohio." In *Transactions of the Criticality Accident Alarm Systems Workshop, Richland, Washington USA, Sept. 1988*, DOE/NCT-05. LLNL, 1988, pp. 59-66.

Subject Codes: C1, C2, C4, E3 09/30/95 Status: Published

Alt. Contact: LLNL, NTIS, OSTI

Henry, Hugh F. "Planning for Control of Criticality Emergencies." In *Progress in Nuclear Energy Series IV: Technology, Engineering, and Safety*, edited by C. M. Nicholle. New York USA: Pergamon Press, 1960, pp. 206-227.

Subject Codes: A3, C2, C5, E, H1, O 09/30/95 Status: Published

Howells, H., and J. T. Daniels. "Organization for Operational Control of Criticality." In *Criticality Control in Chemical and Metallurgical Plant, Karlsruhe Symposium, Karlsruhe Germany, May 1961*. OECD, Nov. 1961, pp. 465-476.

Subject Codes: C2, C3, E2, E3, O 09/30/95 Status: Published

Notes: Criticality safety program overview

NRC. "Criticality Accident Requirements," 10 CFR 70.24. FR, no date.

Subject Codes: C2, C3, C5, E 09/30/95 Status: Active

Source: *Federal Register* (GPO), Vol. 39 (Nov. 5, 1974): p. 39021; as amended in Vol. 41 (July 29, 1976): p. 31522, and in Vol. 53 (May 27, 1988): p. 19252.

Subject Codes: (see full subject code list in the front matter for additional description)

A through A3 = criticality accidents

B1 or B2 = extensive bibliography or references

C1 through C5 = CASs

D = dose, dosimetry, distance and shielding

E through E4 = emergency management

H1 and H2 = hazard-, risk-, and safety-analysis

M = medical

O = other

R = releases and release dispersion

T = computational methods, tools, validation

Parenthesis indicate that the code(s) were assigned based on the document title or on its use as a reference in another document.

OSHA. "Ionizing Radiation," 29 CFR 1910.96. FR, no date.

Subject Codes: C1, C2, C5, E3, O 09/30/95 Status: Active

Source: *Federal Register* (GPO), Vol. 39 (June 27, 1974): p. 23502; as amended in Vol. 43 (Oct. 24, 1978): p.49746; Vol. 43 (Nov. 7, 1978): p. 51759; and Vol. 49 (April 30, 1984): p. 18295.

Notes: See paragraphs (f), "Immediate evacuation warning signal," and (p), "Atomic Energy Commission licensees - AEC contractors operating AEC plants and facilities - AEC Agreement State licensees or registrants."

Pearson, J[ohn] S., and E[rnest] E. Hill. "Emergency Response Preparation Based on an Internal Exercise Program." In *ANS Trans.*, Vol. 59. ANS, June 1989, pp. 180-181.

Subject Codes: E2, E3 09/30/95 Status: Published

Pryor, William A. "Accident Consequences and Emergency Planning." In *Proceedings, Nuclear Criticality Safety, El Paso, Texas USA, April 1990*, SAND80-1675. Albuquerque, New Mexico USA: Sandia National Laboratories, 1990, pp. 301-316.

Subject Codes: A3, D, E2, E3, O 09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Notes: Overview of criticality accident and emergency planning history, with emphasis on developing emergency management resources including REAC/TS

Rimmer, E., et al. "The Provision of Criticality Incident Detection, Alarm and Warning Systems (Provisional)," AECP 1074. Risley, Warrington UK: UKAEA Standards Section, Feb. 1987.

Subject Codes: C1, C2, C3, C5, E 09/30/95 Status: Indeterminant

Alt. Contact: HMSO Notes: Never formally issued but in current use at several UK facilities

Smith, D[avid] R. "The Function and Characteristics of Criticality Accident Alarm Systems." In *ANS Trans.*, Vol. 39. ANS, Nov. 1981, pp. 554-555.

Subject Codes: C5, E2, E3, O 09/30/95 Status: Published

3.14 Code E4: Criticality Accident Emergency Response and Recovery

Allied Chemical Idaho Chemical Programs, CPP Technical Division Personnel. "Recovery of ICPP from Criticality Event of October 17, 1978: Part I - Basic Technical Data," ACI-362. Idaho Falls, Idaho USA: Allied Chemical Idaho Chemical Programs, Nov. 1978.

Subject Codes: A1, E4 09/30/95 Status: Not approved for public release

Released Ref: [Tiller, Robert E., et al.], [ICPP-MISC-002], Nov. 1978, listed separately.

Notes: This report is included here only because it is referenced in McGuire, S. A., NUREG-1140, Jan. 1985, which is listed separately.

ANS. "Administrative Practices for Nuclear Criticality Safety, An American National Standard," ANSI/ANS-8.19-1984 (R1988). ANS, approved Oct. 1, 1984.

Subject Codes: E, O 09/30/95 Status: Active, under revision

Notes: Endorsed by NRC Reg. Guide 3.57 (Rev. 0) which is active
Compliance required by DOE 5480.24 which is active.
No technical emergency management guidance.

ANS. "Nuclear Criticality Accident Emergency Planning and Response, An American National Standard," ANSI/ANS-8.23-199x. Draft, June 1995.

Subject Codes: E

09/30/95 Status: Draft, under review

Aspinall, K[ieth] J., and J. T. Daniels. "Review of UKAEA Criticality Detection and Alarm Systems 1963/64 Part 1: Provision and Design Principles," AHSB (S) R 92. London UK: UKAEA AHSB, 1965.

Subject Codes: A, B1, C2, C3, C4, C5, E

09/30/95 Status: Published

Alt. Contact: HMSO

Aspinall, K[ieth] J. "Criticality Detection and Alarm Systems: Design Principles." In *Criticality Control of Fissile Materials, Stockholm Sweden, Nov. 1965*. IAEA, 1966, pp. 701-716.

Subject Codes: A, C2, C3, C5, E

09/30/95 Status: Published

Cronin, D[aniel] F[rancis] "Recovery and Restart Phases of a Criticality Accident." In *ANS Transactions*, Vol. 19. ANS, Oct. 1974, pp. 193-194.

Subject Codes: A1, E4

09/30/95 Status: Published

D'Aquila, Donna [M.], Michael [A.] Austin, and David [L.] Honkonen. "Evacuation, Reentry, and Rescue During Nuclear Criticality Accident Response." In *ANS Trans.*, Vol. 72. ANS, June 1995, pp. 216-217.

Subject Codes: E2, E4

09/30/95 Status: Published

DOE Office of Environment, Safety and Health. "Occurrence Reporting and Processing of Operations Information," DOE Order 5000.3B; incorporating Change 1. DOE, Jan. 19, 1993; July 2, 1993.

Subject Codes: E4, O

09/30/95 Status: Active

Notes: Notification and reporting requirements for abnormal events including criticality accidents.

Goebel, G. R., T. W. Hines, and A. M. Carver. "Radiation Monitoring During Criticality at a Gaseous Diffusion Plant." In *ANS Trans.*, Vol. 70. ANS, June 1994, pp. 208-209.

Subject Codes: D, E2, E4

09/30/95 Status: Published

Henry, Hugh F. "Planning for Control of Criticality Emergencies." In *Progress in Nuclear Energy Series IV: Technology, Engineering, and Safety*, edited by C. M. Nicholle. New York USA: Pergamon Press, 1960, pp. 206-227.

Subject Codes: A3, C2, C5, E, H1, O

09/30/95 Status: Published

[HPS]. "American National Standard: Dosimetry for Criticality Accidents," ANSI N13.3-1969 (R1988). ANSI, approved July 17, 1969.

Subject Codes: D, E1, E2, E4, T

09/30/95 Status: Active

Notes: References standards ANSI N16.1-1969 and N16.2-1969 but allows rev.s to apply. Current rev.s are ANSI/ANS-8.1-1983 (R1988) and -8.3-1986.

Mee, W[illiam] T., and J[ack] D. McLendon. "The Oak Ridge Y-12 Plant Criticality Accident Emergency Program." In *ANS Trans.*, Vol. 19. ANS, Oct. 1974, pp. 194-195.

Subject Codes: (see full subject code list in the front matter for additional description)

A through A3 = criticality accidents
B1 or B2 = extensive bibliography or references
C1 through C5 = CASs
D = dose, dosimetry, distance and shielding
E through E4 = emergency management

H1 and H2 = hazard-, risk-, and safety-analysis
M = medical
O = other
R = releases and release dispersion
T = computational methods, tools, validation

Parenthesis indicate that the code(s) were assigned based on the document title or on its use as a reference in another document.

Subject Codes: E2, E3

09/30/95 Status: Published

NRC. "Criticality Accident Requirements," 10 CFR 70.24. FR, no date.

Subject Codes: C2, C3, C5, E

09/30/95 Status: Active

Source: *Federal Register* (GPO), Vol. 39 (Nov. 5, 1974): p. 39021; as amended in Vol. 41 (July 29, 1976): p. 31522, and in Vol. 53 (May 27, 1988): p. 19252.

NRC. "Reports of Accidental Criticality or Loss or Theft or Attempted Theft of Special Nuclear Material," 10 CFR 70.52. FR, no date.

Subject Codes: E1, E4, O

09/30/95 Status: Active

Source: *Federal Register* (GPO), Vol. 52 (June 9, 1987): p. 21657.

Paxton, Hugh C. "The Nature and Consequences of Nuclear Accidents." In *Proceedings of the National Topical Meeting on Nuclear Criticality Safety, Las Vegas, Nevada USA, Dec. 1966*, SC-DC-67-1305. No publication data, pp. 213-218.

Subject Codes: (A3, D, E2, E3, E4)

09/30/95 Status: Published

Alt. Contact: possibly ANS or NTIS

Rimmer, E., et al. "The Provision of Criticality Incident Detection, Alarm and Warning Systems (Provisional)," AECP 1074. Risley, Warrington UK: UKAEA Standards Section, Feb. 1987.

Subject Codes: C1, C2, C3, C5, E

09/30/95 Status: Indeterminant

Alt. Contact: HMSO

Notes: Never formally issued but in current use at several UK facilities

Storrs, C. L., and C. W. Bills. "The SL-1 Recovery Operation." In *ANS Trans.*, Vol. 5. ANS, 1962, p. 152.

Subject Codes: A2, E4

09/30/95 Status: Published

Notes: Incident date 01/03/61

Toffer, Hans. "Emergency Cadre Take-Along Briefcase." In *ANS Trans.*, Vol. 72. ANS, June 1995, pp. 215-216.

Subject Codes: E2, E4

09/30/95 Status: Published

3.15 Code E5: Emergency Management in General

Andrews, Gould A. "Medical Management of Accidental Total-body Irradiation." In *The Medical Basis for Radiation Accident Preparedness: Proceedings of the REAC/TS International Conference, Oak Ridge, Tennessee USA, Oct. 1979*, edited by Karl F. Hübner and Shirley A. Fry. New York, New York USA: Elsevier/North-Holland, 1980, pp. 297-310.

Subject Codes: E5, M

09/30/95 Status: Published

ANS. "Facilities and Medical Care for On-Site Nuclear Power Plant Radiological Emergencies," ANSI/ANS-3.7.1-1979 (R1986). ANS, approved April 24, 1979.

Subject Codes: E5, M

09/30/95 Status: Active

ANS. "Emergency Planning for Research Reactors," ANSI/ANS-15.16-1982 (R 1988). ANS, approved Oct. 11, 1982.

Subject Codes: E5

09/30/95 Status: Active

ANS. "Criteria for Functional and Physical Characteristics of Emergency Response Facilities," ANSI/ANS-3.8.2-1987. ANS, approved Aug. 7, 1987.

Subject Codes: E5

09/30/95 Status: Active

ANS. "Criteria for Emergency Response Functions and Organizations," ANSI/ANS-3.8.1-1987. ANS, approved Aug. 10, 1987.

Subject Codes: E5

09/30/95 Status: Active

ANS. "Criteria for Emergency Response Plans and Implementing Procedures," ANSI/ANS-3.8.3-1987. ANS, approved Sept. 4, 1987.

Subject Codes: E5

09/30/95 Status: Active

ANS. "Criteria for Maintaining Emergency Response Capability," ANSI/ANS-3.8.4-1987. ANS, approved Sept. 4, 1987.

Subject Codes: E5

09/30/95 Status: Active

ANS. "Criteria for Emergency Radiological Field Monitoring, Sampling, and Analysis," ANSI/ANS-3.8.5-1992. ANS, 1992.

Subject Codes: (D, E5, R)

09/30/95 Status: Active

Barnes, V. E., et al. "Techniques for Preparing Flowchart-Format Emergency Operating Procedures," NUREG/CR-5228, PNL-6653, BHARC-700/88/017, Vol. 1 and 2. NRC, Jan. 1989.

Subject Codes: E5

09/30/95 Status: Published

Alt. Contact: NTIS

DOE Emergency Operations. "Emergency Categories, Classes, and Notification and Reporting Requirements," DOE Order 5500.2B; incorporating Change 1. DOE, April 30, 1991; Feb. 27, 1992.

Subject Codes: E5

09/30/95 Status: Active, under rev.

DOE Emergency Operations. "Planning And Preparedness for Operational Emergencies," DOE Order 5500.3A; incorporating Change 1. DOE, April 30, 1991; Feb. 27, 1992.

Subject Codes: E5

09/30/95 Status: Active

DOE Emergency Operations. "DOE Emergency Management Guide: Standard Format and Content for Emergency Plans." DOE, December 11, 1991.

Subject Codes: E5

09/30/95 Status: Not determined

DOE Office of Environment, Safety and Health. "Environmental Protection, Safety, and Health Protection Information Reporting Requirements," DOE Order 5484.1; incorporating Changes 1 through 7. DOE, Feb. 24, 1981; June 9, 1981, through Oct. 17, 1990.

Subject Codes: E5, O

09/30/95 Status: Active

Notes: Investigation and reporting requirements for serious abnormal events including criticality accidents.

Subject Codes: (see full subject code list in the front matter for additional description)

A through A3 = criticality accidents

B1 or B2 = extensive bibliography or references

C1 through C5 = CASs

D = dose, dosimetry, distance and shielding

E through E4 = emergency management

H1 and H2 = hazard-, risk-, and safety-analysis

M = medical

O = other

R = releases and release dispersion

T = computational methods, tools, validation

Parenthesis indicate that the code(s) were assigned based on the document title or on its use as a reference in another document.

McGuire, S. A. "A Regulatory Analysis on Emergency Preparedness for Fuel Cycle Facilities and Other Radioactive Material Licensees, Final Report," NUREG-1140. NRC, Jan. 1985.

Subject Codes: E1, E5

09/30/95 Status: Published

NFPA. "Recommended Fire Protection Practice for Facilities Handling Radioactive Materials," ANSI/NFPA 801-1991. Quincy, Massachusetts USA: NFPA, February 8, 1991.

Subject Codes: E5

09/30/95 Status: Active

Notes: Specifically recommends that selection of fire protection and fighting methods consider criticality safety., among other concerns.

NCRP. "Developing Radiation Emergency Plans for Academic, Medical, or Industrial Facilities, Recommendations of the National Council on Radiation Protection and Measurements," NCRP Report No. 111. NCRP, 1991.

Subject Codes: (E5)

09/30/95 Status: Active

NRC Office of Standards Development. "Emergency Planning for Fuel Cycle Facilities and Plants Licensed Under 10 CFR Parts 50 and 70," NRC Regulatory Guide 3.42 (Rev. 1). NRC, Sept. 1979.

Subject Codes: E5

09/30/95 Status: Active

NRC Division of Human Factors Safety. "Guidelines for the Preparation of Emergency Operating Procedures," NUREG-0899. NRC, Aug. 1982.

Subject Codes: E5

09/30/95 Status: Published

Alt. Contact: NTIS

NRC Office of Standards Development. "Standard Format and Content for Emergency Plans for Fuel Cycle and Materials Facilities," NRC Regulatory Guide 3.67 (Rev. 0). NRC, Jan. 1992.

Subject Codes: E5

09/30/95 Status: Active

Nuclear Installation Inspectorate Health and Safety Executive. *Safety Assessment Principles for Nuclear Plants*. London UK: HSE Books, Oct. 1992.

Subject Codes: (C, E5, H2, O)

09/30/95 Status: Published

Alt. Contact: HMSO

Ricks, Robert C. "REAC/TS: Its Role As a Specialty Referral Center and Training Site." In *The Medical Basis for Radiation Accident Preparedness: Proceedings of the REAC/TS International Conference, Oak Ridge, Tennessee USA, Oct. 1979*, edited by Karl F. Hübner and Shirley A. Fry. New York, New York USA: Elvsevier/North-Holland, 1980, pp. 291-296.

Subject Codes: D, E5, M, O

09/30/95 Status: Published

Notes: Describes REAC/TS and other centers as a resource for radiological emergency training, response, and information.

Six, D[onald] E. "The Influence of Safeguards and Fire Protection on Criticality Safety." In *Proceedings, Nuclear Criticality Safety, El Paso, Texas USA, April 1990*, SAND80-1675. Albuquerque, New Mexico USA: Sandia National Laboratories, 1990, pp. 277-299.

Subject Codes: E2, E5, H1, H2, O

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

3.16 Code H1: Hazard-, Risk-, Safety-Analysis for Criticality Safety

Chang, J[oseph], et al. "An Application of Probabilistic Risk Analysis in Nuclear Criticality Safety Design." In *International Meeting on Safety Margins in Criticality Safety, San Francisco, California USA, Nov. 1989*. ANS, Nov. 1989, pp. 214-220.

Subject Codes: H1, O

09/30/95 Status: Published

Friedman, Bruce. "Reliability Characteristics Associated with Criticality Control Mechanisms." In *Proceedings of ICS'87 International Seminar on Nuclear Criticality Safety, Tokyo Japan, Oct. 1987*. PNC, Sept. 1987, pp. 451-457.

Subject Codes: H1, T

09/30/95 Status: Published

Geeting, Mark W., and Philip B. Gerrard. "Criticality Frequency Determination Using a Human-Error-Based Fault Tree." In *ANS Trans.*, Vol. 71. ANS, Nov. 1994, p. 277.

Subject Codes: H1, O

09/30/95 Status: Published

Goldenberg, Neal, memorandum to distribution. "Interpretive Guidance for DOE Order 5480.24, 'Nuclear Criticality Safety'," NE-70. DOE, Feb. 17, 1993.

Subject Codes: C5, H1, O

09/30/95 Status: Active

Alt. Contact: DOE, NTIS

Henry, Hugh F. "Planning for Control of Criticality Emergencies." In *Progress in Nuclear Energy Series IV: Technology, Engineering, and Safety*, edited by C. M. Nicholle. New York USA: Pergamon Press, 1960, pp. 206-227.

Subject Codes: A3, C2, C5, E, H1, O

09/30/95 Status: Published

McLaughlin, Thomas P. "Process Criticality Accident Likelihoods, Consequences and Emergency Planning." *Proceedings of ICNC'91 International Conference on Nuclear Criticality Safety, Oxford England, Sept. 1991*, Vol. 2. UKAEA Tech., Sept. 1991, pp. VII-1 - VII-11.

Subject Codes: A3, C3, H1

09/30/95 Status: Published

Ogilvie, F[iona] M. "Thermal Oxide Reprocessing Plant Basket Handling Cave - An Integrated Deterministic/Probabilistic Criticality Analysis." In *ICNC'95 Proceedings of the Fifth International Conference on Nuclear Criticality Safety, Albuquerque, New Mexico USA, Sept. 1995*, Vol. II. UNM, Sept. 1995, pp. 11•37-11•42.

Subject Codes: H1, O, T

09/30/95 Status: Published

Ryazanov, B[oris] G., V. Goriouinov, and V[ictor I.] Sviridov. "Quantitative Evaluation of Nuclear Criticality Safety Level for Nuclear Industry." In *ICNC'95 Proceedings of the Fifth International Conference on Nuclear Criticality Safety, Albuquerque, New Mexico USA, Sept. 1995*, Vol. II. UNM, Sept. 1995, pp. 7•11-7•15.

Subject Codes: H1, O

09/30/95 Status: Published

Subject Codes: (see full subject code list in the front matter for additional description)

A through A3 = criticality accidents

B1 or B2 = extensive bibliography or references

C1 through C5 = CASs

D = dose, dosimetry, distance and shielding

E through E4 = emergency management

H1 and H2 = hazard-, risk-, and safety-analysis

M = medical

O = other

R = releases and release dispersion

T = computational methods, tools, validation

Parenthesis indicate that the code(s) were assigned based on the document title or on its use as a reference in another document.

Six, D[onald] E. "The Influence of Safeguards and Fire Protection on Criticality Safety." In *Proceedings, Nuclear Criticality Safety, El Paso, Texas USA, April 1990*, SAND80-1675. Albuquerque, New Mexico USA: Sandia National Laboratories, 1990, pp. 277-299.

Subject Codes: E2, E5, H1, H2, O

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Smith, K., and D[avid] N. Simister. "The UK Regulatory Approach to Deterministic and Probabilistic Safety Analysis in Criticality Safety Cases." In *ICNC'95 Proceedings of the Fifth International Conference on Nuclear Criticality Safety, Albuquerque, New Mexico USA, Sept. 1995*, Vol. II. UNM, Sept. 1995, pp. 7•7-7•10.

Subject Codes: H1, O

09/30/95 Status: Published

Tadmor, J., and H. Galron. "Guide for the Hazards Evaluation of a Nuclear Chemical Installation." In *Proceedings of the Third United Nations International Conference on Peaceful Uses of Atomic Energy, Geneva Switzerland, Aug.-Sept. 1964*, Vol. 13. UN, 1965, pp. 225-231.

Subject Codes: H1, H2

09/30/95 Status: Published

Thomas, W., and B. Gamal. "In-Depth Analysis of Accidental Criticality in a Reprocessing Plant." In *International Meeting on Safety Margins in Criticality Safety, San Francisco, California USA, Nov. 1989*. ANS, Nov. 1989, pp. 207-213.

Subject Codes: H1, O

09/30/95 Status: Published

Walls, Stephen J., and Peter R. Thorne. "The Integration of Probabilistic Assessment into Traditional Criticality Safety." In *ICNC'95 Proceedings of the Fifth International Conference on Nuclear Criticality Safety, Albuquerque, New Mexico USA, Sept. 1995*, Vol. II. UNM, Sept. 1995, pp. 7•3-7•6.

Subject Codes: A3, H1, O

09/30/95 Status: Published

Worle, Helmut A., and Glen J. Briscoe. "A Probabilistic Approach to Criticality Safety of Stored Transuranic Waste." In *ICNC'95 Proceedings of the Fifth International Conference on Nuclear Criticality Safety, Albuquerque, New Mexico USA, Sept. 1995*, Vol. II. UNM, Sept. 1995, pp. 7•16-7•21.

Subject Codes: H1, O

09/30/95 Status: Published

Notes: Paper does not so indicate but the approach reported does not yet have final approval.

3.17 Code H2: Hazard-, Risk-, Safety-Analysis in General

ANS and IEEE. "PRA Procedures Guide, Final Report," NUREG/CR-2300, Vol. 1 and 2. NRC, Dec. 1982 (issued Jan. 1983).

Subject Codes: H2, O, R

09/30/95 Status: Published

Alt. Contact: NTIS

Briscoe, G[len] J. "Practical Risk Analysis." In *ANS Trans.*, Vol. 32. ANS, 1979, pp. 318-320.

Subject Codes: H2

09/30/95 Status: Published

Cohen, Bernard L., and I-Sing Lee. "A Catalog of Risks." *Health Physics* (Pergamon Press), Vol. 36 (June 1979): pp. 707-722.

Subject Codes: H2, T

09/30/95 Status: Published

Alt. Contact: HPS

DOE Office of Nuclear Energy. "Nuclear Safety Analysis Reports," DOE Order 5480.23; incorporating Change 1. DOE, April 30, 1992; March 10, 1994.

Subject Codes: H2, O 09/30/95 Status: Active

DOE Office of Nuclear Safety. "Preparation Guide for U. S. Department of Energy Nonreactor Nuclear Facility Safety Analysis Reports," DOE-STD-3009-94. DOE, Aug. 1994.

Subject Codes: C5, H2, O 09/30/95 Status: Active
Alt. Contact: NTIS, OSTI

Lambert, H. E. "Systems Safety Analysis and Fault Tree Analysis," UCID-16238. LLNL, May 9, 1973.

Subject Codes: H2, O 09/30/95 Status: Published
Notes: Qualitative tools

Nertney, R. J. "Risk Projection and Human Factors as Related to Nuclear Systems." In *ANS Trans.*, Vol. 32. ANS, 1979, p. 318.

Subject Codes: H2 09/30/95 Status: Published

NRC Office of Standards Development. "Standard Format and Content of Safety Analysis Reports for Uranium Enrichment Facilities," NRC Regulatory Guide 3.25 (Rev. 0). NRC, Dec. 1974.

Subject Codes: H2, O 09/30/95 Status: Active

NRC Office of Standards Development. "Standard Format and Content of Safety Analysis Reports for Fuel Reprocessing Plants." NRC Regulatory Guide 3.26 (Rev. 0). NRC, Feb. 1975.

Subject Codes: H2, O 09/30/95 Status: Active

Nuclear Installation Inspectorate Health and Safety Executive. *Safety Assessment Principles for Nuclear Plants*. London UK: HSE Books, Oct. 1992.

Subject Codes: (C, E5, H2, O) 09/30/95 Status: Published
Alt. Contact: HMSO

Six, D[onald] E. "The Influence of Safeguards and Fire Protection on Criticality Safety." In *Proceedings, Nuclear Criticality Safety, El Paso, Texas USA, April 1990*, SAND80-1675. Albuquerque, New Mexico USA: Sandia National Laboratories, 1990, pp. 277-299.

Subject Codes: E2, E5, H1, H2, O 09/30/95 Status: Published
Alt. Contact: NTIS, OSTI

Stewart, M. C. "The Human Component: An Off-the-Shelf Subsystem." In *ANS Trans.*, Vol. 32. ANS, 1979, p. 320.

Subject Codes: H2 09/30/95 Status: Published

Tadmor, J., and H. Galron. "Guide for the Hazards Evaluation of a Nuclear Chemical Installation." In *Proceedings of the Third United Nations International Conference on Peaceful Uses of Atomic Energy, Geneva Switzerland, Aug.-Sept. 1964*, Vol. 13. UN, 1965, pp. 225-231.

Subject Codes: (see full subject code list in the front matter for additional description)

A through A3 = criticality accidents	H1 and H2 = hazard-, risk-, and safety-analysis
B1 or B2 = extensive bibliography or references	M = medical
C1 through C5 = CASs	O = other
D = dose, dosimetry, distance and shielding	R = releases and release dispersion
E through E4 = emergency management	T = computational methods, tools, validation

Parenthesis indicate that the code(s) were assigned based on the document title or on its use as a reference in another document.

Subject Codes: H1, H2

09/30/95 Status: Published

Walls, S[tephan] J. "Application of Probabilistic Risk Assessment at BNFL, Sellafield." In *International Meeting on Safety Margins in Criticality Safety, San Francisco, California USA, Nov. 1989*. ANS, Nov. 1989, pp. 195-198.

Subject Codes: H2, O

09/30/95 Status: Published

3.18 Code M: Medical

Andrews, G[ould] A., et al. "Accidental Radiation Excursion at the Oak Ridge Y-12 Plant, IV. Preliminary Report on Clinical and Laboratory Effects in the Irradiated Employees." *Health Physics* (Pergamon Press), Vol. 2, No. 2, 1959: pp. 134-138.

Subject Codes: A1, D, M

09/30/95 Status: Published

Alt. Contact: HPS

Notes: Incident date 06/16/58
4th of 4 part series of articles

Andrews, Gould A. "Medical Management of Accidental Total-body Irradiation." In *The Medical Basis for Radiation Accident Preparedness: Proceedings of the REAC/TS International Conference, Oak Ridge, Tennessee USA, Oct. 1979*, edited by Karl F. Hübner and Shirley A. Fry. New York, New York USA: Elvsevier/North-Holland, 1980, pp. 297-310.

Subject Codes: E5, M

09/30/95 Status: Published

ANS. "Facilities and Medical Care for On-Site Nuclear Power Plant Radiological Emergencies," ANSI/ANS-3.7.1-1979 (R1986). ANS, approved April 24, 1979.

Subject Codes: E5, M

09/30/95 Status: Active

Brittan, R[aymond] O., et al. "Technical Review of ZPR-1 Accidental Transient - The Power Excursion, Exposures, and Clinical Data," ANL-4971. ANL-E, Jan. 26, 1953.

Subject Codes: A2, D, M, T

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Notes: Incident date 06/02/52

Later Work: Brittan, R[aymond] O., L. D. Marinelli, and F. W. Thalgott. "Technical Review of ZPR-1 Accidental Transient - The Power Excursion and Exposures," ANL-4971 (Rev.). ANL-E, 1953. (Referenced in several summaries but apparently not readily retrievable.)

Brucer, Marshall (compiler). "The Acute Radiation Syndrome: A Medical Report on the Y-12 Accident, June 16, 1958," ORINS-25. Oak Ridge Institute of Nuclear Studies, Oak Ridge, Tennessee USA, April 1959.

Subject Codes: A1, D, M

09/30/95 Status: Published

Alt. Contact: NTIS

Hasterlik, R. J., and L. D. Marinelli. "Physical Dosimetry and Clinical Observations on Four Human Beings Involved in an Accidental Critical Assembly Excursion." In *Proceedings of the International Conference on Peaceful Uses of Atomic Energy, Geneva Switzerland, Aug. 1955*, Vol. 11. UN, 1956, pp. 25-34.

Subject Codes: A2, D, M

09/30/95 Status: Published

Notes: Incident date 06/02/52

Hempelmann, Louis H., Clarence C. Lushbaugh, and George L. Voelz. "What Happened to the Survivors of the Early Los Alamos Nuclear Accidents?" In *The Medical Basis for Radiation Accident Preparedness: Proceedings of the REAC/TS International Conference, Oak Ridge, Tennessee USA, Oct. 1979*, edited by Karl F. Hübner and Shirley A. Fry. New York, New York USA: Elvsevier/North-Holland, 1980, pp. 17-32.

Subject Codes: A2, D, M 09/30/95 Status: Published
 Notes: Includes re-evaluations of doses based on recommendation changes over the years.
 Incident dates 08/21/45 and 05/21/46.

IAEA. "Recommendations, Medical Handling of Accidentally Exposed Individuals." IAEA Safety Series No. 88. IAEA, Aug. 1988.

Subject Codes: B1, M, O 09/30/95 Status: Published

Jammet, H. P., et al. "Observation Clinique et Traitement d'un Cas d'Irradiation Globale Accidentelle." In *Proceedings of the First International Congress on Radiation Protection, Rome Italy, Sept. 1966*, Part 2. edited by W. S. Snyder, et al. Pergamon Press, 1967, pp. 1249-1291.

Subject Codes: A1, A2, M 09/30/95 Status: Published

Kathren, R[onald] L., et al. "Health Physics Following a Nuclear Excursion: The LRL Incident of 26 March 1963," UCRL-7345 (Rev. 1). LLNL, June 3, 1963.

Subject Codes: A2, D, M 09/30/95 Status: Published
 Alt. Contact: NTIS, OSTI

Leonard, Jr., B. R. "A Study of the Radiation Burst in the Hanford Homogeneous Reactor," HW-24327. HW, May 2, 1952.

Subject Codes: A2, M, O, T 09/30/95 Status: Published
 Alt. Contact: Hanford, NTIS, OSTI Notes: Incident date 11/16/51.

McLendon, J[ack] D. "Accidental Radiation Excursion at the Oak Ridge Y-12 Plant, II. Health Physics Aspects of the Accident." *Health Physics* (Pergamon Press), Vol. 2, No. 1 (1959): pp. 21-29.

Subject Codes: A1, D, M 09/30/95 Status: Published
 Alt. Contact: HPS Notes: Incident date 06/16/58
 2nd of 4 part series of articles

NCRP. "Basic Radiation Protection Criteria," NCRP Report No. 39. NCRP, issued Jan. 15, 1971.

Subject Codes: B1, D, M, O, T 09/30/95 Status: Superseded by NCRP Report No. 91
 Notes: The 12 rad threshold specified in ANSI/ANS-8.3-1986 is loosely based on 1/2 the NCRP No. 39 reported 25 rad dose at which temporary changes to whole blood cells were barely detectable.

Parmentier, N. C., R. Boulenger, and G. Portal. "Problèmes de Dosimétrie lors de l'Accident." In *Proceedings of the First International Congress on Radiation Protection, Rome Italy, Sept. 1966*, edited by W. S. Snyder, et al., Part 2. Pergamon Press, 1967, pp. 1231-1248.

Subject Codes: A2, D, M 09/30/95 Status: Published
 Notes: Incident date 12/30/65

REAC/TS. "Radiation Accident Registries: Serious Radiation Accidents Worldwide." ORAU, updated periodically.

Subject Codes: (see full subject code list in the front matter for additional description)

A through A3 = criticality accidents	H1 and H2 = hazard-, risk-, and safety-analysis
B1 or B2 = extensive bibliography or references	M = medical
C1 through C5 = CASs	O = other
D = dose, dosimetry, distance and shielding	R = releases and release dispersion
E through E4 = emergency management	T = computational methods, tools, validation

Parenthesis indicate that the code(s) were assigned based on the document title or on its use as a reference in another document.

Subject Codes: (A1, A2, B2, D, M, O) 09/30/95 Status: Ongoing project
Notes: REAC/TS database maintained in conjunction with site for maintaining and training responders for radiation emergencies.
Description: Fry, Shirley A. "The United States Radiation Accident and Other Registries of the REAC/TS Registry System: Their Functions and Current Status." In *The Medical Basis for Radiation Accident Preparedness: Proceedings of the REAC/TS International Conference, Oak Ridge, Tennessee USA, Oct. 1979*, edited by Karl F. Hübner and Shirley A. Fry. New York, New York USA: Elvsevier/North-Holland, 1980, pp. 451-468.
Example: An example of the data were included on pages 6-16 of the same proceedings.

Ricks, Robert C. "REAC/TS: Its Role As a Specialty Referral Center and Training Site." In *The Medical Basis for Radiation Accident Preparedness: Proceedings of the REAC/TS International Conference, Oak Ridge, Tennessee USA, Oct. 1979*, edited by Karl F. Hübner and Shirley A. Fry. New York, New York USA: Elvsevier/North-Holland, 1980, pp. 291-296.

Subject Codes: D, E5, M, O 09/30/95 Status: Published
Notes: Describes REAC/TS and other centers as a resource for radiological emergency training, response, and information.

3.19 Code O: Other

Most references included in this bibliography contain other information, usually regarding criticality accident prevention or other types of accidents. Only key, active guidance and requirements documents with *Code O* are included in this subsection, to reduce its length. Consult section 2 of this bibliography for a complete list of references with other information.

ANS. "American National Standard: Nuclear Criticality Control of Special Actinide Elements," ANSI/ANS-8.15-1981 (R1987). ANS, approved Nov. 9, 1981.

Subject Codes: O 09/30/95 Status: Active, under review

ANS and IEEE. "PRA Procedures Guide, Final Report," NUREG/CR-2300, Vol. 1 and 2. NRC, Dec. 1982 (issued Jan. 1983).

Subject Codes: H2, O, R 09/30/95 Status: Published
Alt. Contact: NTIS

ANS. "Nuclear Criticality Safety in Operations with Fissionable Materials Outside Reactors, An American National Standard," ANSI/ANS-8.1-1983 (R1988). ANS, approved Oct. 7, 1983.

Subject Codes: E1, E2, O 09/30/95 Status: Active, under revision
Notes: Superseded documents are ANSI N6.1-1964, ANSI N16.1-1969, and ANSI N16.1-1975.
Endorsed by NRC Reg. Guide 3.04 (Rev. 2) which is active.
Compliance required by DOE 5480.24 which is active.
No technical or detailed emergency management/planning guidance.

ANS. "Administrative Practices for Nuclear Criticality Safety, An American National Standard," ANSI/ANS-8.19-1984 (R1988). ANS, approved Oct. 1, 1984.

Subject Codes: E, O 09/30/95 Status: Active, under revision
Notes: Endorsed by NRC Reg. Guide 3.57 (Rev. 0) which is active.
Compliance required by DOE 5480.24 which is active.
No technical emergency management guidance.

DOE Office of Environment, Safety and Health. "Occurrence Reporting and Processing of Operations Information," DOE Order 5000.3B; incorporating Change 1. DOE, Jan. 19, 1993; July 2, 1993.

Subject Codes: E4, O

09/30/95 Status: Active

Notes: Notification and reporting requirements for abnormal events including criticality accidents.

DOE Office of Environment, Safety and Health. "Environmental Protection, Safety, and Health Protection Information Reporting Requirements," DOE Order 5484.1; incorporating Changes 1 through 7. DOE, Feb. 24, 1981; June 9, 1981, through Oct. 17, 1990.

Subject Codes: E5, O

09/30/95 Status: Active

Notes: Investigation and reporting requirements for serious abnormal events including criticality accidents.

DOE Office of Nuclear Energy. "Nuclear Criticality Safety," DOE Order 5480.24. DOE, Aug. 12, 1992.

Subject Codes: C2, C3, C5, O

09/30/95 Status: Active, under revision

Notes: For CAS requirements see paragraphs 7a, 7a(1), 7b through 7b(4).

Requires compliance with ANSI/ANS-8.1, -8.3, -8.5, -8.7, -8.15, and -8.19.

DOE Office of Nuclear Energy. "Nuclear Safety Analysis Reports," DOE Order 5480.23; incorporating Change 1. DOE, April 30, 1992; March 10, 1994.

Subject Codes: H2, O

09/30/95 Status: Active

DOE Office of Nuclear Safety. "Preparation Guide for U. S. Department of Energy Nonreactor Nuclear Facility Safety Analysis Reports," DOE-STD-3009-94. DOE, Aug. 1994.

Subject Codes: C5, H2, O

09/30/95 Status: Active

Alt. Contact: NTIS, OSTI

Goldenberg, Neal, memorandum to distribution. "Interpretive Guidance for DOE Order 5480.24, 'Nuclear Criticality Safety'," NE-70. DOE, Feb. 17, 1993.

Subject Codes: C5, H1, O

09/30/95 Status: Active

Alt. Contact: DOE, NTIS

HPS and IEEE. "American National Standard, Radiation Protection Instrumentation Test and Calibration," ANSI N323-1978 (R1993). IEEE, approved Sept. 13, 1977.

Subject Codes: O; possibly C1, C5

09/30/95 Status: Active

Alt. Contact: ANSI, IEEE

Notes: Applies to portable instruments for measuring radiation levels

IAEA Safety Series No. 88. "Recommendations, Medical Handling of Accidentally Exposed Individuals." IAEA, Aug. 1988.

Subject Codes: B1, M, O

09/30/95 Status: Published

ICRU. "Tissue Substitutes in Radiation Dosimetry and Measurement." ICRU Report No. 44. ICRU Publications, Jan. 15, 1989.

Subject Codes: (see full subject code list in the front matter for additional description)

A through A3 = criticality accidents

B1 or B2 = extensive bibliography or references

C1 through C5 = CASs

D = dose, dosimetry, distance and shielding

E through E4 = emergency management

H1 and H2 = hazard-, risk-, and safety-analysis

M = medical

O = other

R = releases and release dispersion

T = computational methods, tools, validation

Parenthesis indicate that the code(s) were assigned based on the document title or on its use as a reference in another document.

Subject Codes: O 09/30/95 Status: Active

Notes: Endorses ANSI/ANS-8.1-1981.

NRC Office of Standards Development. "Administrative Practices for Nuclear Criticality Safety at Fuels and Materials Facilities," NRC Regulatory Guide 3.57 (Rev. 0). NRC, Oct. 1986.

Subject Codes: O 09/30/95 Status: Published

Notes: Endorses ANSI/ANS-8.19-1984

Nuclear Installation Inspectorate Health and Safety Executive. *Safety Assessment Principles for Nuclear Plants*. London UK: HSE Books, Oct. 1992.

Subject Codes: (C, E5, H2, O) 09/30/95 Status: Published

Alt. Contact: HMSO

Okuno, H[iroshi], et al. "Supplement to the Nuclear Criticality Safety Handbook of Japan" (in Japanese), JAERI-xxxx. JAERI, to be published in 1995.

Subject Codes: (A3, C2, C5, O, T) 09/30/95 Status: To be published

Notes: Supplement will contain Chapter 6, "Criticality Accidents and Their Evaluation Methods," and Chapter 7, "Basic Principles on Design and Installation of Criticality Alarm System."

Supplement to: Science and Technology Agency. *Nuclear Criticality Safety Handbook* (in Japanese). Tokyo Japan: Nikkan Shobo, 1988. The handbook is also published in English with the same authoring institution and title, translated by Yoshitaka Naito and Hiroshi Okuno, JAERI-Review 95-013. Tokyo Japan: Nikkan Shobo, Sept. 1995.

OSHA. "Ionizing Radiation," 29 CFR 1910.96. FR, no date.

Subject Codes: C1, C2, C5, E3, O 09/30/95 Status: Active

Source: *Federal Register* (GPO), Vol. 39 (June 27, 1974): p. 23502; as amended in Vol. 43 (Oct. 24, 1978): p.49746; Vol. 43 (Nov. 7, 1978): p. 51759; and Vol. 49 (April 30, 1984): p. 18295.

Notes: See paragraphs (f), "Immediate evacuation warning signal," and (p), "Atomic Energy Commission licensees - AEC contractors operating AEC plants and facilities - AEC Agreement State licensees or registrants."

3.20 Code R: Atmospheric Release and Dispersion

ANS and IEEE. "PRA Procedures Guide, Final Report," NUREG/CR-2300, Vol. 1 and 2. NRC, Dec. 1982 (issued Jan. 1983).

Subject Codes: H2, O, R 09/30/95 Status: Published

Alt. Contact: NTIS

ANS. "Criteria for Emergency Radiological Field Monitoring, Sampling, and Analysis," ANSI/ANS-3.8.5-1992. ANS, 1992.

Subject Codes: (D, E5, R) 09/30/95 Status: Active

Subject Codes: (see full subject code list in the front matter for additional description)

A through A3 = criticality accidents

B1 or B2 = extensive bibliography or references

C1 through C5 = CASs

D = dose, dosimetry, distance and shielding

E through E4 = emergency management

H1 and H2 = hazard-, risk-, and safety-analysis

M = medical

O = other

R = releases and release dispersion

T = computational methods, tools, validation

Parenthesis indicate that the code(s) were assigned based on the document title or on its use as a reference in another document.

Evans, Dennis R., Paul J. Sentieri, and James R. Wilson. "Evaluating the Consequences of a Repository Criticality." In *Proceedings of the Topical Meeting on DOE Spent Nuclear Fuel - Challenges and Initiatives, Salt Lake City, Utah USA, Dec. 1994*. ANS, Dec. 1994, pp. 389-393.

Subject Codes: A3, D, R 09/30/95 Status: Published

Notes: Well shielded underground accident. Included for general interest and for fission yield and shielding considerations; not for CASs or emergency planning.

Fisher, S[tephen] E., and K[atey] E. Lenox. "An Assessment of the Radiological Doses Resulting From Accidental Uranium Aerosol Releases and Fission Product Releases from a Postulated Criticality Accident at the Oak Ridge Y-12 Plant," Y/TS-1272. Y-12 Plant, Oak Ridge, Tennessee USA, March 1995.

Subject Codes: (A3, D, R, T) 09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Notes: Author indicates that a technical editing error occurred in table 3: "months" should be "minutes." Dose calculations apply to inhalation and fission products, not the prompt neutron-gamma dose.

Mazzola, Carl A., Robert B. Addis, and the Emergency Management Laboratory of the Oak Ridge Institute for Science and Education. *Atmospheric Dispersion Modeling Resources*, 2nd Ed. ORAU, March 1995.

Subject Codes: (B1, R, T) 09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Notes: Critical review with supporting bibliography for most methods of estimating and predicting atmospheric dispersion.

Mee, W[illiam] T., D[avis] A. Reed, and R[ichard] G. Taylor. "Consequences of a Postulated, Moderated Criticality Accident at the Oak Ridge Y-12 Plant," Y/DD-384. Martin Marietta Energy Systems, Inc., Oak Ridge, Tennessee USA, Sept. 1988.

Subject Codes: A3, D, R, T 09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Notes: Authors indicate there are a few minor errors with the release calculations.

Soldat, J. K. "Recuplex Incident, April 7, 1962, Emission of Fission Products for the 291-Z Stack," HW-77345. HW, May 23, 1962.

Subject Codes: (A1, R) 09/30/95 Status: Issued

Alt. Contact: Hanford, NTIS, OSTI

Thomas, W., and B. Gamal. "Modeling of Criticality Accidents and Their Environmental Consequences." In *ANS Trans.*, Vol. 55. ANS, Nov. 1987, pp. 409-410.

Subject Codes: D, R, T 09/30/95 Status: Published

3.21 Code T: Computational Methods, Tools, and Validations

AEA Tech. "MONK - A Monte Carlo Program for Nuclear Criticality Safety Analyses: Users Guide for Version 7A," ANSWERS/MONK(94)3, Issue 1 and Issue 2; CCC-393. ANSWERS, Feb. 1991 and Jan. 1995; RSIC.

Subject Codes: T 09/30/95 Status: Active

Notes: RSIC might have version 6.3 rather than 7A.

AEA Tech. "MCBEND - A Monte Carlo Program for General Radiation Transport Solutions: Users Guide for Version 9A," ANSWERS/MCBEND(94)15, Parts 1 and 2, Issue 1 and Issue 2. ANSWERS, May 1994 and Feb. 1995.

Subject Codes: T

09/30/95 Status: Active

AEA Tech. "RANKERN - A Point Kernel Program for Gamma-Ray Transport Solution: Users Guide for Version 14," ANSWERS/RANKERN(95)3. ANSWERS, 1995.

Subject Codes: T

09/30/95 Status: Active

Alcouffe, Ray E., et al. "DANTSYS: A Diffusion Accelerated Neutral Particle Code Transport System," LA-12969-M. LANL, June 1995.

Subject Codes: T

09/30/95 Status: Active

Alt. Contact: RSIC

Related Ref.s: O'Dell, R. Douglas, et al. "Revised User's Manual for ONEDANT: A Code Package for One-Dimensional, Diffusion-Accelerated, Neutral Particle Transport," LA-9184-M-Rev. LANL, 1989.

○ ———. "Users Guide for TWODANT: A Code Package for Two-Dimensional Diffusion-Accelerated, Neutral Particle Transport," LA-10049-M. LANL, 1984.

Notes: Related references are for computer codes which are probably inactive but the references are useful supplemental information for the DANTSYS document.

Akimoto, M., and J. Naito. "A General Dimensional Neutron Diffusion Calculation Code: ADC," (in Japanese?) JAERI 1260. Japan: Japan Atomic Energy Research Institute, 1970.

Subject Codes: (T)

09/30/95 Status: Not determined

Notes: ADC might not be available to the public.

ANS. "American National Standard: Neutron and Gamma-Ray Flux-to-Dose Rate Factors," ANSI/ANS-6.1.1-1977 [N666]. ANS, 1977.

Subject Codes: (D, T)

09/30/95 Status: Withdrawn 08/31/89

Notes: Reported data are a basis for dose estimates specified in many references included here.

ANS. "Criticality Accident Alarm System, An American National Standard," ANSI/ANS-8.3-1986. ANS, approved Aug. 29, 1986.

Subject Codes: A3, C1, C2, C3, C5, E3, T

09/30/95 Status: Active, under revision

Notes: Superseded documents are ANSI N16.2-1969, ANSI/ANS-8.3-1979, ANSI/ANS N2.3-1967, and ANSI/ANS N2.3-1979.

Endorsed by NRC Reg. Guide 8.12 (Rev. 2) which is active.

Compliance required by DOE Order 5480.24 which is active.

Calculation techniques of Appendix B are not universally applicable.

ANS. "Criticality Accident Alarm System, An American National Standard," ANSI/ANS-8.3-199x. Draft, May 1995.

Subject Codes: A3, C1, C2, C3, C5, T

09/30/95 Status: Draft, under review

Subject Codes: (see full subject code list in the front matter for additional description)

A through A3 = criticality accidents

B1 or B2 = extensive bibliography or references

C1 through C5 = CASs

D = dose, dosimetry, distance and shielding

E through E4 = emergency management

H1 and H2 = hazard-, risk-, and safety-analysis

M = medical

O = other

R = releases and release dispersion

T = computational methods, tools, validation

Parenthesis indicate that the code(s) were assigned based on the document title or on its use as a reference in another document.

Notes: Calculation techniques of Appendices B and C are not universally applicable.

Baker, V[an] and R[obert] L. Childs. "FALSTF: Calculator of Response of Detectors External to Shielding Configuration," CCC-351. RSIC, Jan. 1982.

Subject Codes: (T)

Status on 09/10/95: Active

Notes: Reference is an RSIC abstract.

Further info.: ——. "FALSTF: Informal Notes." ORNL, 1979.

Barbry, F[rancis Y.] "Slow Kinetics Power Excursions Performed on the Silene Reactor," CEA/IPSN/SRSC 83.33. CEA, Dec. 1983.

Subject Codes: A3, T

09/30/95 Status: Issued

Barbry, F[rancis Y.], et al. "Criticality Accident Studies in France Experimental Programmes and Modelisation." In *Proceedings of ISCS'87 International Seminar on Nuclear Criticality Safety, Tokyo Japan, Oct. 1987*. PNC, Sept. 1987, pp. 423-426.

Subject Codes: A3, T

09/30/95 Status: Published

Barbry, F[rancis Y.], et al. "Theoretical Studies of Transient Criticality of Irradiated Fuel Elements." In *ANS Trans.*, Vol. 55. ANS, Nov. 1987, pp. 410-411.

Subject Codes: A3, T

09/30/95 Status: Published

Barbry, F[rancis Y.] "Model To Estimate the Maximum Fission Yield in Accident Solution Excursions." In *ANS Trans.*, Vol. 55. ANS, Nov. 1987, pp. 413-414.

Subject Codes: A3, T

09/30/95 Status: Published

Barbry, F[rancis Y.], and J[ean] P[ierre] Rozain. "Objectives and Summary of Experiments on the Formation of Radiolysis Gas Carries Out Using the Silene Reactor," CEA/SRSC 89.08. CEA/IPSN/SRSC, Nov. 1989.

Subject Codes: A3, T

09/30/95 Status: Issued

Earlier Work: Barbry, CEA/DSN 115, May 1973, listed separately.

○ ———, CEA/DSN/SEESNC 117, Sept. 1973, listed separately.

Replaces: ———. "Point sur les Connaissances en Matière de Formation de Gas de Radiolyse Lors d'une Excursion de Criticité en Solution," CEA/SRSC 87/83. CEA, Feb. 1987.

Summary: Barbry, Francis [Y.], and Jean Pierre Rozain. "Radiolysis Gas Formation and Pressure Increase During A Criticality Excursion." In *ANS Trans.*, Vol. 59. ANS, June 1989, pp. 181-182.

Basoglu, B[enan], et al. "Simulation of Hypothetical Criticality Accidents Involving Homogenous Damp Low-Enriched UO_2 Powder Systems." *Nuclear Technology (ANS)*, Vol. 105, No. 1 (Jan. 1994): pp. 14-30.

Subject Codes: A3, B1, T, O

09/30/95 Status: Published

Full Thesis: Basoglu, Benan. "Analysis of a Hypothetical Criticality Accident Involving Damp Low Enriched UO_2 Powder." Master's thesis, University of Tennessee - Knoxville, Aug. 1992.

Bickley, A., et al. "The Code CRITEX to Simulate Transient Criticality in Fissile Solution." In *ANS Trans.*, Vol. 55. ANS, Nov. 1987, pp. 406-407.

Subject Codes: T

09/30/95 Status: Published

Brewer, R[oger] W., et al. "Transient Analysis of a Hypothetical Array Criticality Accident." *Proceedings of the 1993 Topical Meeting on Physics and Methods in Criticality Safety, Nashville, Tennessee USA, Sept. 1993*. ANS, Sept. 1993, pp. 160-166.

Subject Codes: A3, T

09/30/95 Status: Published

Thesis: Brewer, R. W. "Analysis of a Hypothetical Array Criticality Accident Involving Units of Aqueous Uranyl Fluoride." Master's thesis, University of Tennessee - Knoxville, May 1993.

Briesmeister, J[udith] F. (editor). "MCNP 4A, Monte Carlo N-Particle Transport Code System," LA-12625-M; CCC-200. LANL; RSIC, Nov. 1993; March 1994.

Subject Codes: T 09/30/95 Status: Active

Alt. Contact: NEADB

Briggs, J. Blair, et al. "International Handbook of Evaluated Criticality Safety Benchmark Experiments," NEA/NCS/DOC(95)03/I-VI, Vol. I through VI. Paris France: OECD-NEA, March 31, 1995.

Subject Codes: A3, T 09/30/95 Status: Published

Notes: Generally more useful for criticality prevention analysis than accident analysis or detector placement analysis.

Brittan, R[aymond] O., et al. "Technical Review of ZPR-1 Accidental Transient - The Power Excursion, Exposures, and Clinical Data," ANL-4971. ANL-E, Jan. 26, 1953.

Subject Codes: A2, D, M, T 09/30/95 Status: Published

Alt. Contact: NTIS, OSTI Notes: Incident date 06/02/52

Later Work: Brittan, R[aymond] O., L. D. Marinelli, and F. W. Thalgott. "Technical Review of ZPR-1 Accidental Transient - The Power Excursion and Exposures," ANL-4971 (Rev.). ANL-E, 1953. (Referenced in several summaries but apparently not readily retrievable.)

Broadhead, B[ryan] L., and C[alvin] M. Hopper. "Updated Tool for Nuclear Criticality Accident Emergency Response." In *ANS Trans.*, Vol. 72. ANS, June 1995, pp. 218-220.

Subject Codes: A3, D, T 09/30/95 Status: Published

Related Work: Wilkinson, et al., *Nuclear Technology*, Vol. 111, No. 2, pp. 227-240, listed separately

Notes: Part of investigation to update Hopper, C[alvin] M., Y-DD-145, 1974, listed separately.

Cohen, Bernard L., and I-Sing Lee. "A Catalog of Risks." *Health Physics* (Pergamon Press), Vol. 36 (June 1979): pp. 707-722.

Subject Codes: H2, T 09/30/95 Status: Published

Alt. Contact: HPS

Cooper, A[ndrew] J[ames], and J[ohn] M[urray] Hobson. "Assessment of Design Implications of Detecting and Responding to Accidental Criticality Incidents." In *Proceedings of ICNC'91 International Conference on Nuclear Criticality Safety, Oxford England, Sept. 1991*, Vol. 2. UKAEA Tech., Sept. 1991, pp. VII-55 - VII-61.

Subject Codes: C2, C3, C4, E2, T 09/30/95 Status: Published

Subject Codes: (see full subject code list in the front matter for additional description)

A through A3 = criticality accidents

B1 or B2 = extensive bibliography or references

C1 through C5 = CASs

D = dose, dosimetry, distance and shielding

E through E4 = emergency management

H1 and H2 = hazard-, risk-, and safety-analysis

M = medical

O = other

R = releases and release dispersion

T = computational methods, tools, validation

Parenthesis indicate that the code(s) were assigned based on the document title or on its use as a reference in another document.

Courtois, G., et al. "MORET III: Un Programme Monte Carlo pour le Calcul des Coefficients de Multiplication Effectifs de Milieux Fissiles Dans des Géométries Complexes," CEA/IPSN 93/3. CEA-IPSN, 1993.

Subject Codes: (T) 09/30/95 Status: Not Determined

Notes: Code is apparently active but it might not be available to the public.

Das, S. "Comment on 'Reactivity Feedback in Mechanisms in Aqueous Fissile Solutions'." *Nuclear Science and Engineering* (ANS), Vol. 118, No. 2 (Oct. 1994): pp. 127-130.

Subject Codes: T 09/30/95 Status: Published

Delafield, H[oward] J., D. M. Barker, and C. A. Perks. "The Use of an Expert System in Criticality Accident Dosimetry." In *Proceedings of ICNC'91 International Conference on Nuclear Criticality Safety, Oxford England, Sept. 1991*, Vol. 2. UKAEA Tech., Sept. 1991, pp. VII-97 - VII-103.

Subject Codes: D, E2, T 09/30/95 Status: Published

deOliveira, Cassiano R. E., et al. "Three-Dimensional Time-Dependent Finite Element Radiation Transport Methods for Criticality Assessment." In *ICNC'95 Proceedings of the Fifth International Conference on Nuclear Criticality Safety, Albuquerque, New Mexico USA, Sept. 1995*, Vol. I. UNM, Sept. 1995, pp. 6•38-6•43.

Subject Codes: D, T 09/30/95 Status: Published

Dodds, [Jr.], H. L[ee], and R[obert] M[ichael] Westfall. "SKINATH - A Computer Program for Solving the Reactor Point Kinetics Equations with Simple Thermal Hydraulic Feedback," ORNL/CSD/TM-210. ORNL, Sept. 1984.

Subject Codes: T 09/30/95 Status: Active

Alt. Contact: UT-Knoxville

Dunenfeld, M. S., and R. K. Stitt. "Summary Review of the Kinetics Experiments on Water Boilers," NAA-SR-7087. California USA: Atomics International, Feb. 1, 1963.

Subject Codes: A3, T 09/30/95 Status: Published

Alt. Contact: NTIS

Fisher, S[tephen] E., and K[atey] E. Lenox. "An Assessment of the Radiological Doses Resulting From Accidental Uranium Aerosol Releases and Fission Product Releases from a Postulated Criticality Accident at the Oak Ridge Y-12 Plant," Y/TS-1272. Y-12 Plant, Oak Ridge, Tennessee USA, March 1995.

Subject Codes: (A3, D, R, T) 09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Notes: Author indicates that a technical editing error occurred in table 3: "months" should be "minutes." Dose calculations apply to inhalation and fission products, not the prompt neutron-gamma dose.

Forehand, Jr., H. M. "Effect of Radiolytic Gas on Nuclear Excursions in Aqueous Solutions," NUREG/CR-2517. NRC, Jan. 1982.

Subject Codes: (A3, T) 09/30/95 Status: Published

Dissertation: ——. "Effect of Radiolytic Gas on Nuclear Excursions in Aqueous Solutions." Ph.D. dissertation, University of Arizona, 1981.

Earlier Work: ——. "Analytical Studies of Criticality Accidents in Aqueous Solutions." In *ANS Trans.*, Vol 19. ANS, Oct. 1974, pp. 191-193.

Friedman, Bruce. "Reliability Characteristics Associated with Criticality Control Mechanisms." In *Proceedings of ISCS'87 International Seminar on Nuclear Criticality Safety, Tokyo Japan, Oct. 1987*. PNC, Sept. 1987, pp. 451-457.

Subject Codes: H1, T

09/30/95 Status: Published

Geller, L., and H[ugh] F. Henry. "Analysis of a Possible Radiation Burst," K-1095. UCNC, June 2, 1953.

Subject Codes: A3, D, T

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Gibson, J. A. B., and E. Piesch. "Neutron Monitoring for Radiological Protection," IAEA Technical Report Series No. 252. IAEA, 1985.

Subject Codes: B1, C1, C2, D, O, T

09/30/95 Status: Published

Hankins, Dale E. "Effect of Reactivity Addition Rate and of Weak Neutron Source on the Fission Yield of Uranium Solutions." *Nuclear Science and Engineering* (ANS), Vol. 26, No. 1 (Sept. 1966): pp. 26, 110-116.

Subject Codes: A3, T

09/30/95 Status: Published

Major Work: Hansen, *Nuclear Science and Engineering*, Vol. 8, pp. 709-719, listed separately.

Hansen, G[ordon] E. "Burst Characteristics Associated with the Slow Assembly of Fissionable Materials," LA-1441. LASL, July 1952.

Subject Codes: A3, T

09/30/95 Status: Published

Alt. Contact: LANL, NTIS, OSTI

Hansen, G[ordon] E. "Assembly of Fissionable Material in the Presence of a Weak Neutron Source." *Nuclear Science and Engineering* (ANS), Vol. 8, No. 6 (Dec. 1960): pp. 709-719.

Subject Codes: A3, T

09/30/95 Status: Published

Haught, C[hristopher] F., et al. "Analysis of Hypothetical Criticality Excursion Accidents in 10- and 20-MW Freezer/Sublimers." *Nuclear Technology* (ANS), Vol. 111, No. 2 (Aug. 1995): pp. 197-218.

Subject Codes: A3, B1, T

09/30/95 Status: Published

Summary: Haught, C[hristopher] F., et al. "Analysis of Hypothetical Criticality Excursion Accidents in 10- and 20-MW Freezer/Sublimers." In *ANS Trans.*, Vol. 70. ANS, June 1994, pp. 187-188.

Earlier Work: Haught, C[hristopher] F. "Analysis of Hypothetical Criticality Excursion Accidents in 10- and 20-MW Freezer/Sublimers." Master's Practice Project, University of Tennessee - Knoxville, May 1993.

Haywood, F. F., et al. "Dosimetry for Criticality Accidents: A Manual," IAEA Technical Report Series No. 211. IAEA, Feb. 1982.

Subject Codes: B1, D, T

09/30/95 Status: Active

Subject Codes: (see full subject code list in the front matter for additional description)

A through A3 = criticality accidents

B1 or B2 = extensive bibliography or references

C1 through C5 = CASSs

D = dose, dosimetry, distance and shielding

E through E4 = emergency management

H1 and H2 = hazard-, risk-, and safety-analysis

M = medical

O = other

R = releases and release dispersion

T = computational methods, tools, validation

Parenthesis indicate that the code(s) were assigned based on the document title or on its use as a reference in another document.

Henderson, P. J. "Conversion of Neutron and Gamma-Ray Flux to Absorbed Dose Rate," XDC-59-8-179. Cincinnati, Ohio USA: General Electric Atomic Products Division, Aug. 1959.

Subject Codes: (D, T)

09/30/95 Status: Issued

Notes: Many recommended conversion factors have changed since 1959 but the factors of this report were used extensively.

Henry, H[ugh] F., J. C. Bailey, and R. C. Rohr. "Calibration of Indium Foils for Personnel Monitoring," K-999. UCNC, 1953.

Subject Codes: (D, T)

09/30/95 Status: Issued

Alt. Contact: NTIS, OSTI

Hetrick, David L. "Simulation of Power Pulses in Criticality Accidents with Fissile Solutions." In *International Meeting on Safety Margins in Criticality Safety, San Francisco, California USA, Nov. 1989*. ANS, Nov. 1989, pp. 70-78.

Subject Codes: A3, T

09/30/95 Status: Published

Hetrick, David L. "Computer Simulation of Hypothetical Criticality Accidents." In *Proceedings of ICNC'91 International Conference on Nuclear Criticality Safety, Oxford England, Sept. 1991*, Vol. 2. UKAEA Tech., Sept. 1991, pp. VII-72 - VII-84.

Subject Codes: A3, T

09/30/95 Status: Published

Summary: ———. "Computer Simulation of Hypothetical Criticality Accidents in Aqueous Fissile Solutions." In *ANS Trans.*, Vol. 63. ANS, June 1991, pp. 226-228.

Hetrick, David L., and Drew E. Kornreich. "Hypothetical Criticality Accidents in Dilute Plutonium-Water Solutions: A Potential Trans-Uranic Storage Hazard." In *Proceedings of the WM'93 Symposium on Waste Management, Tucson, Arizona, USA, Feb.-Mar. 1993*. ANS, 1993, pp. 1267-1270.

Subject Codes: A3, T

09/30/95 Status: Published

Hetrick, D[avid] L., R[obert] H. Kimpland, and D[rew] E. Kornreich. "Computer Model for Predicting the Effects of Criticality Accidents in Solution." In *Proceedings of the 1993 Topical Meeting on Physics and Methods in Criticality Safety, Nashville, Tennessee USA, Sept. 1993*. ANS, Sept. 1993, pp. 80-86.

Subject Codes: A3, T

09/30/95 Status: Published

Later Work: ———. "Computer Simulations of Homogeneous Water Solution Pulse Reactors and Criticality Accidents." In *ANS Topical Meeting on Physics, Safety, and Applications of Pulse Reactors, Washington DC USA, Nov. 1994*. ANS, 1994.

Hetrick, D[avid] L., and T[homas] P. McLaughlin. "Estimating Maximum Pulse Yields for Solution Criticality Accidents." In *ANS Trans.*, Vol. 69. ANS, Nov. 1993, pp. 249-250.

Subject Codes: A3, T

09/30/95 Status: Published

Hetrick, David L. "Computation of Nuclear Excursions Induced by Large Reactivity Ramps." In *ANS Trans.*, Vol. 72. ANS, June 1995, pp. 204-205.

Subject Codes: T

09/30/95 Status: Published

Hetrick, David [L.], and Sung Lee. "Progress Toward a Method of Estimating Maximum Pulse Yields for Solution Criticality Accidents." In *ICNC'95 Proceedings of the Fifth International Conference on Nuclear Criticality Safety, Albuquerque, New Mexico USA, Sept. 1995*, Vol. II. UNM, Sept. 1995, pp. 11•131-11•136.

Subject Codes: A3, T

09/30/95 Status: Published

Hobson, J[ohn] M[urray] "Definition of Areas Requiring Criticality Alarm Annunciation and Emergency Control." In *Transactions of the Criticality Accident Alarm Systems Workshop, Richland, Washington USA, Sept. 1988*, DOE/NCT-05. LLNL, 1988, pp. 163-171.

Subject Codes: A3, C3, E2, O, T

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Hoffman, Joseph G. "Radiation Doses in the Pajarito Accident of May 21, 1946," LA-687. LASL, May 26, 1948.

Subject Codes: A2, D, T

09/30/95 Status: Published

Alt. Contact: LANL, NTIS, OSTI

Hopper, C[alvin] M. "A Slide Rule for Estimating Nuclear Criticality Information," Y-DD-145. UCNC Y-12 Plant, Jan. 7, 1974.

Subject Codes: A3, B1, D, T

09/30/95 Status: Issued

Alt. Contact: NTIS, OSTI

Further Work: Wilkinson, et al, *Nuclear Technology*, Vol. 111, No. 2, pp. 227-240, listed separately.

○ Broadhead and Hopper, *ANS Trans.*, Vol. 72, pp. 218-220, listed separately.

Notes: Revision due to be issued in 1996.

[HPS]. "American National Standard: Dosimetry for Criticality Accidents," ANSI N13.3-1969 (R1988). ANSI, approved July 17, 1969.

Subject Codes: D, E1, E2, E4, T

09/30/95 Status: Active

Notes: References standards ANSI N16.1-1969 and N16.2-1969 but allows rev.s to apply.

Current rev.s are ANSI/ANS-8.1-1983 (R1988) and -8.3-1986.

Hurst, G. S., R. H. Ritchie, and L. C. Emerson. "Accidental Radiation Excursion at the Oak Ridge Y-12 Plant, III. Determination of Radiation Doses." *Health Physics* (Pergamon Press), Vol. 2, No. 2 (1959): pp. 121-133.

Subject Codes: A1, D, T

09/30/95 Status: Published

Alt. Contact: HPS

Notes: Incident date 06/16/58

3rd of 4 part series of articles

ICRU. "Tissue Substitutes in Radiation Dosimetry and Measurement." ICRU Report No. 44. ICRU Publications, Jan. 15, 1989.

Subject Codes: B1, T, O

09/30/95 Status: Active

Notes: Gamma and neutron flux-to-dose conversion factors.

Ing, H., and S. Makra. "Compendium of Neutron Spectra in Criticality Accident Dosimetry." IAEA Technical Report Series No. 180. IAEA, 1987.

Subject Codes: A3, B1, T, O

09/30/95 Status: Published

Subject Codes: (see full subject code list in the front matter for additional description)

A through A3 = criticality accidents

B1 or B2 = extensive bibliography or references

C1 through C5 = CASs

D = dose, dosimetry, distance and shielding

E through E4 = emergency management

H1 and H2 = hazard-, risk-, and safety-analysis

M = medical

O = other

R = releases and release dispersion

T = computational methods, tools, validation

Parenthesis indicate that the code(s) were assigned based on the document title or on its use as a reference in another document.

IOS. "International Standard, Nuclear Energy - X and Gamma Reference Radiations for Calibrating Dosimeters and Dose Ratemeters and for Determining their Response as a Function of Photon Energy," ISO 4037: 1979. IOS, 1979.

Subject Codes: (C1, D, T, O)

09/30/95 Status: Active

Notes: Apparently Part I. A draft Part II was available for comment as of June 1995.

Kato, R., T. Naramura, and Y. Senda. "The Code CREST to Simulate Criticality Accident Power Excursion in Fuel Solution." In *International Meeting on Safety Margins in Criticality Safety, San Francisco, California USA, Nov. 1989*. ANS, Nov. 1989, pp. 79-88.

Subject Codes: A3, T

09/30/95 Status: Published

Code Report: ———. "The Code CREST to Simulate Criticality Accident Power Excursion in Fuel Solution" (in Japanese?). Mitsubishi Atomic Power Industries, Japan, no date.

Notes: CREST might not be available to the public.

Keepin, G. R[obert], and R. W. Cox, "General Solution of the Reactor Kinetic Equation." *Nuclear Science and Engineering* (ANS), Vol. 8, No. 6 (Dec. 1960): pp. 670-690.

Subject Codes: T

09/30/95 Status: Published

Kimpland, Robert Herbert. "Multi-Region Computer Model for Predicting Nuclear Excursions in Aqueous Homogeneous Solution Assemblies." Ph.D. dissertation, University of Arizona, 1993.

Subject Codes: T

09/30/95 Status: Published

Summary: Kimpland, R[obert] H. "An Improved Multi-Region Computer Model for Predicting Nuclear Excursions in Aqueous Homogeneous Solution Assemblies." In *ANS Trans.*, Vol. 68. ANS, June 1993, p. 245.

Later work: R[obert] H. Kimpland and D[rew] E. Kornreich. "A Two-Dimensional Multi-Region Computer Model for Predicting Nuclear Excursions in Aqueous Homogeneous Solution Assemblies." To be published in *Nuclear Science and Engineering* (late 1995 or early 1996).

Kornreich, D[rew] E. "Reactivity Feedback Mechanisms in Aqueous Fissile Solutions." *Nuclear Science and Engineering* (ANS), Vol. 115, No. 1 (Sept. 1993): pp. 50-61.

Subject Codes: A3, T

09/30/95 Status: Published

Kornreich, Drew E. "'Response to 'Comment on 'Reactivity Feedback Mechanisms in Aqueous Fissile Solutions' ". "' *Nuclear Science and Engineering* (ANS), Vol. 118, No. 2 (Oct. 1994): pp. 130-131.

Subject Codes: T

09/30/95 Status: Published

Krug, H., and W. Thomas. "Criticality Safety in the Federal Republic of Germany." In *Proceedings, Nuclear Criticality Safety, El Paso, Texas USA, April 1990*, SAND80-1675. Albuquerque, New Mexico USA: Sandia National Laboratories, 1990, pp. 141-165.

Subject Codes: A3, T, O

09/30/95 Status: Published

Alt. Contact: NTIS

Lee, Sung, and David [L.] Hetrick. "Effect of Axial Expansion on the Reactivity of a Cylindrical Fissile Solution Assembly." In *ANS Trans.*, Vol. 72. ANS, June 1995, pp. 203-204.

Subject Codes: A3, T

09/30/95 Status: Published

Leonard, Jr., B. R. "A Study of the Radiation Burst in the Hanford Homogeneous Reactor," HW-24327. HW, May 2, 1952.

Subject Codes: A2, M, O, T

09/30/95 Status: Published

Alt. Contact: Hanford, NTIS, OSTI

Notes: Incident date 11/16/51.

Lutz, H[arry] F. "Nuclear Criticality Safety Assessment: Part I. Calculating Power Histories in Nuclear Excursions," M-164. LLNL, June 17, 1985.

Subject Codes: A3

09/30/95 Status: Issued

Alt. Contact: NTIS, OSTI

Lutz, Harry F. "Predicting Accident Characteristics by Calculations." In *ANS Trans.*, Vol. 55. ANS, Nov. 1987, pp. 408-409.

Subject Codes: A3, T

09/30/95 Status: Published

Maceda, E. L., and D[on] K. Sgarlata. "Radius of Coverage of Nuclear Criticality Detectors." In *ANS Trans.*, Vol. 34. ANS, 1980, pp. 330-331.

Subject Codes: C2, D, T

09/30/95 Status: Published

Mather, D[onald] J., and P. M. Shaw. "Calculations of Criticality Excursions in Fissile Liquid Solutions," SRD-R-308. UKAEA, July 1984.

Subject Codes: (A3, T)

09/30/95 Status: Issued

Alt. Contact: HMSO, UKAEA Tech.

Mather, D[onald] J., and P. Hague. "The Analysis of Transient Criticality in Wetted Uranium Dioxide Systems and in Fissile Solutions." In *ANS Trans.*, Vol. 55. ANS, Nov. 1987, pp. 414-415.

Subject Codes: A3, T

09/30/95 Status: Published

Mather, D[onald] J., et al. "Validation of the Critex Code." In *Proceedings of ICNC'91 International Conference on Nuclear Criticality Safety, Oxford England, Sept. 1991*, Vol. 2. UKAEA Tech., Sept. 1991, pp. VII-62 - VII-71.

Subject Codes: T

09/30/95 Status: Published

Mather, D[onald] J., et al. "Examination of Some Fissile Solution Scenarios Using Critex." In *Proceedings of ICNC'91 International Conference on Nuclear Criticality Safety, Oxford England, Sept. 1991*, Vol. 2. UKAEA Tech., Sept. 1991, pp. VII-85 - VII-96.

Subject Codes: A3, T

09/30/95 Status: Published

Replaces: Mather, D[onald] J., and P. M. Shaw. "Calculations of Criticality Excursions in Fissile Liquid Solutions." In *Proceedings of the International Seminar on Criticality Studies Programs and Needs, Dijon France, Sept. 1983*. Centre d' Études de Valduc, France: CEA, 1984, pp. 485-515.

Subject Codes: (see full subject code list in the front matter for additional description)

A through A3 = criticality accidents

B1 or B2 = extensive bibliography or references

C1 through C5 = CAs

D = dose, dosimetry, distance and shielding

E through E4 = emergency management

H1 and H2 = hazard-, risk-, and safety-analysis

M = medical

O = other

R = releases and release dispersion

T = computational methods, tools, validation

Parenthesis indicate that the code(s) were assigned based on the document title or on its use as a reference in another document.

Mather, D[onald J.], A. Bickley, and A[nthony] Prescott. "CRITEX - A Code To Calculate the Fission Release Arising from Transient Criticality in Fissile Solutions," AEA/CS/R1007/R. UKAEA Tech., 1994.

Subject Codes: (T) 09/30/95 Status: Indeterminant

Notes: Work on CRITEX has apparently ended. Although the code was available for sale, there is no support network, such as ANSWERS, for users.

Mather, D[onald] J. "Analysis of Radiolytic Gas Nucleation during Criticality Transients." In *ICNC'95 Proceedings of the Fifth International Conference on Nuclear Criticality Safety, Albuquerque, New Mexico USA, Sept. 1995*, Vol. II. UNM, Sept. 1995, pp. 10•11-10•18.

Subject Codes: A3, T 09/30/95 Status: Published

Mazzola, Carl A., Robert. B. Addis, and the Emergency Management Laboratory of the Oak Ridge Institute for Science and Education. *Atmospheric Dispersion Modeling Resources*, 2nd Ed. ORAU, March 1995.

Subject Codes: (B1, R, T) 09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Notes: Critical review with supporting bibliography for most methods of estimating and predicting atmospheric dispersion.

Mee, W[illiam] T., D[avis] A. Reed, and R[ichard] G. Taylor. "Consequences of a Postulated, Moderated Criticality Accident at the Oak Ridge Y-12 Plant," Y/DD-384. Martin Marietta Energy Systems, Inc., Oak Ridge, Tennessee USA, Sept. 1988.

Subject Codes: A3, D, R, T 09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Notes: Authors indicate there are a few minor errors with the release calculations.

Naito, Y[oshitaka], M. Yokota, and K[o] Nakano. "MULTI-KENO: A Monte Carlo Code for Criticality Safety Analysis," (in Japanese) JAERI-M 83-049. JAERI, March 1983.

Subject Codes: (T) 09/30/95 Status: Not determined

Notes: MULTI-KENO is apparently active but it might not be available to the public.

Nakache, F. R., and M. M. Shapiro. "The Nuclear Aspects of the Accidental Criticality at Wood River Junction, Rhode Island, July 24, 1964," TID-21995. New Haven, Connecticut USA: United Nuclear Corporation, Nov. 12, 1964.

Subject Codes: A1, D, T 09/30/95 Status: Published

Alt. Contact: NTIS Notes: No. assigned after initial distribution

Summary: Auxier, *Nuclear Safety*, Vol. 6, No. 3, pp. 298-301, listed separately.

Supplement to: Allison, et al., "Nuclear Incident ... July 24, 1964," Aug. 21, 1964, listed separately.

Nakajima, Ken, and Yeong-Chan Kim. "Comparisons of Two Models and Effects of Initial Neutron Density in Criticality Accident Analysis." In *Proceedings of ICNC'91 International Conference on Nuclear Criticality Safety, Oxford England, Sept. 1991*, Vol. 2. UKAEA Tech., Sept. 1991, pp. VII-25 - VII-32.

Subject Codes: A3, T 09/30/95 Status: Published

Nakajima, K[en], and H. Yanagisawa. "Development of a Kinetics Code, AGNES, for the Evaluation of Criticality Accidents in Solution Fuel Systems." In *Proceedings of ISCS'87 International Seminar on Nuclear Criticality Safety, Tokyo Japan, Oct. 1987*. PNC, Sept. 1987, pp. 427-429.

Subject Codes: T 09/30/95 Status: Published

Notes: Author indicates the AGNES code is not yet available to the public.

NCRP. "Protection Against Neutron Radiation, Recommendations" NCRP Report No. 38. NCRP, issued Jan. 4, 1971.

Subject Codes: B1, D, O, T 09/30/95 Status: Active

Notes: Especially see Appendix F, "Accident Dosimetry."

NCRP. "Basic Radiation Protection Criteria," NCRP Report No. 39. NCRP, issued Jan. 15, 1971.

Subject Codes: B1, D, M, O, T 09/30/95 Status: Superseded by NCRP Report No. 91

Notes: The 12 rad threshold specified in ANSI/ANS-8.3-1986 is loosely based on 1/2 the NCRP No. 39 reported 25 rad dose at which temporary changes to whole blood cells were barely detectable.

NCRP. "Recommendations on Limits for Exposure to Ionizing Radiation," NCRP Report No. 91. NCRP, issued June 1, 1987.

Subject Codes: B1, D, O, T 09/30/95 Status: Active

Notes: Limit recommendations supersede those of NCRP Report No. 39.

Newmyer, William D. "Analysis of a Hypothetical Criticality Accident Involving Dry Highly Enriched Uranium Powder." Master's thesis, University of Tennessee - Knoxville, Dec. 1991.

Subject Codes: (A3, T) 09/30/95 Status: Published

Summary: —. "Analysis of a Hypothetical Criticality Accident Involving Dry Highly Enriched Uranium Powder." In *ANS Trans.*, Vol. 64. ANS, Nov. 1991, p. 344-346.

Nguyen, Dong H. "Source Term Analysis for a Criticality Accident in Metal Production Line Glove Boxes." *Proceedings of ICNC'91 International Conference on Nuclear Criticality Safety, Oxford England, Sept. 1991*, Vol. 2. UKAEA Tech., Sept. 1991, pp. VII-17 - VII-24.

Subject Codes: A3, T 09/30/95 Status: Published

NRC Office of Standards Development. "Assumptions Used for Evaluating the Potential Radiological Consequences of Accidental Nuclear Criticality in a Uranium Fuel Fabrication Plant," NRC Regulatory Guide 3.34 (Rev. 1). NRC, July 1979.

Subject Codes: A3, B1, C5, D, E1, T 09/30/95 Status: Active

NRC Office of Standards Development. "Assumptions Used for Evaluating the Potential Radiological Consequences of Accidental Nuclear Criticality in a Plutonium Processing and Fuel Fabrication Plant," NRC Regulatory Guide 3.35 (Rev. 1). NRC, July 1979.

Subject Codes: A3, B1, C5, D, E1, T 09/30/95 Status: Active

NRC Office of Standards Development. "Assumptions Used for Evaluating the Potential Radiological Consequences of Accidental Nuclear Criticality in a Fuel Processing Plant," NRC Regulatory Guide 3.33 (Rev. 0). NRC, April 1987.

Subject Codes: A3, B1, C5, D, E1, T 09/30/95 Status: Active

Subject Codes: (see full subject code list in the front matter for additional description)

A through A3 = criticality accidents

B1 or B2 = extensive bibliography or references

C1 through C5 = CASs

D = dose, dosimetry, distance and shielding

E through E4 = emergency management

H1 and H2 = hazard-, risk-, and safety-analysis

M = medical

O = other

R = releases and release dispersion

T = computational methods, tools, validation

Parenthesis indicate that the code(s) were assigned based on the document title or on its use as a reference in another document.

Ogilvie, F[iona] M. "Thermal Oxide Reprocessing Plant Basket Handling Cave - An Integrated Deterministic/Probabilistic Criticality Analysis." In *ICNC'95 Proceedings of the Fifth International Conference on Nuclear Criticality Safety, Albuquerque, New Mexico USA, Sept. 1995*, Vol. II. UNM, Sept. 1995, pp. 11•37-11•42.

Subject Codes: H1, O, T

09/30/95 Status: Published

Okuno, H[iroshi], et al. "Supplement to the Nuclear Criticality Safety Handbook of Japan" (in Japanese), JAERI-xxxx. JAERI, to be published in 1995.

Subject Codes: (A3, C2, C5, O, T)

09/30/95 Status: To be published

Notes: Supplement will contain Chapter 6, "Criticality Accidents and Their Evaluation Methods," and Chapter 7, "Basic Principles on Design and Installation of Criticality Alarm System."

Supplement to: Science and Technology Agency. *Nuclear Criticality Safety Handbook* (in Japanese). Tokyo Japan: Nikkan Shobo, 1988. The handbook is also published in English with the same authoring institution and title, translated by Yoshitaka Naito and Hiroshi Okuno, JAERI-Review 95-013. Tokyo Japan: Nikkan Shobo, Sept. 1995.

Olsen, A. R., et al. "Empirical Model to Estimate Energy Release from Accidental Criticality." In *ANS Trans.* Vol. 19. ANS, Oct. 1974, p. 189-191.

Subject Codes: A3, T

09/30/95 Status: Published

ORNL. "SCALE 4.2: A Modular Code System for Performing Standardized Computer Analyses for Licensing Evaluation," draft NUREG/CR-200 (Rev. 4), draft ORNL/NUREG/CSD-2/R4; CCC-545. ORNL; RSIC, Nov. 1993. Approved edition numbered NUREG/CR-200 (Rev. 4), ORNL/NUREG/CSD-2/R4 published by NRC, Feb. 1995.

Subject Codes: T

09/30/95 Status: Active

Alt. Contact: NEADB

Notes: Help available via e-mail, scalehelp@ornl.gov.

Newsletters on internet URL http://www.cad.ornl.gov/cad_nea/text/scale_news.html.

Next rev., SCALE 4.3, due to be available from RSIC in Oct. 1995.

ORNL. "ANISN-ORNL: One-Dimensional Discrete Ordinates Transport Code with Anisotropic Scattering," CCC-254. RSIC, May 1995.

Subject Codes: T

09/30/95 Status: Active

Related Ref.s: Engle, Jr., W[ard] W. "ANISN, A One-Dimensional Discrete Ordinates Transport Code with Anisotropic Scattering," K-1693. UCNC, March 1967.

○ Engle, [Jr.], W[ard] W., M. A. Boling, and B. W. Colston. "DTF-II, A One-Dimensional, Multigroup Neutron Transport Program," NAA-SR-10951. California USA: Atomics International, March 1966.

Notes: Reference is an RSIC abstract.

Related references are for computer codes which are probably inactive but the reference are useful information for ANISN-ORNL.

Parks, C[ecil] V., et al. "Assessment of Shielding Analysis Methods, Codes, and Data for Spent Fuel Transport/Storage Applications," ORNL/CSD/TM-246. ORNL, July 1988.

Subject Codes: (D, T)

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Peterson, D[onald] M., W[illiam] R. Stratton, and T[homas] P. McLaughlin. "PAD: A One-Dimensional, Coupled Neutronic-Thermodynamic-Hydrodynamic Computer Code," LA-6540-MS. LASL, Dec. 1976.

Subject Codes: T 09/30/95 Status: Not determined
Alt. Contact: LANL, NTIS, OSTI Notes: Code in occasional use

Plaster, M[ichael] J., et al. "Analysis of a Hypothetical Criticality Accident in a Waste Super-Compactor." *Nuclear Technology* (ANS), Vol. 111, No. 2 (Aug. 1995): pp. 219-226.

Subject Codes: A3, T 09/30/95 Status: Published
Summary: Plaster, M[ichael] J., et al. "Analysis of a Hypothetical Criticality Accident in a Waste Super-Compactor." In *ANS Trans.*, Vol. 70. ANS, June 1994, pp. 189-191.
Full Thesis: Plaster, Michael J. "Analysis of a Hypothetical Criticality Accident in a Waste Super-Compactor." Master's thesis, University of Tennessee - Knoxville, Dec. 1993.

Profio, A. E. "Experimental Tests of Shielding Codes," AFWL-TR-69-116. San Diego, California USA: Gulf General Atomic, Inc., Dec. 1969.

Subject Codes: D, T 09/30/95 Status: Published
Alt. Contact: NTIS

"Le Programme CRAC - Études d'Accidents de Criticité en Solution." *Bulletin d'Informations Scientifiques et Techniques*, Vol. 172 (July-Aug. 1972): no page data.

Subject Codes: (A3, T) 09/30/95 Status: Published

Pruvost, Norman L., and John A. Schlessler. "MCNP Transport Calculations for Detector Locations." In *Transactions of the Criticality Accident Alarm Systems Workshop, Richland, Washington USA, Sept. 1988*, DOE/NCT-05. LLNL, 1988, pp. 145-155.

Subject Codes: C2, T 09/30/95 Status: Published
Alt. Contact: NTIS, OSTI

Rhoades, W[ayne] A., and R[obert] L. Childs. "TORT-DORT: Two- and Three-Dimensional Ordinates Transport, Version 2.12.14" CCC-543. RSIC, Jan. 1990 with revisions through January 1995.

Subject Codes: (T) 09/30/95 Status: Active
Alt. Contact: NTIS, OSTI Notes: Reference is an RSIC abstract
Additional: —. "An Updated Version of the DOT 4 One- and Two-Dimensional Neutron/Photon Transport Code," ORNL-5851. ORNL, April 1982.
○ —. "Theoretical Basis of the Linear Nodal and Linear Characteristic Methods in the TORT Computer Code," ORNL/TM-12246. ORNL, Jan. 1993.
○ Rhoades, W[ayne] A., "The TORT Three-Dimensional Discrete Ordinates Neutron/Photon Transport Code," ORNL-6268. ORNL, Nov. 1987.
○ —. "The TORSED Method for Construction of TORT Boundary Sources from External DORT Flux Files," ORNL/TM-12359. ORNL, Aug. 1993.

Subject Codes: (see full subject code list in the front matter for additional description)

A through A3 = criticality accidents	H1 and H2 = hazard-, risk-, and safety-analysis
B1 or B2 = extensive bibliography or references	M = medical
C1 through C5 = CASs	O = other
D = dose, dosimetry, distance and shielding	R = releases and release dispersion
E through E4 = emergency management	T = computational methods, tools, validation

Parenthesis indicate that the code(s) were assigned based on the document title or on its use as a reference in another document.

Rittmann, Paul D. "An Automated Method for Determining the Areas Covered by Gamma Sensitive Criticality Detectors." In *Transactions of the Criticality Accident Alarm Systems Workshop, Richland, Washington USA, Sept. 1988*, DOE/NCT-05. LLNL, 1988, pp. 157-162.

Subject Codes: T

09/30/95 Status: Not determined

Alt. Contact: NTIS, OSTI

Notes: Code might not be active

Roesch, R. O., et al. "Dosimetry Investigation of the Recuplex Accident," HW-SA-2730. HW, Aug. 22, 1962.

Subject Codes: (A1, D, T)

09/30/95 Status: Published

Alt. Contact: Hanford, NTIS, OSTI

Notes: Incident date 04/07/62

Summary: Hanford Laboratories. "Dosimetry Investigation on the RECUPLEX Criticality Accident." *Health Physics* (Pergamon Press), Vol. 9 (1963): p. 839.

Rozain, J[ean] P[ierre], et al. "Criticality Excursions in Wetted UO₂ Powder." In *Proceedings of ICNC'91 International Conference on Nuclear Criticality Safety, Oxford England, Sept. 1991*, Vol. 2. UKAEA Tech., Sept. 1991, pp. VII-40 - VII-50.

Subject Codes: A3, T

09/30/95 Status: Published

Summary: Rozain, J[ean] P[ierre], et al. "Criticality Excursions in Wetted UO₂ Powder." In *ANS Trans.*, Vol. 63. ANS, June 1991, p. 228.

Seale, Robert L. "Consequences of Criticality Accidents." In *Nuclear Criticality Safety Proceedings of a Short Course, Taos, New Mexico USA, May 1973*, TID-26286. UNM, 1974, pp. 16-24.

Subject Codes: A3, O, T

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Seale, R[obert] L. "Kinetics Calculations." In *Proceedings of the International Seminar on Criticality Studies Programs and Needs, Dijon France, Sept. 1983*. Centre d' Études de Valduc, France: CEA, 1984, pp. 300-341.

Subject Codes: A3, T

09/30/95 Status: Published

Seale, Robert L. "Criticality Alarms: How Sensitive to What?" In *Transactions of the Criticality Alarm Systems Workshop, Richland, Washington USA, Sept. 1988*, DOE/NCT-05. LLNL, 1988, pp. 5-12.

Subject Codes: A3, C5, T

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Simpkins, W. M., H. L[ee] Dodds, [Jr.], and R[obert] S[herwood] Howell. "Investigation of the Validity of the Point Kinetics Model During the Initiating Phase of a Hypothetical Core Disruptive Accident (HCDA) in the Clinch River Breeder Reactor," R-82-036. Knoxville, Tennessee USA: Technology for Energy Corporation, Nov. 1982.

Subject Codes: (A3, T)

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI, University of Tennessee - Knoxville

Notes: Dr. Dodds indicates the calculation model is very similar to models for criticality accidents outside reactors.

Singleterry, Jr., R. C. "Parameter Study for Dynamic Models of Power Bursts for the KEWB5, CRAC, and Silene Experiments." Master's thesis, University of Arizona, 1990.

Subject Codes: (A3, B1, T)

09/30/95 Status: Published

Stratton, William R. "A Review of Criticality Accidents," revised by David R. Smith, DOE/NCT-04. LLNL and DOE, March 1989.

Subject Codes: A, B1, T 09/30/95 Status: Published
 Alt. Contact: NTIS, OSTI Notes: Known as *Stratton Report*
 Previous Ed.s: ———. "A Review of Criticality Accidents." In *Progress in Nuclear Energy Series IV: Technology, Engineering, and Safety*, edited by C. M. Nicholle. New York USA: Pergamon Press, 1960, pp. 163-205.
 ○ ———. "A Review of Criticality Incidents." In *Criticality Control in Chemical and Metallurgical Plant, Karlsruhe Symposium, Karlsruhe Germany, May 1961*. OECD, Nov. 1961, pp. 491-533.
 ○ ———. "A Review of Criticality Accidents," LA-3611. LASL, Jan. 1967.
 ○ ———. "Criticality Accident Experience: Heterogenous Water-Moderated Systems." In *ANS Trans.*, Vol. 46. ANS, June 1984, pp. 460-462.

Stratton, W[illiam] R., T. H. Colvin, and R. B. Lazarus. "Analyses of Prompt Excursions in Simple Systems and Idealized Fast Reactors." In *Proceedings of the Second United Nations International Conference on Peaceful Uses of Atomic Energy, Geneva Switzerland, Sept. 1958*, Vol. 12. UN, 1959, pp. 196-206.

Subject Codes: A3, T 09/30/95 Status: Published

Thomas, J[oseph] T., and [A.] D[ixon] Callihan. "Radiation Excursions at the ORNL Critical Experiments Laboratory, I. May 26, 1954, II. February 1, 1956," ORNL-2452. ORNL, May 27, 1958.

Subject Codes: A2, T 09/30/95 Status: Published
 Alt. Contact: NTIS, OSTI

Thomas, W., and B. Gamal. "Modeling of Criticality Accidents and Their Environmental Consequences." In *ANS Trans.*, Vol. 55. ANS, Nov. 1987, pp. 409-410.

Subject Codes: D, R, T 09/30/95 Status: Published

Tuck, Grover "Simplified Methods of Estimating the Results of Accidental Solution Excursions." *Nuclear Technology (ANS)*, Vol. 23 (Aug. 1974): pp. 177-188.

Subject Codes: A3, T 09/30/95 Status: Not Determined

Waddell, Jr., M. W[esley], and H. L[ee] Dodds, [Jr.]. "A Method for Transient, Three-Dimensional Neutron Transport Calculations," Y/DD-586. UCNC Y-12 Plant, Dec. 28, 1982.

Subject Codes: T 09/30/95 Status: Not determined
 Alt. Contact: NTIS, OSTI

Waddell, Jr., M. W[esley], and H. L[ee] Dodds, [Jr.]. "A Method for Transient, Three-Dimensional Neutron Transport Calculations." In *Proceeding of the Conference on Mathematical Methods and Supercomputing in Nuclear Applications, Karlsruhe Germany, April 1993*. No publication data, p. 633.

Subject Codes: (T) 09/30/95 Status: Published

Subject Codes: (see full subject code list in the front matter for additional description)

A through A3 = criticality accidents	H1 and H2 = hazard-, risk-, and safety-analysis
B1 or B2 = extensive bibliography or references	M = medical
C1 through C5 = CASs	O = other
D = dose, dosimetry, distance and shielding	R = releases and release dispersion
E through E4 = emergency management	T = computational methods, tools, validation

Parenthesis indicate that the code(s) were assigned based on the document title or on its use as a reference in another document.

Waddell, Jr., M. W[esley] "Development of a Transient Three-Dimensional Neutron Transport Code with Feedback." In *ANS Trans.*, Vol. 71. ANS, Nov. 1994, p. 283-285.

Subject Codes: T

09/30/95 Status: Published

Wilkinson, A[lan], et al. "Improved Dose Estimates for Nuclear Criticality Accidents." *Nuclear Technology* (ANS), Vol. 111, No. 2 (Aug. 1995): pp. 227-240.

Subject Codes: A3, B1, D, T

09/30/95 Status: Published

Earlier Work: Wilkinson, A[lan], et al. "Improved Dose Estimates for Nuclear Criticality Accidents: Preliminary Results." In *ANS Trans.*, Vol. 70. ANS, June 1994, pp. 191-192.

○ Wilkinson, A[lan] "Improved Dose Estimates for Nuclear Criticality Accidents." Master's thesis, University of Tennessee - Knoxville, 1994

Related Work: Broadhead and Hopper, *ANS Trans.*, Vol. 72, pp. 218-220, listed separately.

Notes: Part of investigation to update: Hopper, Y-DD-145, 1974, listed separately

Wimett, T[homas] F. "Time Behavior of Godiva Through Prompt Critical," LA-2029. LASL, April 1956.

Subject Codes: A3, T

09/30/95 Status: Issued

Alt. Contact: NTIS, OSTI

Yamamoto, T[oshihiro]. "Space-Dependent Kinetics Analysis of a Hypothetical Criticality Accident Involving Units of Aqueous Uranyl Fluoride." In *ICNC'95 Proceedings of the Fifth International Conference on Nuclear Criticality Safety, Albuquerque, New Mexico USA, Sept. 1995*, Vol. II. UNM, Sept. 1995, pp. 10•19-10•24.

Subject Codes: A3, T

09/30/95 Status: Published

Notes: Analysis includes use of TDKENO which might not be available to the public.

4 Sorted by Document Type and Number or Date

4.1 Reports, Rules, Standards, Etc. with Document Numbers

10 CFR 70.24. NRC. "Criticality Accident Requirements." FR, no date.

Subject Codes: C2, C3, C5, E 09/30/95 Status: Active

Source: *Federal Register* (GPO), Vol. 39 (Nov. 5, 1974): p. 39021; as amended in Vol. 41 (July 29, 1976): p. 31522, and in Vol. 53 (May 27, 1988): p. 19252.

10 CFR 70.52. NRC. "Reports of Accidental Criticality or Loss or Theft or Attempted Theft of Special Nuclear Material." FR, no date.

Subject Codes: E1, E4, O 09/30/95 Status: Active

Source: *Federal Register* (GPO), Vol. 52 (June 9, 1987): p. 21657.

29 CFR 1910.96. OSHA. "Ionizing Radiation." FR, no date.

Subject Codes: C1, C2, C5, E3, O 09/30/95 Status: Active

Source: *Federal Register* (GPO), Vol. 39 (June 27, 1974): p. 23502; as amended in Vol. 43 (Oct. 24, 1978): p. 49746; Vol. 43 (Nov. 7, 1978): p. 51759; and Vol. 49 (April 30, 1984): p. 18295.

Notes: See paragraphs (f), "Immediate evacuation warning signal," and (p), "Atomic Energy Commission licensees - AEC contractors operating AEC plants and facilities - AEC Agreement State licensees or registrants."

ACI-362. Allied Chemical Idaho Chemical Programs, CPP Technical Division Personnel. "Recovery of ICPP from Criticality Event of October 17, 1978: Part I - Basic Technical Data." Idaho Falls, Idaho USA: Allied Chemical Idaho Chemical Programs, Nov. 1978.

Subject Codes: A1, E4 09/30/95 Status: Not approved for public release

Released Ref: [ICPP-MISC-002], listed separately.

Notes: This report is included here only because it is referenced in NUREG-1140, which is listed separately.

AEA/CS/R1007/R. D[onald J.] Mather, A. Bickley, and A[nthony] Prescott. "CRITEX - A Code To Calculate the Fission Release Arising from Transient Criticality in Fissile Solutions." UKAEA Tech., 1994.

Subject Codes: (T) 09/30/95 Status: Indeterminant

Notes: Work on CRITEX has apparently ended. Although the code was available for sale, there is no support network, such as ANSWERS, for users.

AECP 1074 (Atomic Energy Code of Practice). E. Rimmer, et al. "The Provision of Criticality Incident Detection, Alarm and Warning Systems (Provisional)." Risley, Warrington UK: UKAEA Standards Section, Feb. 1987.

Subject Codes: C1, C2, C3, C5, E 09/30/95 Status: Indeterminant

Alt. Contact: HMSO Notes: Never formally issued but in current use at several UK facilities

Subject Codes: (see full subject code list in the front matter for additional description)

A through A3 = criticality accidents

B1 or B2 = extensive bibliography or references

C1 through C5 = CASs

D = dose, dosimetry, distance and shielding

E through E4 = emergency management

H1 and H2 = hazard-, risk-, and safety-analysis

M = medical

O = other

R = releases and release dispersion

T = computational methods, tools, validation

Parenthesis indicate that code(s) were assigned based on document title, its use as a reference in other documents, or discussions with authors.

AERE-R-7728. J. A. B. Gibson and H[oward] J. Delafield. "The Neutron Capture Probability for Sodium Activation in Man Phantoms." AERE, 1974.

Subject Codes: (D)

09/30/95 Status: Issued

Alt. Contact: HMSO, UKAEA

AERE-R-8520. J. A. B. Gibson, H[oward] J. Delafield, and A. H. Reading. "Nuclear Accident Dosimetry - Report on the 4th IAEA Intercomparison Experiment at Harwell, UK - 7-18 April 1975: Part 1 - Description of the Experiment and Participant Results." AERE, 1976.

Subject Codes: (D)

09/30/95 Status: Issued

Alt. Contact: IAEA, HMSO, UKAEA

AFWL-TR-69-116. A. E. Profio. "Experimental Tests of Shielding Codes." San Diego, California USA: Gulf General Atomic, Inc., Dec. 1969.

Subject Codes: D, T

09/30/95 Status: Published

Alt. Contact: NTIS

AHSB (RP) R 14. E. R. Woodcock. "Potential Magnitude of Criticality Accidents." UKAEA, Jan. 1966.

Subject Codes: A3

09/30/95 Status: Published

Alt. Contact: HMSO

AHSB (S) R 92. K[ieth] J. Aspinall and J. T. Daniels. "Review of UKAEA Criticality Detection and Alarm Systems 1963/64 Part 1: Provision and Design Principles." London UK: UKAEA AHSB, 1965.

Subject Codes: A3, B1, C2, C3, C4, C5, E

09/30/95 Status: Published

Alt. Contact: HMSO

ANL-4971. Brittan, R[aymond] O., et al. "Technical Review of ZPR-1 Accidental Transient - The Power Excursion, Exposures, and Clinical Data." ANL-E, Jan. 26, 1953.

Subject Codes: A2, D, M, T

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Notes: Incident date 06/02/52

Later Work: ANL-4971 (Rev.). R[aymond] O. Brittan, L. D. Marinelli, and F. W. Thalgott.

"Technical Review of ZPR-1 Accidental Transient - The Power Excursion and Exposures." ANL-E, 1953. (Referenced in several summaries but apparently not readily retrievable.)

ANL-5323. J[oseph] R. Dietrich (compiler). "Experimental Investigation of the Self-Limitation of Power During Reactivity Transients in a Subcooled, Water-Moderated Reactor, Borax-I Experiments, 1954,"

ANL-5323. ANL-E, 1954.

Subject Codes: A3

09/30/95 Status: Published

Alt. Contact: NTIS

Summary: *Proceedings of the International Conference on the Peaceful ...Aug. 1955*, Vol. 13, pp. 88-101, listed separately.

ANSI N2.3-1979. "American National Standard: Immediate Evacuation Signal for Use in Industrial Installations Where Radiation Exposure May Occur." ANSI, 1979.

Subject Codes: C1, C2, C5

09/30/95 Status: Withdrawn 08/29/86

Notes: Superseded ANSI N2.3-1967, which was partial basis of 10 CFR 1910.96 (f).

Incorporated into ANSI/ANS-8.3-1986.

Endorsed by NRC Reg. Guide 8.5 (Rev. 1), which is active.

ANSI N13.3-1969 (R1988). "American National Standard: Dosimetry for Criticality Accidents." ANSI, approved July 17, 1969.

Subject Codes: D, E1, E2, E4, T 09/30/95 Status: Active

Notes: References standards ANSI N16.1-1969 and N16.2-1969 but allows rev.s to apply.
Current rev.s are ANSI/ANS-8.1-1983 (R1988) and -8.3-1986.

ANSI N323-1978 (R1993). HPS and IEEE. "American National Standard, Radiation Protection Instrumentation Test and Calibration." IEEE, approved Sept. 13, 1977.

Subject Codes: O; possibly C1, C5 09/30/95 Status: Active

Alt. Contact: ANSI, IEEE Notes: Applies to portable instruments for measuring radiation levels

ANSI/ANS-3.7.1-1979 (R1986). "Facilities and Medical Care for On-Site Nuclear Power Plant Radiological Emergencies." ANS, approved April 24, 1979.

Subject Codes: E5, M 09/30/95 Status: Active

ANSI/ANS-3.8.1-1987. "Criteria for Emergency Response Functions and Organizations." ANS, approved Aug. 10, 1987.

Subject Codes: E5 09/30/95 Status: Active

ANSI/ANS-3.8.2-1987. "Criteria for Functional and Physical Characteristics of Emergency Response Facilities." ANS, approved Aug. 7, 1987.

Subject Codes: E5 09/30/95 Status: Active

ANSI/ANS-3.8.3-1987. "Criteria for Emergency Response Plans and Implementing Procedures." ANS, approved Sept. 4, 1987.

Subject Codes: E5 09/30/95 Status: Active

ANSI/ANS-3.8.4-1987. "Criteria for Maintaining Emergency Response Capability." ANS, approved Sept. 4, 1987.

Subject Codes: E5 09/30/95 Status: Active

ANSI/ANS-3.8.5-1992. "Criteria for Emergency Radiological Field Monitoring, Sampling, and Analysis." ANS, 1992.

Subject Codes: (D, E5, R) 09/30/95 Status: Active

ANSI/ANS-6.1.1-1977 [N666]. "American National Standard: Neutron and Gamma-Ray Flux-to-Dose Rate Factors." ANS, 1977.

Subject Codes: (D, T) 09/30/95 Status: Withdrawn 08/31/89

Notes: Reported data are a basis for dose estimates specified in many references included here.

Subject Codes: (see full subject code list in the front matter for additional description)

A through A3 = criticality accidents	H1 and H2 = hazard-, risk-, and safety-analysis
B1 or B2 = extensive bibliography or references	M = medical
C1 through C5 = CASs	O = other
D = dose, dosimetry, distance and shielding	R = releases and release dispersion
E through E4 = emergency management	T = computational methods, tools, validation

Parenthesis indicate that code(s) were assigned based on document title, its use as a reference in other documents, or discussions with authors.

ANSI/ANS-8.1-1983 (R1988). "Nuclear Criticality Safety in Operations with Fissionable Materials Outside Reactors, An American National Standard." ANS, approved Oct. 7, 1983.

Subject Codes: E1, E2, O

09/30/95 Status: Active, under revision

Notes: Superseded documents are ANSI N6.1-1964, ANSI N16.1-1969, and ANSI N16.1-1975.
Endorsed by NRC Reg. Guide 3.04 (Rev. 2) which is active.
Compliance required by DOE 5480.24 which is active.
No technical or detailed emergency management/planning guidance.

ANSI/ANS-8.3-1986. "Criticality Accident Alarm System, An American National Standard." ANS, approved Aug. 29, 1986.

Subject Codes: A3, C1, C2, C3, C5, E3, T

09/30/95 Status: Active, under revision

Notes: Superseded documents are ANSI N16.2-1969, ANSI/ANS-8.3-1979, ANSI/ANS N2.3-1967, and ANSI/ANS N2.3-1979.
Endorsed by NRC Reg. Guide 8.12 (Rev. 2) which is active.
Compliance required by DOE Order 5480.24 which is active.
Calculation techniques of Appendix B are not universally applicable.

ANSI/ANS-8.3-199x. "Criticality Accident Alarm System, An American National Standard." ANS Draft, May 1995.

Subject Codes: A3, C1, C2, C3, C5

09/30/95 Status: Draft, under review

Notes: Calculation techniques of Appendices B and C are not universally applicable.

ANSI/ANS-8.15-1981 (R1987). "American National Standard: Nuclear Criticality Control of Special Actinide Elements." ANS, approved Nov. 9, 1981.

Subject Codes: O

09/30/95 Status: Active, under review

ANSI/ANS-8.19-1984 (R1988). "Administrative Practices for Nuclear Criticality Safety, An American National Standard." ANS, approved Oct. 1, 1984.

Subject Codes: E, O

09/30/95 Status: Active, under revision

Notes: Endorsed by NRC Reg. Guide 3.57 (Rev. 0) which is active.
Compliance required by DOE 5480.24 which is active.
No technical emergency management guidance.

ANSI/ANS-8.23-199x. "Nuclear Criticality Accident Emergency Planning and Response, An American National Standard." Draft, June 1995.

Subject Codes: E

09/30/95 Status: Draft, under review

ANSI/ANS-15.16-1982 (R 1988). "Emergency Planning for Research Reactors." ANS, approved Oct. 11, 1982.

Subject Codes: E5

09/30/95 Status: Active

ANSI/NFPA 801-1991. "Recommended Fire Protection Practice for Facilities Handling Radioactive Materials." Quincy, Massachusetts USA: NFPA, February 8, 1991.

Subject Codes: E5

09/30/95 Status: Active

Notes: Specifically recommends that selection of fire protection and fighting methods consider criticality safety., among other concerns.

ANSWERS/MONK(94)3, Issue 1 and Issue 2; CCC-393. AEA Tech. "MONK - A Monte Carlo Program for Nuclear Criticality Safety Analyses: Users Guide for Version 7A." ANSWERS, Feb. 1991 and Jan. 1995; RSIC.

Subject Codes: T 09/30/95 Status: Active
Notes: RSIC might have version 6.3 rather than 7A.

ANSWERS/MCBEND(94)15, Parts 1 and 2, Issue 1 and Issue 2. AEA Tech. "MCBEND - A Monte Carlo Program for General Radiation Transport Solutions: Users Guide for Version 9A." ANSWERS, May 1994 and Feb. 1995.

Subject Codes: T 09/30/95 Status: Active

ANSWERS/RANKERN(95)3. AEA Tech. "RANKERN - A Point Kernel Program for Gamma-Ray Transport Solution: Users Guide for Version 14." ANSWERS, 1995.

Subject Codes: T 09/30/95 Status: Active

CCC-200. See LA-12625-M (MCNP-4A reference), listed separately.

CCC-254. ORNL. "ANISN-ORNL: One-Dimensional Discrete Ordinates Transport Code with Anisotropic Scattering." RSIC, May 1995.

Subject Codes: T 09/30/95 Status: Active
Notes: Reference is an RSIC abstract Further Info.: K-1693 and NAA-SR-10951, listed separately.

CCC-351. V[an] Baker and R[obert] L. Childs. "FALSTF: Calculator of Response of Detectors External to Shielding Configuration." RSIC, Jan. 1982.

Subject Codes: (T) Status on 09/10/95: Active
Notes: Reference is an RSIC abstract.
Further info.: V[an] Baker and R[obert] L. Childs. "FALSTF: Informal Notes." ORNL, 1979.

CCC-393; See ANSWERS/MONK(94)3 (MONK Version 7A reference), listed separately.

CCC-543. W[ayne] A. Rhoades and R[obert] L. Childs. "TORT-DORT: Two- and Three-Dimensional Ordinates Transport, Version 2.12.14." RSIC, Jan. 1990 with revisions through January 1995.

Subject Codes: (T) 09/30/95 Status: Active
Notes: Reference is an RSIC abstract
Further info.: ORNL-5851, ORNL-6268, ORNL/TM-12246, and ORNL/TM-12359, listed separately.

CCC-545. See NUREG/CR-200 (Rev. 4) (SCALE 4.2 reference), listed separately.

CEA 205/91. F[rancis Y.] Barbry. "Dosimetry of Neutron and Gamma Radiation in the CRAC and SILENE Criticality Accident Study Program." CEA/IPSN/SRSC, 1991.

Subject Codes: (A3, C1, D) 09/30/95 Status: Published
French Ed.: CEA/SEESNC 33, listed separately.

Subject Codes: (see full subject code list in the front matter for additional description)

A through A3 = criticality accidents	H1 and H2 = hazard-, risk-, and safety-analysis
B1 or B2 = extensive bibliography or references	M = medical
C1 through C5 = CASs	O = other
D = dose, dosimetry, distance and shielding	R = releases and release dispersion
E through E4 = emergency management	T = computational methods, tools, validation

Parenthesis indicate that code(s) were assigned based on document title, its use as a reference in other documents, or discussions with authors.

CEA/DPSR 59; 60; 69; and 70. F[rancis Y.] Barbry, et al. "Experience CRAC.02 Resultats;" "Experience CRAC.03.04 Resultats;" "Experience CRAC.09.10.11 Resultats;" and "Experience CRAC.12.13.14 Resultats." Service d' Études de Criticité, CEA, Jan. 1959; March 1969; Aug. 1969; and Oct. 1969.

Subject Codes: A3

09/30/95 Status: Issued

Related Refs: CEA/SEEC 74, 77, 79, 83, 91, 92, 96, and 98; CEA/DSN/SEEC 103, 106, 108, 109, and 113; CEA/DSN/SE 111 and 114. All are listed separately.

Summaries: CEA/DSN 116 and Y-CDC-12, listed separately.

Notes: Barbry translated all of the French reports into English for LANL Critical Facilities, LANL Criticality Safety and UA Nuclear Engineering personnel.

CEA/DSN 115. F[rancis Y.] Barbry. "Note de Synthese Concernant le Observations Effectuées sur le Formation de Gas de Radiolyse et ed leurs Consequences." Sûreté Nucléaire et Criticité CEA, May 1973.

Subject Codes: (A3)

09/30/95 Status: Issued

Later Work: CEA/DSN/SEESCN 117 and CEA/SRSC 89.08, listed separately.

Notes: Author translated into English for LANL Critical Facilities, LANL Criticality Safety and UA Nuclear Engineering personnel.

CEA/DSN 116. F[rancis Y.] Barbry, D. Mangin, and H. Revol. "CRAC - Récapitulation des Résultats Expérimentaux." Sûreté Nucléaire et Criticité CEA, Aug. 1973.

Subject Codes: A3

09/30/95 Status: Issued

Full Reports: CEA/DPSR 60, 69, and 70; CEA/SEEC 74, 77, 79, 83, 91, 92, 96, and 98; CEA/DSN/SEEC 103, 106, 108, 109, and 113; and CEA/DSN/SE 111 and 114. All are listed separately.

Other Sum.: Y-CDC-12, listed separately.

Notes: Barbry translated all of the French reports into English for LANL Critical Facilities, LANL Criticality Safety and UA Nuclear Engineering personnel.

CEA/DSN/SE 111; and 114. F[rancis Y.] Barbry, D. Magnin, and H. Revol. "Experience CRAC.58.61.62.63 Resultats;" and "Experience CRAC.59.59bis60.60 Resultats." Département de Sûreté Nucléaire, CEA, Feb. 1973; and March 1973.

Subject Codes: A3

09/30/95 Status: Issued

Related Refs: CEA/DPSR 59, 60, 69, and 70; CEA/SEEC 74, 77, 79, 83, 91, 92, 96, and 98; and CEA/DSN/SEEC 103, 106, 108, 109, and 113. All are listed separately.

Summaries: CEA/DSN 116 and Y-CDC-12, listed separately.

Notes: Barbry translated all of the French reports into English for LANL Critical Facilities, LANL Criticality Safety and UA Nuclear Engineering personnel.

CEA/DSN/SEEC 103; 106; and 108. F[rancis Y.] Barbry, et al. "Experience CRAC.42.43.44 Resultats;" "Experience CRAC.45.46.47 Resultats;" and "Experience CRAC.48.50.52 Resultats." Département de Sûreté Nucléaire, CEA, Aug. 1971; Dec. 1971; and April 1972.

Subject Codes: A3

09/30/95 Status: Issued

Related Refs: CEA/DPSR 59, 60, 69, and 70; CEA/SEEC 74, 77, 79, 83, 91, 92, 96, and 98; CEA/DSN/SEEC 109 and 113; CEA/DSN/SE 111 and 114. All are listed separately.

Summaries: CEA/DSN 116 and Y-CDC-12, listed separately.

Notes: Barbry translated all of the French reports into English for LANL Critical Facilities, LANL Criticality Safety and UA Nuclear Engineering personnel.

CEA/DSN/SEEC 109; and 113. F[rancis Y.] Barbry, D. Magnin, and H. Revol. "Experience CRAC.53.54.55.56.57 Resultats;" and "Experience C.R.A.C 63 (1-2-3-4)." Département de Sûreté Nucléaire, CEA, Sept. 1972; and Jan. 1973.

Subject Codes: A3

09/30/95 Status: Issued

Related Refs: CEA/DPSR 59, 60, 69, and 70; CEA/SEEC 74, 77, 79, 83, 91, 92, 96, and 98; CEA/DSN/SEEC 103, 106, and 108; and CEA/DSN/SE 111 and 114. All are listed separately.

Summaries: CEA/DSN 116 and Y-CDC-12, listed separately.

Notes: Barbry translated all of the French reports into English for LANL Critical Facilities, LANL Criticality Safety and UA Nuclear Engineering personnel.

CEA/DSN/SEESNC 117. F[rancis Y.] Barbry. "Essais de Synthese Partielle des Resultats Experimentaux." CEA, Sept. 1973.

Subject Codes: (A3)

09/30/95 Status: Issued

Earlier Work: CEA/DSN 115, listed separately.

Later Work: CEA/SRSC 89.08, listed separately.

Notes: Author translated into English for LANL Critical Facilities, LANL Criticality Safety and UA Nuclear Engineering personnel.

CEA/IPSN 93/3. G. Courtois, et al. "MORET III: Un Programme Monte Carlo pour le Calcul des Coefficients de Multiplication Effectifs de Milieux Fissiles Dans des Géométries Complexes." CEA-IPSN, 1993.

Subject Codes: (T)

09/30/95 Status: Not Determined

Notes: Code is apparently active but it might not be available to the public.

CEA/IPSN/SRSC 83.33. F[rancis Y.] Barbry. "Slow Kinetics Power Excursions Performed on the Silene Reactor." CEA, Dec. 1983.

Subject Codes: A3, T

09/30/95 Status: Issued

CEA-R-4784. Raymond Prignet and Claude Renard. "E.D.A.C. Ensemble de détection et d'alarme de criticité, Caractéristiques physiques et électroniques." CEA Department de Protection, Centre d'Études Nucléaires de Fontenay-aux-Roses, 1976.

Subject Codes: (C1, C2, C4, C5)

09/30/95 Status: Published

Earlier Sys.: *Proceedings of the Third United Nations... Aug.-Sept. 1964*, Vol. 13, pp. 244-251, listed separately.

Later Sys.: *Proceedings of ICNC'91...*, Vol. 2, Sept. 1991, pp. VII-104 - VII-123, listed separately.

Other Work: *Nuclear Technology*, Vol. 78, pp. 320-325, listed separately.

Subject Codes: (see full subject code list in the front matter for additional description)

A through A3 = criticality accidents	H1 and H2 = hazard-, risk-, and safety-analysis
B1 or B2 = extensive bibliography or references	M = medical
C1 through C5 = CASs	O = other
D = dose, dosimetry, distance and shielding	R = releases and release dispersion
E through E4 = emergency management	T = computational methods, tools, validation

Parenthesis indicate that code(s) were assigned based on document title, its use as a reference in other documents, or discussions with authors.

CEA/SEEC 74; 77; 79; 83; 91; and 92. F[rancis Y.] Barbry, et al. "Experience CRAC.15.16.17 Resultats;" "Experience CRAC.18.19 Resultats;" "Experience CRAC.20.1,2,3,4,5 Resultats;" "Experience CRAC.21.22.23 Resultats;" "Experience CRAC.24.25.26 Resultats;" and "Experience CRAC.27.28.29 Resultats." Service d' Études de Criticité, Direction de la Protections et de la Sûreté Radiologiques, CEA, Jan. 1970; Feb. 1970; March 1970; May 1970; July 1970; and Aug. 1970.

Subject Codes: A3

09/30/95 Status: Issued

Related Refs: CEA/DPSR 59, 60, 69, and 70; CEA/SEEC 96 and 98; CEA/DSN/SEEC 103, 106, 108, 109, and 113; and CEA/DSN/SE 111 and 114. All are listed separately.

Summaries: CEA/DSN 116 and Y-CDC-12, listed separately.

Notes: Barbry translated all of the French reports into English for LANL Critical Facilities, LANL Criticality Safety and UA Nuclear Engineering personnel.

CEA/SEEC 96; and 98. F[rancis Y.] Barbry, et al. "Experience CRAC.37.38 Resultats;" and "Experience CRAC.39.40.41 Resultats." Service d' Études de Criticité, Direction de la Protections et de la Sûreté Radiologiques, CEA, Dec. 1970; and March 1971.

Subject Codes: A3

09/30/95 Status: Issued

Related Refs: CEA/DPSR 59, 60, 69, and 70; CEA/SEEC 74, 77, 79, 83, 91, and 92; CEA/DSN/SEEC 103, 106, 108, 109, and 113; and CEA/DSN/SE 111 and 114. All are listed separately.

Summaries: CEA/DSN 116 and Y-CDC-12, listed separately.

Notes: Barbry translated all of the French reports into English for LANL Critical Facilities, LANL Criticality Safety and UA Nuclear Engineering personnel.

CEA/SEESNC 33. F[rancis Y.] Barbry and R. Médioni. "Dosimétrie d'Accidents de Criticité: Synthèse de Résultats Acquis sur CRAC et Silene." CEA, Nov. 1980.

Subject Codes: (A3, C1, D)

09/30/95 Status: Issued

English Ed.: CEA 205/91, listed separately.

CEA/SEESNC 82/23. F[rancis Y.] Barbry and A. Woillard. "Accidents de Criticité en Solution: Valeurs Envelopes Résultant des Expériences Menées sur CRAC et Silene in Matières de Cinétique et de Dosimétrie." CEA, Dec. 1982.

Subject Codes: (A3)

09/30/95 Status: Issued

Notes: Barbry translated into English for LANL Critical Facilities, LANL Criticality Safety and UA Nuclear Engineering personnel.

CEA/SESRCI 71/408M8. M. Bricka. "First IAEA Measurement Intercomparison, Valduc, June 1970 - Final Report" (in French?). CEA, 1971.

Subject Codes: (D)

09/30/95 Status: Issued

Alt. Contact: IAEA

CEA/SRSC 89.08. F[rancis Y.] Barbry and J[ean] P[ierre] Rozain. "Objectives and Summary of Experiments on the Formation of Radiolysis Gas Carried Out Using the Silene Reactor." CEA/IPSN/SRSC, Nov. 1989.

Subject Codes: A3, T

09/30/95 Status: Issued

Earlier Work: CEA/DSN 115 and CEA/DSN/SEESNC 117, listed separately.

Replaces: ———. "Point sur les Connaissances en Matière de Formation de Gas de Radiolyse Lors d'une Excursion de Criticité en Solution," CEA/SRSC 87/83. CEA, Feb. 1987.

Summary: *ANS Trans.*, Vol. 59, pp. 181-182, listed separately.

CEA/SRSC 223. Francis [Y.] Barbry. "SILENE Reactor: Results of Selected Typical Experiments." CEA/SRSC, Sept. 1994.

Subject Codes: A3

09/30/95 Status: Issued

Alt. Contact: LANL Critical Experiments Facility, UA

Earlier Work: *ANS Trans.*, Vol. 41, pp. 358-359, listed separately.

Proceedings of the International...Sept 1983, 1984, pp. 36-52, listed separately.

Proceedings of the 1993 ... Sept. 1993, pp. 34-40, listed separately.

DOE Order 5000.3B; incorporating Change 1. DOE Office of Environment, Safety and Health. "Occurrence Reporting and Processing of Operations Information." DOE, Jan. 19, 1993; July 2, 1993.

Subject Codes: E4, O

09/30/95 Status: Active

Notes: Notification and reporting requirements for abnormal events including criticality accidents.

DOE Order 5480.5. DOE Office of Environment, Safety and Health. "Safety of Nuclear Facilities." DOE, Sept. 23, 1986.

Subject Codes: C2, C3, C5, O

09/30/95 Status: Cancelled

Notes: For CAS requirements see paragraphs 11c(3)(g) and 11c(3)(h).

Interest depends on the design date of an exiting CAS.

DOE Order 5480.23; incorporating Change 1. DOE Office of Nuclear Energy. "Nuclear Safety Analysis Reports," DOE, April 30, 1992; March 10, 1994.

Subject Codes: H2, O

09/30/95 Status: Active

DOE Order 5480.24. DOE Office of Nuclear Energy. "Nuclear Criticality Safety." DOE, Aug. 12, 1992.

Subject Codes: C2, C3, C5, O

09/30/95 Status: Active, under revision

Notes: For CAS requirements see paragraphs 7a, 7a(1), 7b through 7b(4).

Requires compliance with ANSI/ANS-8.1, -8.3, -8.5, -8.7, -8.15, and -8.19.

DOE Order 5484.1; incorporating Changes 1 through 7. DOE Office of Environment, Safety and Health. "Environmental Protection, Safety, and Health Protection Information Reporting Requirements." DOE, Feb. 24, 1981; June 9, 1981, through Oct. 17, 1990.

Subject Codes: E5, O

09/30/95 Status: Active

Notes: Investigation and reporting requirements for serious abnormal events including criticality accidents.

DOE Order 5500.2B; incorporating Change 1. DOE Emergency Operations. "Emergency Categories, Classes, and Notification and Reporting Requirements." DOE, April 30, 1991; Feb. 27, 1992.

Subject Codes: E5

09/30/95 Status: Active, under rev.

DOE Order 5500.3A; incorporating Change 1. DOE Emergency Operations. "Planning And Preparedness for Operational Emergencies." DOE, April 30, 1991; Feb. 27, 1992.

Subject Codes: E5

09/30/95 Status: Active

Subject Codes: (see full subject code list in the front matter for additional description)

A through A3 = criticality accidents

B1 or B2 = extensive bibliography or references

C1 through C5 = CASs

D = dose, dosimetry, distance and shielding

E through E4 = emergency management

H1 and H2 = hazard-, risk-, and safety-analysis

M = medical

O = other

R = releases and release dispersion

T = computational methods, tools, validation

Parenthesis indicate that code(s) were assigned based on document title, its use as a reference in other documents, or discussions with authors.

DOE-STD-3009-94. DOE Office of Nuclear Safety. "Preparation Guide for U. S. Department of Energy Nonreactor Nuclear Facility Safety Analysis Reports." DOE, Aug. 1994.

Subject Codes: C5, H2, O

09/30/95 Status: Active

Alt. Contact: NTIS, OSTI

DOE/NCT-04. William R. Stratton. "A Review of Criticality Accidents," revised by David R. Smith. LLNL and DOE, March 1989.

Subject Codes: A, B1, T

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Notes: Known as the *Stratton Report*

Previous Ed.s: Nicholle, C. M., *Progress in Nuclear Energy Series IV...*, pp. 163-205, listed separately.

ANS Trans., Vol. 3, pp. 290-292, listed separately

Criticality Control ... Karlsruhe Germany, May 1961, pp. 491-533, listed separately.

LA-3611, listed separately.

ANS Trans., Vol. 46, pp. 460-462, listed separately.

DOE/NCT-05. See *Transactions of the Criticality Accident Alarm Systems Workshop, Richland, Washington USA, Sept. 1988*, listed separately.

DR-29. W. B. Lewis. "Interim Report at January 9, 1953 on Problems Arising from the NRX Incident of December 12, 1952." Atomic Energy of Canada, Limited, Chalk River Project, Chalk River, Ontario Canada, Feb. 1953.

Subject Codes: (A2)

09/30/95 Status: Issued

Alt. Contact: NTIS

Additional: DR-32 and NEI-26, listed separately.

DR-32. W. B. Lewis. "The Accident to the NRX Reactor on December 12, 1952." Atomic Energy of Canada, Limited, Chalk River Project, Chalk River, Ontario Canada, 1953.

Subject Codes: (A2)

09/30/95 Status: Issued

Alt. Contact: NTIS

Additional: DR-29 and NEI-26, listed separately.

FEMP-2328. Ronald C. Marble, Tulanda D. Brown, and Jeff C. Wooldridge. "Criticality Accident Alarm System at the Fernald Environmental Management Project." Fernald Environmental Restoration Management Corporation, Cincinnati, Ohio USA, June 1994.

Subject Codes: (C1, C2, C4)

09/30/95 Status: Published

Summary: *ANS Trans.*, Vol. 70, p. 206, listed separately.

GAT-T-3133. S. A. Jones. "Technology Assessment for Improved Criticality Radiation Alarm Monitors." Piketon, Ohio USA: Goodyear Atomic Corporation, January 29, 1982.

Subject Codes: C2, C4

09/30/95 Status: Issued

Alt. Contact: NTIS, OSTI

H&R 82-2. C[harles] E. Newlon, A[nn] H. Hansen, and C[raig] Fithian. "An Assessment of the Minimum Critical Accident of Concern." Oak Ridge, Tennessee USA: H&R Technical Associates, April 1982.

Subject Codes: (A3)

09/30/95 Status: Issued

Alt. Contact: K-25 Plant at Oak Ridge, Tennessee USA; NTIS, OSTI

HW-24327. B. R. Leonard, Jr. "A Study of the Radiation Burst in the Hanford Homogeneous Reactor." HW, May 2, 1952.

Subject Codes: A2, M, O, T

09/30/95 Status: Published

Alt. Contact: Hanford, NTIS, OSTI

Notes: Incident date 11/16/51.

HW-74723; TID-18431. C. N. Zanger. "Summary Report of Accidental Nuclear Excursion Recuplex Operation 234-5 Facility." HW; GPO, April 1962.

Subject Codes: A1 09/30/95 Status: Published
 Alt. Contact: Hanford, NTIS, OSTI Notes: Incident date 04/07/62
 Summary: *Nuclear Safety* (GPO), Vol. 4, No. 4, pp. 136-144, listed separately.
 Additional: HW-77780, listed separately.

HW-77345. J. K. Soldat. "Recuplex Incident, April 7, 1962, Emission of Fission Products for the 291-Z Stack." HW, May 23, 1962.

Subject Codes: (A1, R) 09/30/95 Status: Issued
 Alt. Contact: Hanford, NTIS, OSTI

HW-77780. E. D[uane] Clayton. "Further Considerations of Criticality in Recuplex and Possible Shutdown Mechanism." HW, 1963.

Subject Codes: (A1) 09/30/95 Status: Published
 Alt. Contact: Hanford, NTIS, OSTI Notes: Incident date 04/07/62

HW-SA-2730. R. O. Roesch, et al. "Dosimetry Investigation of the Recuplex Accident." HW, Aug. 22, 1962.

Subject Codes: (A1, D, T) 09/30/95 Status: Published
 Alt. Contact: Hanford, NTIS, OSTI Notes: Incident date 04/07/62
 Summary: *Health Physics*, Vol. 9, p. 839, listed separately.

IAEA Safety Series No. 88. "Recommendations, Medical Handling of Accidentally Exposed Individuals." IAEA, Aug. 1988.

Subject Codes: B1, M, O 09/30/95 Status: Published

IAEA Technical Report Series No. 180. H. Ing, and S. Makra. "Compendium of Neutron Spectra in Criticality Accident Dosimetry." IAEA, 1987.

Subject Codes: A3, B1, T, O 09/30/95 Status: Published

IAEA Technical Report Series No. 211. F. F. Haywood, et al. "Dosimetry for Criticality Accidents: A Manual." IAEA, Feb. 1982.

Subject Codes: B1, D, T 09/30/95 Status: Active

IAEA Technical Report Series No. 252. J. A. B. Gibson and E. Piesch. "Neutron Monitoring for Radiological Protection." IAEA, 1985.

Subject Codes: B1, C1, C2, D, O, T 09/30/95 Status: Published

IAEA Technical Report Series No. 318. R. V. Griffith, J. Palfalvi, U. Madhvanath. "Compendium of Neutron Spectra and Detector Responses for Radiation Protection Purposes." IAEA, 1990.

Subject Codes: B1, C2, D, O 09/30/95 Status: Published

Subject Codes: (see full subject code list in the front matter for additional description)

A through A3 = criticality accidents	H1 and H2 = hazard-, risk-, and safety-analysis
B1 or B2 = extensive bibliography or references	M = medical
C1 through C5 = CAsS	O = other
D = dose, dosimetry, distance and shielding	R = releases and release dispersion
E through E4 = emergency management	T = computational methods, tools, validation

Parenthesis indicate that code(s) were assigned based on document title, its use as a reference in other documents, or discussions with authors.

IBK-1275. I. Mirić and Ž. Ubović. "3rd IAEA Nuclear Accident Intercomparison Experiment, 14-25 May 1973" (probably not in English). Belgrade Yugoslavia: Boris Kidrič Institute, 1974.

Subject Codes: (D)

09/30/95 Status: Issued

Alt. Contact: IAEA

[ICPP-MISC-002]. [Tiller, Robert E., et al.] "Investigation of the 10/17/78 Criticality Incident in the Uranium Extraction Process Scrub Column at the Idaho Chemical Processing Plant." Idaho Falls, Idaho USA: Allied Chemical Idaho Chemical Programs, Nov. 1978.

Subject Codes: A1

09/30/95 Status: Published

Alt. Contact: INEL, NTIS, OSTI

Summary: *Nuclear Safety*, Vol. 21, No. 5, pp. 648-653, listed separately.

Notes: ICPP-MISC-002 is an INEL-assigned number for filing purposes.

ICRU Report No. 44. "Tissue Substitutes in Radiation Dosimetry and Measurement." ICRU Publications, Jan. 15, 1989.

Subject Codes: B1, T, O

09/30/95 Status: Active

Notes: Gamma and neutron flux-to-dose conversion factors.

IDO-10035. William L. Ginkel, et al.. "Nuclear Incident at the Idaho Chemical Processing Plant on October 16, 1959." Idaho Falls, Idaho USA: Phillips Petroleum Company, Feb. 15, 1960.

Subject Codes: A1

09/30/95 Status: Published

Alt. Contact: INEL, NTIS, OSTI

IDO-10036. R. C. Paulus, et al. "Nuclear Incident at the Idaho Chemical Processing Plant on January 25, 1961." Idaho Falls, Idaho USA: Phillips Petroleum Company, June 1, 1961.

Subject Codes: A1

09/30/95 Status: Published

Alt. Contact: INEL, NTIS, OSTI

Summary: *Nuclear Safety*, Vol. 3, No. 2, pp. 71-73. listed separately.

IEC 293: 1968. "International Standard, Supply Voltages for Transistorized Nuclear Instruments." IEC, 1968.

Subject Codes: (C2, C5)

09/30/95 Status: Not determined

IEC 860: 1987. "International Standard, Warning Equipment for Criticality Accidents." IEC, 1987.

Subject Codes: C1, C2, C5

09/30/95 Status: Active

INEL-95/00426. Valerie L. Putman. "Consensus Standard Requirements and Guidance." INEL, Sept. 1995.

Subject Codes: C5

09/30/95 Status: Published

Duplicate: ———. "1. Consensus Standard Requirements and Guidance," In notebook for *ANS Criticality Alarm System Workshop, San Francisco California USA, Nov. 1995.*
ANS, Nov. 1995.

ISO 1709: 1975. "International Standard, Principles of Criticality Safety in Handling and Processing." IOS, 1975

Subject Codes: (O)

09/30/95 Status: Active

Notes: International counterpart of ANSI/ANS-8.1

ISO 4037: 1979. "International Standard, Nuclear Energy - X and Gamma Reference Radiations for Calibrating Dosimeters and Dose Ratemeters and for Determining their Response as a Function of Photon Energy." IOS, 1979.

Subject Codes: (C1, D, T, O)

09/30/95 Status: Active

Notes: Apparently Part I. A draft Part II was available for comment as of June 1995.

ISO 7753: 1987 (E). "International Standard, Nuclear Energy - Performance and Testing Requirements for Criticality Detection and Alarm Systems." IOS, Aug. 1, 1987.

Subject Codes: A3, C1, C2, C3, C5

09/30/95 Status: Active

JAERI 1260. M. Akimoto and J. Naito. "A General Dimensional Neutron Diffusion Calculation Code: ADC," (in Japanese?). Japan: Japan Atomic Energy Research Institute, 1970.

Subject Codes: (T)

09/30/95 Status: Not determined

Notes: ADC might not be available to the public.

JAERI-M 83-049. Y[oshitaka] Naito, M. Yokota, and K[o] Nakano. "MULTI-KENO: A Monte Carlo Code for Criticality Safety Analysis," (in Japanese). JAERI, March 1983.

Subject Codes: (T)

09/30/95 Status: Not determined

Notes: MULTI-KENO is apparently active but it might not be available to the public.

JAERI-xxxx. H[iroshi] Okuno, et al. "Supplement to the Nuclear Criticality Safety Handbook of Japan" (in Japanese). JAERI, to be published in 1995.

Subject Codes: (A3, C2, C5, O, T)

09/30/95 Status: To be published

Notes: Supplement will contain Chapter 6, "Criticality Accidents and Their Evaluation Methods," and Chapter 7, "Basic Principles on Design and Installation of Criticality Alarm System."

Supplement to: Science and Technology Agency. *Nuclear Criticality Safety Handbook* (in Japanese). Tokyo Japan: Nikkan Shobo, 1988. The handbook is also published in English with the same authoring institution and title, translated by Yoshitaka Naito and Hiroshi Okuno, JAERI-Review 95-013. Tokyo Japan: Nikkan Shobo, Sept. 1995.

K-999. H[ugh] F. Henry, J. C. Bailey, and R. C. Rohr. "Calibration of Indium Foils for Personnel Monitoring." UCNC, 1953.

Subject Codes: (D, T)

09/30/95 Status: Issued

Alt. Contact: NTIS, OSTI

K-1095. L. Geller and H[ugh] F. Henry. "Analysis of a Possible Radiation Burst." UCNC, June 2, 1953.

Subject Codes: A3, D, T

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

K-1693. W[ard] W. Engle, Jr. "ANISN, A One-Dimensional Discrete Ordinates Transport Code with Anisotropic Scattering." UCNC, March 1967.

Subject Codes: T

09/30/95 Status: Not determined, probably inactive

Supplements: CCC-254 (ANISN-ORNL which is active), listed separately.

Subject Codes: (see full subject code list in the front matter for additional description)

A through A3 = criticality accidents

B1 or B2 = extensive bibliography or references

C1 through C5 = CASs

D = dose, dosimetry, distance and shielding

E through E4 = emergency management

H1 and H2 = hazard-, risk-, and safety-analysis

M = medical

O = other

R = releases and release dispersion

T = computational methods, tools, validation

Parenthesis indicate that code(s) were assigned based on document title, its use as a reference in other documents, or discussions with authors.

K/CSD/TM--55. R[obert] M[ichael] Westfall and J[ohn] R. Knight. "Radiation Levels in a Gaseous Diffusion Plant Assuming a Low-Enriched Criticality Event Corresponding to the ANSI-Standard Minimum Accident of Concern." UCNC, Feb. 1984.

Subject Codes: C3, D

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

LA-569. K. Fuchs. "Efficiency for Very Slow Assembly." LASL, August 2, 1946.

Subject Codes: A3

09/30/95 Status: Published

Alt. Contact: LANL, NTIS, OSTI

LA-687. Joseph G. Hoffman "Radiation Doses in the Pajarito Accident of May 21, 1946." LASL, May 26, 1948.

Subject Codes: A2, D, T

09/30/95 Status: Published

Alt. Contact: LANL, NTIS, OSTI

LA-1289. R[oger] W. Paine, Jr. "A Study of an Accidental Radiation Burst." LASL, March 20, 1951.

Subject Codes: A2, D

09/30/95 Status: Issued

Alt. Contact: LANL, NTIS, OSTI

Notes: Incident date 02/01/51.

LA-1441. G[ordon] E. Hansen. "Burst Characteristics Associated with the Slow Assembly of Fissionable Materials." LASL, July 1952.

Subject Codes: A3, T

09/30/95 Status: Published

Alt. Contact: LANL, NTIS, OSTI

LA-1477. E. C. Mallery, et al. "Neutron Burst from a Cylindrical Untamped Oy Assembly." LASL, July 22, 1952.

Subject Codes: A2

09/30/95 Status: Published

Alt. Contact: LANL, NTIS, OSTI

Notes: Incident date 04/18/52.

Oy is the now declassified codeword for enriched uranium.

LA-2029. T[homas] F. Wimett. "Time Behavior of Godiva Through Prompt Critical." LASL, April 1956.

Subject Codes: A3, T

09/30/95 Status: Issued

Alt. Contact: NTIS, OSTI

LA-3611. William R. Stratton. "A Review of Criticality Accidents." LASL, Jan. 1967.

Subject Codes: A, B1, T

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Notes: Earlier ed. of *Stratton Report*

Other Ed.s: See DOE/NCT-04 (latest edition of *Stratton Report*), listed separately.

LA-3910. Dale E. Hankins. "A Study of Selected Criticality Dosimetry Methods." LASL, June 1968.

Subject Codes: B1, D

09/30/95 Status: Issued

Alt. Contact: LANL, NTIS, OSTI

LA-6540-MS. D[onald] M. Peterson, W[illiam] R. Stratton, and T[homas] P. McLaughlin. "PAD: A One-Dimensional, Coupled Neutronic-Thermodynamic-Hydrodynamic Computer Code." LASL, Dec. 1976.

Subject Codes: T

09/30/95 Status: Not determined

Alt. Contact: LANL, NTIS, OSTI

Notes: Code in occasional use

LA-8911-MS. D. G. Vasilik, R. W. Martin, and D. Fuller. "Nuclear Accident Dosimetry: Measurements at the Los Alamos SHEBA Critical Assembly." LANL, July 1981.

Subject Codes: A3, C1, D

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

LA-9184-M-Rev. R. Douglas O'Dell, et al. "Revised User's Manual for ONEDANT: A Code Package for One-Dimensional, Diffusion-Accelerated, Neutral Particle Transport." LANL, 1989.

Subject Codes: T

09/30/95 Status: Not determined, probably inactive

Supplements: LA-12969-M (DANTSYS which is active), listed separately.

LA-10049-M. R. Douglas O'Dell, et al. "Users Guide for TWODANT: A Code Package for Two-Dimensional Diffusion-Accelerated, Neutral Particle Transport." LANL, 1984.

Subject Codes: T

09/30/95 Status: Not determined, probably inactive

Supplements: LA-12969-M (DANTSYS which is active), listed separately.

LA-12556-C. See *Proceedings of the First Annual Nuclear Criticality Safety Technology Project, Gaithersburg, Maryland USA, May 1992*, listed separately.

LA-12625-M; CC-200. J[udith] F. Briesmeister (editor). "MCNP 4A, Monte Carlo N-Particle Transport Code System." LANL; RSIC, Nov. 1993; March 1994.

Subject Codes: T

09/30/95 Status: Active

Alt. Contact: NEADB

LA-12969-M. Ray E. Alcouffe, et al. "DANTSYS: A Diffusion Accelerated Neutral Particle Code Transport System." LANL, June 1995.

Subject Codes: T

09/30/95 Status: Active

Alt. Contact: RSIC

Related Refs.: LA-9184-M-Rev. and LA-10049-M, listed separately.

Notes: Related references are for computer codes which are probably inactive but the references are useful supplemental information for the DANTSYS document.

LAMS-2293. H[ugh] C. Paxton, et al. "Nuclear-Criticality Accident at the Los Alamos Scientific Laboratory on December 30, 1958." LASL, Feb. 1959.

Subject Codes: A1

09/30/95 Status: Published

Alt. Contact: LANL, NTIS, OSTI

Summary: *Nucleonics*, Vol. 17, No. 4, pp. 107-108 and 151-153, listed separately

LA-UR-82-1988. R[ichard] E. Malenfant and H. M. Forehand, Jr. "Simulation of Process Plant Accidents." LANL, 1982.

Subject Codes: A3

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Duplicate: *ANS Trans.*, Vol. 43, p. 405, listed separately.

Subject Codes: (see full subject code list in the front matter for additional description)

A through A3 = criticality accidents

B1 or B2 = extensive bibliography or references

C1 through C5 = CASs

D = dose, dosimetry, distance and shielding

E through E4 = emergency management

H1 and H2 = hazard-, risk-, and safety-analysis

M = medical

O = other

R = releases and release dispersion

T = computational methods, tools, validation

Parenthesis indicate that code(s) were assigned based on document title, its use as a reference in other documents, or discussions with authors.

LA-UR-88-3124. Richard E. Malenfant. "Self Limiting Features of Accidental Criticality in a Solution System." LANL, Sept. 1988.

Subject Codes: A3

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Duplicate: *Transactions of the Criticality Accident...Sept. 1988*, pp. 27-34, listed separately.

M-164. H[arry] F. Lutz. "Nuclear Criticality Safety Assessment: Part I. Calculating Power Histories in Nuclear Excursions." LLNL, June 17, 1985.

Subject Codes: A3, T

09/30/95 Status: Issued

Alt. Contact: NTIS, OSTI

NAA-SR-7087. M. S. Dunenfeld and R. K. Stitt. "Summary Review of the Kinetics Experiments on Water Boilers." California USA: Atomics International, Feb. 1, 1963.

Subject Codes: A3, T

09/30/95 Status: Published

Alt. Contact: NTIS

NAA-SR-10951. W[ard] W. Engle, Jr., M. A. Boling, and B. W. Colston. "DTF-II, A One-Dimensional, Multigroup Neutron Transport Program." California USA: Atomics International, March 1966.

Subject Codes: T

09/30/95 Status: Not determined, probably inactive

Supplements: CCC-254 (ANISN-ORNL which is active), listed separately.

NCRP Report No. 38. "Protection Against Neutron Radiation, Recommendations." NCRP, issued Jan. 4, 1971.

Subject Codes: B1, D, O, T

09/30/95 Status: Active

Notes: Especially see Appendix F, "Accident Dosimetry."

NCRP Report No. 39. "Basic Radiation Protection Criteria." NCRP, issued Jan. 15, 1971.

Subject Codes: B1, D, M, O, T

09/30/95 Status: Superseded by NCRP Report No. 91

Notes: The 12 rad threshold specified in ANSI/ANS-8.3-1986 is loosely based on 1/2 the NCRP No. 39 reported 25 rad dose at which temporary changes to whole blood cells were barely detectable.

NCRP Report No. 91. "Recommendations on Limits for Exposure to Ionizing Radiation." NCRP, issued June 1, 1987.

Subject Codes: B1, D, O, T

09/30/95 Status: Active

Notes: Limit recommendations supersede those of NCRP Report No. 39.

NCRP Report No. 111. "Developing Radiation Emergency Plans for Academic, Medical, or Industrial Facilities, Recommendations of the National Council on Radiation Protection and Measurements." NCRP, 1991.

Subject Codes: (E5)

09/30/95 Status: Active

NE-70. Neal Goldenberg, memorandum to distribution. "Interpretive Guidance for DOE Order 5480.24, 'Nuclear Criticality Safety'." DOE, Feb. 17, 1993.

Subject Codes: C5, H1, O

09/30/95 Status: Active

Alt. Contact: DOE, NTIS

NEA/NCS/DOC(95)03/I-VI. J. Blair Briggs, et al. "International Handbook of Evaluated Criticality Safety Benchmark Experiments," Vol. I through VI. Paris France: OECD-NEA, March 31, 1995.

Subject Codes: A3, T

09/30/95 Status: Published

Notes: Generally more useful for criticality prevention analysis than accident analysis or detector placement analysis.

NEI-26. W. J. Henderson, et al. "An Investigation of Some of the Circumstances Pertinent to the Accident to the NRX Reactor on December 12, 1952." Atomic Energy of Canada, Limited, Chalk River Project, Chalk River, Ontario Canada, 1953.

Subject Codes: (A2)

09/30/95 Status: Issued

Alt. Contact: NTIS

Additional: DR-29 and DR-32, listed separately.

NRC Information Notice No. 83-66; and No. 83-66, Supplement 1. Edward L. Jordan. "Fatality at Argentine Critical Facility." NRC, Oct. 7, 1983, May 25, 1984.

Subject Codes: A2

09/30/95 Status: Published

Notes: Incident date 09/23/83

NRC Regulatory Guide 3.4 (Rev. 2). NRC Office of Standards Development. "Nuclear Criticality Safety in Operations with Fissionable Materials at Fuels and Materials Facilities." NRC, March 1986.

Subject Codes: O

09/30/95 Status: Active

Notes: Endorses ANSI/ANS-8.1-1981.

NRC Regulatory Guide 3.25 (Rev. 0). NRC Office of Standards Development. "Standard Format and Content of Safety Analysis Reports for Uranium Enrichment Facilities." NRC, Dec. 1974.

Subject Codes: H2, O

09/30/95 Status: Active

NRC Regulatory Guide 3.26 (Rev. 0). NRC Office of Standards Development. "Standard Format and Content of Safety Analysis Reports for Fuel Reprocessing Plants." NRC, Feb. 1975.

Subject Codes: H2, O

09/30/95 Status: Active

NRC Regulatory Guide 3.33 (Rev. 0). NRC Office of Standards Development. "Assumptions Used for Evaluating the Potential Radiological Consequences of Accidental Nuclear Criticality in a Fuel Processing Plant." NRC, April 1987.

Subject Codes: A3, B1, C5, D, E1, T

09/30/95 Status: Active

NRC Regulatory Guide 3.34 (Rev. 1). NRC Office of Standards Development. "Assumptions Used for Evaluating the Potential Radiological Consequences of Accidental Nuclear Criticality in a Uranium Fuel Fabrication Plant." NRC, July 1979.

Subject Codes: A3, B1, C5, D, E1, T

09/30/95 Status: Active

Subject Codes: (see full subject code list in the front matter for additional description)

A through A3 = criticality accidents

B1 or B2 = extensive bibliography or references

C1 through C5 = CASs

D = dose, dosimetry, distance and shielding

E through E4 = emergency management

H1 and H2 = hazard-, risk-, and safety-analysis

M = medical

O = other

R = releases and release dispersion

T = computational methods, tools, validation

Parenthesis indicate that code(s) were assigned based on document title, its use as a reference in other documents, or discussions with authors.

NRC Regulatory Guide 3.35 (Rev. 1). NRC Office of Standards Development. "Assumptions Used for Evaluating the Potential Radiological Consequences of Accidental Nuclear Criticality in a Plutonium Processing and Fuel Fabrication Plant." NRC, July 1979.

Subject Codes: A3, B1, C5, D, E1, T 09/30/95 Status: Active

NRC Regulatory Guide 3.42 (Rev. 1). NRC Office of Standards Development. "Emergency Planning for Fuel Cycle Facilities and Plants Licensed Under 10 CFR Parts 50 and 70." NRC, Sept. 1979.

Subject Codes: E5 09/30/95 Status: Active

NRC Regulatory Guide 3.57 (Rev. 0). NRC Office of Standards Development. "Administrative Practices for Nuclear Criticality Safety at Fuels and Materials Facilities." NRC, Oct. 1986.

Subject Codes: O 09/30/95 Status: Published

Notes: Endorses ANSI/ANS-8.19-1984

NRC Regulatory Guide 3.67 (Rev. 0). NRC Office of Standards Development. "Standard Format and Content for Emergency Plans for Fuel Cycle and Materials Facilities." NRC, Jan. 1992.

Subject Codes: E5 09/30/95 Status: Active

NRC Regulatory Guide 8.5 (Rev. 1). NRC Office of Standards Development. "Criticality and Other Interior Evacuation Signals." NRC, March 1981.

Subject Codes: C2, C3, C5 09/30/95 Status: Active

Notes: Endorses ANSI N2.3-1975.

NRC Regulatory Guide 8.12 (Rev. 2). NRC Office of Standards Development. "Criticality Accident Alarm System." NRC, Oct. 1988.

Subject Codes: C5 09/30/95 Status: Active

Notes: Endorses ANSI/ANS-8.3-1986.

NUREG-0899. NRC Division of Human Factors Safety. "Guidelines for the Preparation of Emergency Operating Procedures." NRC, Aug. 1982.

Subject Codes: E5 09/30/95 Status: Published

Alt. Contact: NTIS

NUREG-1140. S. A. McGuire. "A Regulatory Analysis on Emergency Preparedness for Fuel Cycle Facilities and Other Radioactive Material Licensees, Final Report." NRC, Jan. 1985.

Subject Codes: E1, E5 09/30/95 Status: Published

NUREG/CR-200 (Rev. 4), ORNL/NUREG/CSD-2/R4; draft NUREG/CR-200 (Rev. 4), draft ORNL/NUREG/CSD-2/R4; CCC-545. ORNL. "SCALE 4.2: A Modular Code System for Performing Standardized Computer Analyses for Licensing Evaluation." NRC; ORNL; RSIC, Feb. 1995; Nov. 1993; Nov. 1993.

Subject Codes: T 09/30/95 Status: Active

Alt. Contact: NEADB

Notes: Help available via e-mail, scalehelp@ornl.gov.
Newsletters on internet URL http://www.cad.ornl.gov/cad_nea/text/scale_news.html.
Next rev., SCALE 4.3, due to be available from RSIC in Oct. 1995.

NUREG/CR-2300, Vol. 1 and 2. ANS and IEEE. "PRA Procedures Guide, Final Report." NRC, Dec. 1982 (issued Jan. 1983).

Subject Codes: H2, O, R 09/30/95 Status: Published

NUREG/CR-2517. H. M. Forehand, Jr. "Effect of Radiolytic Gas on Nuclear Excursions in Aqueous Solutions." NRC, Jan. 1982.

Subject Codes: (A3, T)

09/30/95 Status: Published

Dissertation: H. M. Forehand, Jr., Ph.D. dissertation, University of Arizona, listed separately.

Earlier Work: *ANS Trans.*, Vol 19, pp. 191-193, listed separately.

NUREG/CR-5228, PNL-6653, BHARC-700/88/017, Vol. 1 and 2. V. E. Barnes, et al. "Techniques for Preparing Flowchart-Format Emergency Operating Procedures." NRC, Jan. 1989.

Subject Codes: E5

09/30/95 Status: Published

Alt. Contact: NTIS

ORNL-2452. J[oseph] T. Thomas and [A.] D[ixon] Callihan. "Radiation Excursions at the ORNL Critical Experiments Laboratory, I. May 26, 1954, II. February 1, 1956." ORNL, May 27, 1958.

Subject Codes: A2, T

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

ORNL-3849. J[ohn] A. Auxier, et al. "Nuclear Accident Dosimetry Intercomparison Study." In *Health Physics Division Annual Progress Report for Period Ending July 31, 1965*. ORNL, 1965.

Subject Codes: (D)

09/30/95 Status: Issued

Alt. Contact: NTIS, OSTI

ORNL-5851. W[ayne] A. Rhoades and R[obert] L. Childs. "An Updated Version of the DOT 4 One- and Two-Dimensional Neutron/Photon Transport Code." ORNL, April 1982.

Subject Codes: (T)

09/30/95 Status: Not Determined, probably inactive

Supplements: CCC-543 (TORT-DORT, which is active), listed separately.

ORNL-6268. W[ayne] A. Rhoades. "The TORT Three-Dimensional Discrete Ordinates Neutron/Photon Transport Code." ORNL, Nov. 1987.

Subject Codes: (T)

09/30/95 Status: Not Determined, probably inactive

Supplements: CCC-543 (TORT-DORT, which is active), listed separately.

ORNL/CSD/TM-210. H. L[ee] Dodds, [Jr.] and R[obert] M[ichael] Westfall. "SKINATH - A Computer Program for Solving the Reactor Point Kinetics Equations with Simple Thermal Hydraulic Feedback." ORNL, Sept. 1984.

Subject Codes: T

09/30/95 Status: Active

Alt. Contact: UT-Knoxville

ORNL/CSD/TM-246. C[ecil] V. Parks, et al. "Assessment of Shielding Analysis Methods, Codes, and Data for Spent Fuel Transport/Storage Applications." ORNL, July 1988.

Subject Codes: (D, T)

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Subject Codes: (see full subject code list in the front matter for additional description)

A through A3 = criticality accidents

B1 or B2 = extensive bibliography or references

C1 through C5 = CASs

D = dose, dosimetry, distance and shielding

E through E4 = emergency management

H1 and H2 = hazard-, risk-, and safety-analysis

M = medical

O = other

R = releases and release dispersion

T = computational methods, tools, validation

Parenthesis indicate that code(s) were assigned based on document title, its use as a reference in other documents, or discussions with authors.

ORNL/TM-55. B[rian] L. Broadhead, et al. "Evaluation of Criticality Alarm Response at the WEMCO Fernald Site." ORNL, Nov. 1992.

Subject Codes: (A3, C2, C3, C4, D) 09/30/95 Status: Issued

Alt. Contact: NTIS, OSTI

Summary: *ANS Trans.*, Vol. 70., pp. 206-208, listed separately.

ORNL-TM-139. [A.] Dixon Callihan. "Criticality Excursion of November 10, 1961." ORNL, Feb. 13, 1962.

Subject Codes: A2 09/30/95 Status: Issued

Alt. Contact: NTIS, OSTI

ORNL-TM-2207. [A.] D[ixon] Callihan. "Excursion at the Oak Ridge Critical Experiments Facility, January 30, 1968." UCNC, ORNL, June 1968.

Subject Codes: A2 09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

ORNL-TM-3770. ORNL, 1971. F. F. Haywood and J. W. Poston. "2nd IAEA Nuclear Accident Dosimetry Coordination Meeting and Intercomparison Experiment, May 3-15, 1971."

Subject Codes: (D) 09/30/95 Status: Issued

Alt. Contact: IAEA, NTIS, OSTI

ORNL/TM-12246. W[ayne] A. Rhoades and R[obert] L. Childs. "Theoretical Basis of the Linear Nodal and Linear Characteristic Methods in the TORT Computer Code." ORNL, Jan. 1993.

Subject Codes: (T) 09/30/95 Status: Not Determined, probably inactive

Supplements: CCC-543 (TORT-DORT, which is active), listed separately.

ORNL/TM-12359. W[ayne] A. Rhoades. "The TORSED Method for Construction of TORT Boundary Sources from External DORT Flux Files." ORNL, Aug. 1993.

Subject Codes: (T) 09/30/95 Status: Not Determined, probably inactive

Supplements: CCC-543 (TORT-DORT, which is active), listed separately.

ORINS-25. Marshall Brucer (compiler). "The Acute Radiation Syndrome: A Medical Report on the Y-12 Accident, June 16, 1958." Oak Ridge Institute of Nuclear Studies, Oak Ridge, Tennessee USA, April 1959.

Subject Codes: A1, D, M 09/30/95 Status: Published

Alt. Contact: NTIS

POEF-SH-12. Scott B. Negron and Robert W. Tayloe, Jr. "Analysis of the Proposed Relocation of Neutron Criticality Clusters in the Process Buildings for the Portsmouth Gaseous Diffusion Plant." Martin Marietta Energy Systems, Inc., Piketon, Ohio USA, Jan. 1994.

Subject Codes: (A3, C1, C2, C4, D) 09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Summary: *ANS Trans.*, Vol. 70, pp. 209-210, listed separately.

POEF-SH-19. Scott B. Negron, Robert W. Tayloe, Jr., and M. C. Dobelbower "Analysis of Criticality Alarm System Response to an Accidental Criticality Outside the Cascade Process Buildings at the Portsmouth Gaseous Diffusion Plant." Martin Marietta Energy Systems, Inc., Piketon, Ohio USA, July 1994.

Subject Codes: (A3, C2, C4, D) 09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

POEF-SH-29. Billy L. Lee, Jr., et al. "Evaluation of Coverage of Enriched UF₆ Cylinder Storage Lots by Existing Criticality Accident Alarms." Martin Marietta Energy Systems, Inc., Piketon, Ohio USA, March 1995.

Subject Codes: (A3, C2, C4, D)

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

R-82-036. W. M. Simpkins, H. L[ee] Dodds, [Jr.], and R[obert] S[herwood] Howell. "Investigation of the Validity of the Point Kinetics Model During the Initiating Phase of a Hypothetical Core Disruptive Accident (HCDA) in the Clinch River Breeder Reactor." Knoxville, Tennessee USA: Technology for Energy Corporation, Nov. 1982.

Subject Codes: (A3, T)

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI, University of Tennessee - Knoxville

Notes: Dr. Dodds indicates the calculation model is very similar to models for criticality accidents outside reactors.

RFP-1621. William H. Tyree. "A Neutron Criticality Alarm System ." Golden, Colorado USA: DOW Chemical USA, Rock Flats Plant, March 21, 1972.

Subject Codes: C1, C2, C4

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

RFP-2027. William H. Tyree. "Test Procedures for the Neutron Criticality Alarm System at Rocky Flats Plant." Golden, Colorado USA: DOW Chemical USA, Rock Flats Plant, Aug. 2, 1973.

Subject Codes: C1, C4

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

SAND80-1675. See *Proceedings, Nuclear Criticality Safety, El Paso, Texas USA, April 1990*, listed separately.

SC-DC--67-1305. See *Proceedings of the National Topical Meeting on Nuclear Criticality Safety, Las Vegas, Nevada USA, Dec. 1966*, listed separately.

SRD-R-308. D[onald] J. Mather and P. M. Shaw. "Calculations of Criticality Excursions in Fissile Liquid Solutions." UKAEA, July 1984.

Subject Codes: (A3, T)

09/30/95 Status: Issued

Alt. Contact: HMSO, UKAEA Tech.

SRD R 309. H[oward] J. Delafield and J. J. Clifton. "Design Criteria and Principles for Criticality Detection and Alarm Systems." Culcheth, Warrington UK: UKAEA SRD, Oct. 1984.

Subject Codes: A3, C1, C2, C3, C5, E2

09/30/95 Status: Published

Alt. Contact: HMSO

Subject Codes: (see full subject code list in the front matter for additional description)

A through A3 = criticality accidents

B1 or B2 = extensive bibliography or references

C1 through C5 = CASs

D = dose, dosimetry, distance and shielding

E through E4 = emergency management

H1 and H2 = hazard-, risk-, and safety-analysis

M = medical

O = other

R = releases and release dispersion

T = computational methods, tools, validation

Parenthesis indicate that code(s) were assigned based on document title, its use as a reference in other documents, or discussions with authors.

TID-5630 and its Supplements:

Subject Codes: A1, A2, B2, O

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Notes: See *Stratton Report* instead.

Final Work: WASH-1192, listed separately.

- TID-5360. Daniel F. Hayes. "A Summary of Accidents and Incidents Involving Radiation in Atomic Energy Activities, June 1945 through December 1955." USAEC and GPO, Aug. 1956.
- TID-5360 Supplement. Daniel F. Hayes. "A Summary of Accidents and Incidents Involving Radioactive Material in Atomic Energy Activities, January - December 1956." USAEC and GPO, Aug. 1957.
- TID-5360 (Supplement 1) (Revised). AEC Division of Operational Safety. "A Summary of Industrial Accidents in USAEC Facilities 1956." AEC, Aug. 1967.
- TID-5360 (Supplement 2); (Supplement 3); (Supplement 3) (Revised); (Supplement 4); and (Supplement 5). AEC Office of Industrial Relations. "A Summary of Industrial Accidents in USAEC Facilities." AEC, Sept. 1959; Aug. 1961; Dec. 1961; Dec. 1963; and Dec. 1965.

TID-18431. See HW-74723, listed separately.

TID-21995. F. R. Nakache and M. M. Shapiro. "The Nuclear Aspects of the Accidental Criticality at Wood River Junction, Rhode Island, July 24, 1964." New Haven, Connecticut USA: United Nuclear Corporation, Nov. 12, 1964.

Subject Codes: A1, D, T

09/30/95 Status: Published

Alt. Contact: NTIS

Notes: No. assigned after initial distribution

Summary: *Nuclear Safety*, Vol. 6, No. 3, pp. 298-301, listed separately.

Supplement to: Allison, W. L., et al., "Nuclear Incident ... July 24, 1964," Aug. 21, 1964, listed separately.

UCID-16238. H. E. Lambert. "Systems Safety Analysis and Fault Tree Analysis." LLNL, May 9, 1973.

Subject Codes: H2, O

09/30/95 Status: Published

Notes: Qualitative tools

UCRL-7345 (Rev. I). R[onald] L. Kathren, et al. "Health Physics Following a Nuclear Excursion: The LRL Incident of 26 March 1963." LLNL, June 3, 1963.

Subject Codes: A2, D, M

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

WASH-1192. AEC Division of Operational Safety. "Operational Accidents and Radiation Exposure Experience within the United States Atomic Energy Commission 1943-1975." AEC, fall 1975.

Subject Codes: A1, A2, B2, O

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Notes: See *Stratton Report* instead.

Earlier Work: TID-5630 and its supplements, listed separately.

WSRC-MS-94-0544. J. F. Zino. "Exposure Rate Response Analysis of Criticality Accident Detector at Savannah River Site." Westinghouse Savannah River Company, Aiken, South Carolina USA, 1995.

Subject Codes: (C1, C4)

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

XDC-59-8-179. P. J. Henderson. "Conversion of Neutron and Gamma-Ray Flux to Absorbed Dose Rate." Cincinnati, Ohio USA: General Electric Atomic Products Division, Aug. 1959.

Subject Codes: (D, T)

09/30/95 Status: Issued

Notes: Many recommended conversion factors have changed since 1959 but the factors of this report were used extensively.

Y-1182. J. S. Wachter, J. S., B. J. Youghblood, and S. J. Groothuis. "Response of Radiation Monitors to Prompt Critical Bursts." UCNC Y-12 Plant, issued June 4, 1958.

Subject Codes: C1, C4

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Y-1234. [F. S. Patton, et al.] "Accidental Excursion at the Y-12 Plant, June 16, 1958, Final Report." UCNC Y-12 Plant, July 28, 1958.

Subject Codes: A1, D, E2, O

09/30/95 Status: Issued

Alt. Contact: NTIS, OSTI

Summary: *Nucleonics*, Vol. 16, No. 1, pp. 138-140 and 200-203, listed separately

Y-CDC-12. Pierre [R.] Lécorché and Robert L. Seale. "A Review of the Experiments Performed to Determine the Radiological Consequences of a Criticality Accident." UCNC, Nov. 1973.

Subject Codes: A3

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Full Reports: CEA/DPSR/SEEC reports 57, 59, 60, 69, 70, 74, 77, 79, 83, 91, 92, 96, and 98; and CEA/DSN/SEEC report 103. All are listed separately here.

Earlier Ed.s: *ANS Trans.*, Vol. 14, pp. 33-34, listed separately.

ANS Trans., Vol. 14, pp. 34-35, listed separately.

ANS Trans., Vol. 16, pp. 163-164, listed separately.

Y-DD-113. E. C[harles] Crume "Experiments to Determine Sensitivity of NMC Gamma Monitors to Distant Fission Bursts." UCNC, Y-12 Plant, Dec. 12, 1974.

Subject Codes: C1, C4

09/30/95 Status: Published

Y-DD-145. C[alvin] M. Hopper. "A Slide Rule for Estimating Nuclear Criticality Information." UCNC Y-12 Plant, Jan. 7, 1974.

Subject Codes: A3, B1, D, T

09/30/95 Status: Issued

Alt. Contact: NTIS, OSTI

Further Work: *Nuclear Technology*, Vol. 111, No. 2, pp. 227-240, listed separately.

ANS Trans., Vol. 72, pp. 218-220, listed separately.

Notes: Revision due to be issued in 1996.

Y/DD-384. W[illiam] T. Mee, D[avis] A. Reed, and R[ichard] G. Taylor. "Consequences of a Postulated, Moderated Criticality Accident at the Oak Ridge Y-12 Plant." Martin Marietta Energy Systems, Inc., Oak Ridge, Tennessee USA, Sept. 1988.

Subject Codes: A3, D, R, T

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Notes: Authors indicate there are a few minor errors with the release calculations.

Y/DD--586. M. W[esley] Waddell, Jr. and H. L[ee] Dodds, [Jr.]. "A Method for Transient, Three-Dimensional Neutron Transport Calculations." UCNC Y-12 Plant, Dec. 28, 1982.

Subject Codes: T

09/30/95 Status: Not determined

Subject Codes: (see full subject code list in the front matter for additional description)

A through A3 = criticality accidents

B1 or B2 = extensive bibliography or references

C1 through C5 = CASS

D = dose, dosimetry, distance and shielding

E through E4 = emergency management

H1 and H2 = hazard-, risk-, and safety-analysis

M = medical

O = other

R = releases and release dispersion

T = computational methods, tools, validation

Parenthesis indicate that code(s) were assigned based on document title, its use as a reference in other documents, or discussions with authors.

Y/DD-626. J[ames] S. Baker, J[acquelyn] A. Smith, and D[onald] T. Berry. "Testing of the Y-12 Criticality Accident Alarm System Detectors at the Sandia Pulsed Reactor Facility." Y-12 Plant, Oak Ridge, Tennessee USA, Jan. 6, 1994.

Subject Codes: (C1, C4)

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Summary: *ANS Trans.*, Vol. 70, pp. 210-211, listed separately.

Y/TS-1272. S[tephen] E. Fisher and K[atey] E. Lenox. "An Assessment of the Radiological Doses Resulting From Accidental Uranium Aerosol Releases and Fission Product Releases from a Postulated Criticality Accident at the Oak Ridge Y-12 Plant." Y-12 Plant, Oak Ridge, Tennessee USA, March 1995.

Subject Codes: (A3, D, R, T)

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Notes: Author indicates that a technical editing error occurred in table 3: "months" should be "minutes." Dose calculations apply to inhalation and fission products, not the prompt neutron-gamma dose.

4.2 Books (The status of all books is *published*.)

Cember, Herman. "Chapter 9: Health Physics Instrumentation." In *Introduction to Health Physics*, Second Ed. Elmsford, New York USA: Pergamon Press, 1989.

Subject Codes: B1, C2, D, O

Notes: Principles and types of radiation level and radiation rate detectors.

Hübner, Karl F., and Shirley A. Fry (editors). *The Medical Basis for Radiation Accident Preparedness*. New York, New York USA: Elvsevier/North-Holland, 1980. See subsection 4.5.2, proceedings of non-ANS, for *The Medical Basis for Radiation Accident Preparedness: Proceedings of the REAC/TS International Conference, Oak Ridge, Tennessee USA, Oct. 1979*.

Mazzola, Carl A., Robert. B. Addis, and the Emergency Management Laboratory of the Oak Ridge Institute for Science and Education. *Atmospheric Dispersion Modeling Resources*, 2nd Ed. ORAU, March 1995.

Subject Codes: (B1, R, T)

09/30/95 Status: Published

Alt. Contact: NTIS, OSTI

Notes: Critical review with supporting bibliography for most methods of estimating and predicting atmospheric dispersion.

Nicholle, C. M. (editor). In *Progress in Nuclear Energy Series IV: Technology, Engineering, and Safety*. New York USA: Pergamon Press, 1960. Sections of chapters include:

- pp. 163-205. William R. Stratton. "A Review of Criticality Accidents."

Subject Codes: A, B1, T

Notes: Earlier ed. of *Stratton Report*

Other Ed.s: See DOE/NCT-04 (latest edition of *Stratton Report*), listed separately.

- pp. 206-227. Hugh F. Henry. "Planning for Control of Criticality Emergencies."

Subject Codes: A3, C2, C5, E, H1, O

Nuclear Installation Inspectorate Health and Safety Executive. *Safety Assessment Principles for Nuclear Plants*. London UK: HSE Books, Oct. 1992.

Subject Codes: (C, E5, H2, O)

09/30/95 Status: Published

Alt. Contact: HMSO

4.3 Dissertations and Theses (The status of all dissertations and theses is *published* unless otherwise noted.)

Basoglu, Benan "Analysis of a Hypothetical Criticality Accident Involving Damp Low Enriched UO₂ Powder." Master's thesis, University of Tennessee - Knoxville, Aug. 1992.

Subject Codes: (A3, B1, T, O)

Other: *Nuclear Technology*, Vol. 105, No. 1, listed separately.

Brewer, Roger W. "Analysis of a Hypothetical Array Criticality Accident Involving Units of Aqueous Uranyl Fluoride." Master's thesis, University of Tennessee - Knoxville, May 1993.

Subject Codes: (A3, T)

Partial: *Proceedings of the 1993 Topical ...*, pp. 160-166, listed separately.

Forehand, Jr., H. M. "Effect of Radiolytic Gas on Nuclear Excursions in Aqueous Solutions." Ph.D. dissertation, University of Arizona, 1981.

Subject Codes: (A3, T) 09/30/95 Status: Issued

Earlier Work: *ANS Trans.*, Vol 19, pp. 191-193, listed separately.

Final Report: NUREG/CR-2517, listed separately.

Haught, C[hristopher] F. "Analysis of Hypothetical Criticality Excursion Accidents in 10- and 20-MW Freezer/Sublimers." Master's Practice Project, University of Tennessee - Knoxville, May 1993.

Subject Codes: (A3, B1, T)

Later Work: *Nuclear Technology*, Vol. 111, pp. 197-218, listed separately.

ANS Trans., Vol. 70, pp. 187-188, listed separately.

Kimpland, Robert Herbert. "Multi-Region Computer Model for Predicting Nuclear Excursions in Aqueous Homogeneous Solution Assemblies." Ph.D. dissertation, University of Arizona, 1993.

Subject Codes: T

Summary: *ANS Trans.*, Vol. 68, p. 245, listed separately.

Later work: R[obert] H. Kimpland and D[rew] E. Kornreich, to be published in *Nuclear Science and Engineering* (late 1995 or early 1996), listed separately.

Newmyer, William D. "Analysis of a Hypothetical Criticality Accident Involving Dry Highly Enriched Uranium Powder." Master's thesis, University of Tennessee - Knoxville, Dec. 1991.

Subject Codes: (A3, T)

Summary: *ANS Trans.*, Vol. 64, p. 344-346, listed separately.

Plaster, Michael J. "Analysis of a Hypothetical Criticality Accident in a Waste Super-Compactor." Master's thesis, University of Tennessee - Knoxville, Dec. 1993.

Subject Codes: (A3, T)

Later Work: *ANS Trans.*, Vol. 70, pp. 189-191, listed separately.

Nuclear Technology (ANS), Vol. 111, No. 2, pp. 219-226, listed separately.

Subject Codes: (see full subject code list in the front matter for additional description)

A through A3 = criticality accidents

B1 or B2 = extensive bibliography or references

C1 through C5 = CASs

D = dose, dosimetry, distance and shielding

E through E4 = emergency management

H1 and H2 = hazard-, risk-, and safety-analysis

M = medical

O = other

R = releases and release dispersion

T = computational methods, tools, validation

Parenthesis indicate that code(s) were assigned based on document title, its use as a reference in other documents, or discussions with authors.

Singleterry, Jr., R. C. "Parameter Study for Dynamic Models of Power Bursts for the KEWB5, CRAC, and Silene Experiments." Master's thesis, University of Arizona, 1990.

Subject Codes: (A3, B1, T)

Wilkinson, A[lan] "Improved Dose Estimates for Nuclear Criticality Accidents." Master's thesis, University of Tennessee - Knoxville, 1994

Subject Codes: A3, B1, D, T

Earlier Work: *ANS Trans.*, Vol. 70, pp. 191-192, listed separately.

Later Work: *Nuclear Technology*, Vol. 111, No. 2, pp. 227-240, listed separately.

Related Work: *ANS Trans.*, Vol. 72, pp. 218-220, listed separately.

Notes: Part of investigation to update Y-DD-145, listed separately

4.4 Journals and Periodicals (The status of all journals and periodicals is *published* unless noted otherwise.)

ANS Trans.: see *Proceedings* subdivision of this bibliography.

Bulletin d'Informations Scientifiques et Techniques, Vol. 172 (July-Aug. 1972): no page data. "Le Programme CRAC - Études d'Accidents de Criticité en Solution."

Subject Codes: (A3, T)

Bulletin of the Institute of Nuclear Sciences Boris Kidre (Belgrade Yugoslavia), Vol. 9 (Mar. 1959): pp. 1-4. Pavle P. Savić. "Sur l' Accident Avec le Reacteur de Puissance Zero de 15 Octobre 1958."

Subject Codes: A2

Health Physics (Pergamon Press), Vol. 2, No. 1 (1959): pp. 21-29. J[ack] D. McLendon. "Accidental Radiation Excursion at the Oak Ridge Y-12 Plant, II. Health Physics Aspects of the Accident."

Subject Codes: A1, D, M

Alt. Contact: HPS

Notes: Incident date 06/16/58
2nd of 4 part series of articles

Health Physics (Pergamon Press), Vol. 1 (1959): pp. 363-372. [A.] Dixon Callihan and Joseph T. Thomas. "Accidental Radiation Excursion at the Oak Ridge Y-12 Plant, I. Description and Physics of the Accident."

Subject Codes: A1

Alt. Contact: HPS

Notes: Incident date 06/16/58
1st of 4 part series of articles

Health Physics (Pergamon Press), Vol. 2, No. 2, 1959. Articles include:

Alt. Contact: HPS

- pp. 121-133. G. S. Hurst, R. H. Ritchie, and L. C. Emerson. "Accidental Radiation Excursion at the Oak Ridge Y-12 Plant, III. Determination of Radiation Doses."

Subject Codes: A1, D, T

Notes: Incident date 06/16/58
3rd of 4 part series of articles

- pp. 134-138. G[ould] A. Andrews, et al. "Accidental Radiation Excursion at the Oak Ridge Y-12 Plant, IV. Preliminary Report on Clinical and Laboratory Effects in the Irradiated Employees."

Subject Codes: A1, D, M

Notes: Incident date 06/16/58
4th of 4 part series of articles

Health Physics (Pergamon Press), Vol. 9 (1963): p. 839. Hanford Laboratories. "Dosimetry Investigation on the RECUPLEX Criticality Accident."

Subject Codes: (A1, D, T)

Alt. Contact: Hanford, HPS

Notes: Incident date 04/07/62

Full Report: HW-SA-2730, listed separately.

Health Physics (Pergamon Press), Vol. 36 (June 1979): pp. 707-722. Bernard L. Cohen and I-Sing Lee. "A Catalog of Risks."

Subject Codes: H2, T

Alt. Contact: HPS

Health Physics (Pergamon Press), Vol. 37 (1979): p. 328. C. S. Sims and H. W. Dickson. "Nuclear Accident Dosimetry Intercomparison Studies at the Health Physics Research Reactor: A Summary (1965-1978)."

Subject Codes: (D)

Alt. Contact: HPS

Notes: Apparently Sims published an update in *Health Physics* sometime in 1989 or 1990.

Health Physics (Pergamon Press), Vol. 38, (April 1980): pp. 529-541. Dale E. Hankins. "Dosimetry of Criticality Accidents Using Activations of the Blood and Hair."

Subject Codes: A3, B1, D

Alt. Contact: HPS

Nuclear Engineering International (Reed Business Publishing), Vol. 17, No. 189 (Feb. 1972): pp. 95-97. T. G. Hughes. "Criticality Incident at Windscale."

Subject Codes: A1

Notes: Incident date 08/24/70

Nuclear News (ANS), Vol. 35, No. 9 (July 1992): p. 76. Jon Payne (editor). Standards, Standards Actions, "Clarification."

Subject Codes: C3, C5, E1, E2

Notes: Clarification to paragraph 4.2 of ANSI/ANS-8.3-1986.

Nuclear Safety (GPO), Vol. 3, No. 2 (Dec. 1961): pp. 71-73. J. P. Nichols. "Idaho Chemical Processing Plant Criticality Incident of January 25, 1961."

Subject Codes: A1

09/30/95 Status: Published

Full Report: IDO-10036, listed separately.

Nuclear Safety (GPO), Vol. 4, No. 1 (Mar. 1963): pp. 83-86. W. B. Cottrell (editor). "SL-1 Final Report."

Subject Codes: A2

Alt. Contact: INEL

Notes: Incident date 01/03/61

Nuclear Safety (GPO), Vol. 4, No. 4 (June 1963): pp. 136-144. [A.] D[ixon] Callihan "Accidental Nuclear Excursion in Recuplex Operation at Hanford in April 1962."

Subject Codes: A1

Report: HW-74723; TID-18431, listed separately.

Subject Codes: (see full subject code list in the front matter for additional description)

A through A3 = criticality accidents

B1 or B2 = extensive bibliography or references

C1 through C5 = CASs

D = dose, dosimetry, distance and shielding

E through E4 = emergency management

H1 and H2 = hazard-, risk-, and safety-analysis

M = medical

O = other

R = releases and release dispersion

T = computational methods, tools, validation

Parenthesis indicate that code(s) were assigned based on document title, its use as a reference in other documents, or discussions with authors.

Nuclear Safety (GPO), Vol. 6, No. 3, (Spring 1965): pp. 298-301. J[ohn] A. Auxier. "Nuclear Accident at Wood River Junction."

Subject Codes: A1

Notes:

Incident date 07/24/64

Reports: Allison, et al., "Nuclear Incident ... July 24, 1964," Aug. 21, 1964, listed separately.
TID-21995, listed separately.

Nuclear Safety (GPO), Vol. 21, No. 5 (Sept.-Oct. 1980): pp. 648-653. W. R. Castro (editor). "Operating Experiences, ICPP Criticality Event of 17 October, 1978."

Subject Codes: A1

Alt. Contact: INEL

Full Report: [ICPP-MISC-002], listed separately.

Nuclear Science and Engineering (ANS), Vol. 5, No. 5 (1959): pp. 285-290. H[ugh] F. Henry, J. C. Bailey, and R. C. Rohr. "A Simple Device for Personnel Monitoring of an Accidental Nuclear Reaction."

Subject Codes: D

Nuclear Science and Engineering (ANS), Vol. 8, No. 6 (Dec. 1960). Articles include:

- pp. 670-690. G. R[obert] Keepin and R. W. Cox, "General Solution of the Reactor Kinetic Equation."
Subject Codes: T
- pp. 709-719. G[ordon] E. Hansen. "Assembly of Fissionable Material in the Presence of a Weak Neutron Source."
Subject Codes: A3, T

Nuclear Science and Engineering (ANS), Vol. 26, No. 1 (Sept. 1966): pp. 26, 110-116. Dale E. Hankins. "Effect of Reactivity Addition Rate and of Weak Neutron Source on the Fission Yield of Uranium Solutions."

Subject Codes: A3, T

Major Work: Hansen, G[ordon] E., *Nuclear Science and Engineering*, Vol. 8, pp. 709-719, listed separately.

Nuclear Science and Engineering (ANS), Vol. 115, No. 1 (Sept. 1993): pp. 50-61. D[rew] E. Kornreich. "Reactivity Feedback Mechanisms in Aqueous Fissile Solutions."

Subject Codes: A3, T

Nuclear Science and Engineering (ANS), Vol. 118, No. 2 (Oct. 1994). Articles include:

- pp. 127-130. Das, S. "Comment on 'Reactivity Feedback in Mechanisms in Aqueous Fissile Solutions'."
Subject Codes: T
- pp. 130-131. Drew E. Kornreich. "'Response to 'Comment on 'Reactivity Feedback Mechanisms in Aqueous Fissile Solutions' ". '"
Subject Codes: T

Nuclear Science and Engineering (ANS), (to be published late 1995 or early 1996). R[obert] H. Kimpland and D[rew] E. Kornreich. "A Two-Dimensional Multi-Region Computer Model for Predicting Nuclear Excursions in Aqueous Homogeneous Solution Assemblies."

Subject Codes: (T)

09/30/95 Status: To be published

Thesis: Robert Herbert Kimpland, Ph.D. dissertation, University of Arizona, listed separately.
ANS Trans., Vol. 68, p. 245, listed separately.

Nuclear Technology (ANS), Vol. 23 (Aug. 1974): pp. 177-188. Grover Tuck. "Simplified Methods of Estimating the Results of Accidental Solution Excursions."

Subject Codes: A3, T

Nuclear Technology (ANS), Vol. 78 (Sept. 1987): pp. 320-325. Francis [Y.] Barbry and Raymond Prignet. "The EDAC System and New Developments Under Consideration at the CEA for Criticality Accident Detection."

Subject Codes: C1, C2, C4

Other Ed.s: *Proceedings of the International Seminar 1983*, pp. 12-27, listed separately.

Proceedings of ISCS'87..., pp. 475-478, listed separately.

Transactions of the Criticality Accident Alarm... 1988, pp. 103-110, listed separately.

Earlier Sys: *Proceedings of the Third United Nations... Aug.-Sept. 1964*, Vol. 13, pp. 244-251, listed separately.

CEA-R-4784, listed separately.

Later Work: *Proceedings of ICNC'91...*, Vol. 2, Sept. 1991, pp. VII-104 - VII-123, listed separately.

Nuclear Technology (ANS), Vol. 105, No. 1 (Jan. 1994): pp. 14-30. B[enan] Basoglu, et al. "Simulation of Hypothetical Criticality Accidents Involving Homogenous Damp Low-Enriched UO₂ Powder Systems."

Subject Codes: A3, B1, T, O

Full Thesis: Benan Basoglu, Master's thesis, University of Tennessee - Knoxville, listed separately.

Nuclear Technology, Vol. 109 (1995): pp. 142-152. Nomura, Y[asushi], and H[iroshi] Okuno. "Simplified Evaluation Models for Total Fission Number in a Criticality Accident."

Subject Codes: (A3, T)

Summary: *ICNC'95 ...*, Vol. II, pp. 11•25-11•28, listed separately.

Nuclear Technology (ANS), Vol. 111, No. 2 (Aug. 1995). Articles include:

- pp. 197-218. C[hristopher] F. Haught, et al. "Analysis of Hypothetical Criticality Excursion Accidents in 10- and 20-MW Freezer/Sublimers."

Subject Codes: A3, B1, T

Summary: *ANS Trans.*, Vol. 70, pp. 187-188, listed separately.

Earlier Work: C[hristopher] F. Haught, Master's Practice Project, University of Tennessee - Knoxville, listed separately.

- pp. 219-226. M[ichael] J. Plaster, et al. "Analysis of a Hypothetical Criticality Accident in a Waste Super-Compactor."

Subject Codes: A3, T

Summary: *ANS Trans.*, Vol. 70, pp. 189-191, listed separately.

Thesis: Michael J. Plaster, Master's thesis, University of Tennessee - Knoxville, listed separately.

- pp. 227-240. A[lan] Wilkinson, et al. "Improved Dose Estimates for Nuclear Criticality Accidents."

Subject Codes: A3, B1, D, T

Earlier Work: *ANS Trans.*, Vol. 70, pp. 191-192, listed separately.

A[lan] Wilkinson, Master's thesis, University of Tennessee - Knoxville, listed separately.

Related Work: *ANS Trans.*, Vol. 72, pp. 218-220, listed separately.

Notes: Part of investigation to update Y-DD-145, listed separately

Nucleonics (McGraw-Hill), Vol. 13 (Sept. 1955): p. 40-45. Jerome D. Luntz (editor). "Reactors."

Subject Codes: (A2)

Notes:

Incident date 07/22/54

Subject Codes: (see full subject code list in the front matter for additional description)

A through A3 = criticality accidents

B1 or B2 = extensive bibliography or references

C1 through C5 = CASs

D = dose, dosimetry, distance and shielding

E through E4 = emergency management

H1 and H2 = hazard-, risk-, and safety-analysis

M = medical

O = other

R = releases and release dispersion

T = computational methods, tools, validation

Parenthesis indicate that code(s) were assigned based on document title, its use as a reference in other documents, or discussions with authors.

Nucleonics (McGraw-Hill), Vol. 15, No. 4 (April 1957): p. 104. [Hugh C. Paxton]. "Godiva Wrecked at Los Alamos."

Subject Codes: A2

Notes:

Incident date 02/12/57

Nucleonics (McGraw-Hill), Vol. 16, No. 3 (March 1958): pp. 80-81. Hugh C. Paxton, Hugh C. "Critical Assembly Booby Traps."

Subject Codes: A2

Full Report: H[ugh] C. Paxton. "Critical Assembly Booby Traps," AECD-4240. LASL, 1957.

Notes: Incident dates 02/01/51, 02/03/54, and 07/03/56.

There is apparently an error in the number of the full report because the document does not seem to be retrievable through the AECD number.

Nucleonics (McGraw-Hill), Vol. 16, No. 11 (Nov. 1958): pp. 138-140 and 200-203. Jerome D. Luntz (editor). "Oak Ridge Y-12 Accidental Excursion, June 16, 1958."

Subject Codes: A1

Full Report: Y-1234, listed separately.

Nucleonics (McGraw-Hill), Vol. 17, No. 4 (April 1959). Articles include:

- pp. 106 and 154-156. Jerome D. Luntz (editor). "Yugoslavian Criticality Accident, October 15, 1958." Subject Codes: A2
- pp. 107-108 and 151-153. H[ugh] C. Paxton, et al. "Los Alamos Criticality Accident, December 30, 1958."

Subject Codes: A2

Full Report: LAMS-2293, listed separately

Review of Scientific Instruments, Vol. 27, No. 3 (March 1956): pp. 153-156. G. S. Hurst, et al. "Techniques of Measuring Neutron Spectra with Threshold Detectors - Tissue Dose Determination."

Subject Codes: D

4.5 Proceedings by Date of Meeting (The status of all proceedings is *published*.)

4.5.1 Annual ANS Meetings (see *ANS Trans.*)

In *ANS Trans.*, Vol. 3. ANS, 1960. Papers include:

- pp. 290-292. William R. Stratton. "A Review of Criticality Accidents." Subject Codes: A, B1, T Notes: Earlier ed. of *Stratton Report*
Other Ed.s: See DOE/NCT-04 (latest edition of *Stratton Report*), listed separately.

In *ANS Trans.*, Vol. 5. ANS, 1962. Papers include:

- p. 152. C. L. Storrs, C. L., and C. W. Bills. "The SL-1 Recovery Operation." Subject Codes: A2, E4 Notes: Incident date 01/03/61

In *ANS Trans.*, Vol. 14, No. 1. ANS, June 1971. Papers include:

- pp. 35-36. J. T. Daniels, H. Howells, and T. G. Hughes. "Criticality Incident - August 24, 1970, Windscale Works."
Subject Codes: A1
 - pp. 33-34. P[ierre] R. Lécorché and H. F. Revol. "CRAC - Experimental Study of Criticality Accidents."
Subject Codes: A3
Additional: *ANS Trans.*, same vol., pp. 34-35, listed below.
CEA/DPSR/SEEC reports 57, 59, 60, 69, 70, 74, 77, 79, 83, 91, 92, 96, and 98; and
CEA/DSN/SEEC report 103. All are listed separately here.
Y-CDC-12, listed separately.
ANS Trans., Vol. 16, pp. 163-164.
 - pp. 34-35. R[obert] L. Seale. "A Review of the CRAC Experiments."
Subject Codes: A3
Additional: *ANS Trans.*, same vol., pp. 33-34, listed above.
Y-CDC-12, listed separately.
ANS Trans., Vol. 16, pp. 163-164, listed separately.
- Full Reports: CEA/DPSR/SEEC reports 57, 59, 60, 69, 70, 74, 77, 79, 83, 91, 92, 96, and 98; and
CEA/DSN/SEEC report 103. All are listed separately here.

In *ANS Trans.*, Vol. 16, No. 1. ANS, June 1973. Papers include:

- pp. 163-164. P[ierre] R. Lécorché. "CRAC Experimental Study of Criticality Accidents."
Subject Codes: A3
Earlier Work: *ANS Trans.*, Vol. 14, pp. 33-34, listed separately.
ANS Trans., Vol. 14, pp. 34-35, listed separately.
- Full Reports: CEA/DPSR/SEEC reports 57, 59, 60, 69, 70, 74, 77, 79, 83, 91, 92, 96, and 98; and
CEA/DSN/SEEC report 103. All are listed separately here.
- Additional: Y-CDC-12.

In *ANS Transactions*, Vol. 19. ANS, Oct. 1974. Papers include:

- p. 189-191. A. R. Olsen et al. "Empirical Model to Estimate Energy Release from Accidental Criticality."
Subject Codes: A3, T
- pp. 191-193. H. M. Forehand, Jr. "Analytical Studies of Criticality Accidents in Aqueous Solutions."
Subject Codes: (A3, T)
Dissertation: H. M. Forehand, Jr., Ph.D. dissertation, University of Arizona, listed separately
Later Work: NUREG/CR-2517, listed separately.
- pp. 193-194. D[aniel] F[rancis] Cronin. "Recovery and Restart Phases of a Criticality Accident."
Subject Codes: A1, E4
- pp. 194-195. W[illiam] T. Mee and J[ack] D. McLendon. "The Oak Ridge Y-12 Plant Criticality Accident Emergency Program."
Subject Codes: E2, E3
- pp. 195-196. R. T. Santoro, et al. "Nuclear Accident Dosimetry in a Simulated Criticality Accident."
Subject Codes: D, E2

Subject Codes: (see full subject code list in the front matter for additional description)

A through A3	= criticality accidents	H1 and H2	= hazard-, risk-, and safety-analysis
B1 or B2	= extensive bibliography or references	M	= medical
C1 through C5	= CAs	O	= other
D	= dose, dosimetry, distance and shielding	R	= releases and release dispersion
E through E4	= emergency management	T	= computational methods, tools, validation

Parenthesis indicate that code(s) were assigned based on document title, its use as a reference in other documents, or discussions with authors.

- pp. 196-197. W. M. Smalley. "The AEC Radiological Assistance Program."
Subject Codes: E2

In *ANS Trans.*, Vol. 32. ANS, 1979. Papers include:

- p. 318. R. J. Nertney. "Risk Projection and Human Factors as Related to Nuclear Systems."
Subject Codes: H2
- pp. 318-320. G[len] J. Briscoe. "Practical Risk Analysis."
Subject Codes: H2
- p. 320. M. C. Stewart "The Human Component: An Off-the-Shelf Subsystem."
Subject Codes: H2

In *ANS Trans.*, Vol. 34. ANS, 1980. Papers include:

- pp. 330-331. E. L. Maceda and D[on] K. Sgarlata. "Radius of Coverage of Nuclear Criticality Detectors."
Subject Codes: C2, D, T

In *ANS Trans.*, Vol. 39. ANS, Nov. 1981. Papers include:

- pp. 521-522. R. E. Swaja and R. T. Greene. "Neutron and Gamma Attenuation Characteristics of Various Shields During Nuclear Criticality Accidents."
Subject Codes: A3, C2, C4, D
- pp. 545. D[avid] R. Smith "ANSI/ANS-1983-1979 - American National Standard Criticality Accident Alarm System."
Subject Codes: C5
- p. 554. G. E[lliott] Whitesides. "The Need for Radiation Field Measurements from a Low-Enriched Critical Assembly."
Subject Codes: A3, D
- pp. 554-555. D[avid] R. Smith. "The Function and Characteristics of Criticality Accident Alarm Systems."
Subject Codes: C5, E2, E3, O
- pp. 555-557. Richard E. Malenfant and H. M. Forehand. "Facility Description of a Solution Critical Assembly: SHEBA."
Subject Codes: A3, C1, O
- pp. 557-559. John H. Thorngate, Duane W. Rueppel, and Richard V. Griffith. "Neutron and Gamma Spectrum Measurements at the Los Alamos Critical Assembly SHEBA."
Subject Codes: A3, C3, D
- pp. 559-560. Dale E. Hankins. "Neutron and Gamma-Ray Dose Measurements at the Los Alamos Critical Assembly SHEBA."
Subject Codes: A3, C3, D
- p. 561. Norman L. Pruvost and John C. Tsitouras. "A Study of Some Current Technologies for Criticality Alarm Systems."
Subject Codes: C2, C4
- p. 561. W[illiam] H. Tyree and Henry Urano. "A Criticality Alarm System for Plutonium Process Operations."
Subject Codes: C2, C4

09/30/95 Status: Published

In *ANS Trans.*, Vol. 41. ANS, June 1982, pp. 358-359. F[rancis Y.] Barbry and Jean[-]C[laude] Manaranche. "Criticality Accident Experimental Studies with High-Enriched Uranium Solutions."

Subject Codes: A3

Later Work: *Proceedings of the International...Sept 1983*, 1984, pp. 36-52, listed separately.

Proceedings of the 1993 Topical ..., pp. 34-40. listed separately.

Final Report: CEA/SRSC 223, listed separately.

In *ANS Trans.*, Vol. 43. ANS, June 1982. Papers include:

- p. 405. R[ichard] E. Malenfant and H. M. Forehand, Jr. "Simulation of Process Plant Accidents."

Subject Codes: A3

Duplicate: LA-UR-82-1988, listed separately

In *ANS Trans.*, Vol. 46. ANS, June 1984. Papers include:

- p. 277. Mark W. Geeting and Philip B. Gerrard. "Criticality Frequency Determination Using a Human-Error-Based Fault Tree."

Subject Codes: H1, O

- p. 440. J. Pahissa-Campa and D. Beninson. "RA-2 Criticality Accident."

Subject Codes: A2

Notes: Incident date 09/23/83

- pp. 440-441. R[onald] L. Kathren. "The 1963 Livermore Criticality Accident Revisited."

Subject Codes: A2

Notes: Incident date 03/26/63

- p. 460. H. M. Forehand, [Jr.] "An Analysis of the Yield and Quench Mechanism of the Argentine Accident of September 23, 1983."

Subject Codes: A2

- pp. 460-462. William R. Stratton. "Criticality Accident Experience: Heterogenous Water-Moderated Systems."

Subject Codes: A, B1, T

Notes: partial ed. of *Stratton Report*

Other Ed.s: See DOE/NCT-04 (latest edition of *Stratton Report*), listed separately.

- pp. 462-463. M[artyn] C. Evans. "A Review of Criticality Accidents Within the European Community."

Subject Codes: A1, A2

Notes: Saclay, 03/15/60; Mol, 12/30/65; and Windscale, 08/24/70

- pp. 463-464. E. D[uane] Clayton. "The Hanford Pulsar Accident."

Subject Codes: A1

Notes: Incident date 04/07/62

In *ANS Trans.*, Vol. 55. ANS, Nov. 1987. Papers include:

- pp. 406-407. A. Bickley, et al. "The Code CRITEX to Simulate Transient Criticality in Fissile Solution."

Subject Codes: T

- pp. 407-408. David L. Hetrick and Adrienne B. Smith. "Nuclear Excursions in Aqueous Solutions of Fissile Material."

Subject Codes: A3

- pp. 408-409. Harry F. Lutz "Predicting Accident Characteristics by Calculations."

Subject Codes: A3, T

- pp. 409-410. W. Thomas and B. Gamal. "Modeling of Criticality Accidents and Their Environmental Consequences."

Subject Codes: D, R, T

Subject Codes: (see full subject code list in the front matter for additional description)

A through A3 = criticality accidents

B1 or B2 = extensive bibliography or references

C1 through C5 = CASs

D = dose, dosimetry, distance and shielding

E through E4 = emergency management

H1 and H2 = hazard-, risk-, and safety-analysis

M = medical

O = other

R = releases and release dispersion

T = computational methods, tools, validation

Parenthesis indicate that code(s) were assigned based on document title, its use as a reference in other documents, or discussions with authors.

- pp. 410-411. F[rancis Y.] Barbry, et al. "Theoretical Studies of Transient Criticality of Irradiated Fuel Elements."
Subject Codes: A3, T
- pp. 413-414. F[rancis Y.] Barbry. "Model To Estimate the Maximum Fission Yield in Accident Solution Excursions."
Subject Codes: A3, T
- pp. 414-415. D[onald] J. Mather and P. Hague. "The Analysis of Transient Criticality in Wetted Uranium Dioxide Systems and in Fissile Solutions."
Subject Codes: A3, T

In *ANS Trans.*, Vol. 59. ANS, June 1989. Papers include:

- pp. 180-181. J[ohn] S. Pearson and E[rnest] E. Hill. "Emergency Response Preparation Based on an Internal Exercise Program."
Subject Codes: E2, E3
- pp. 181-182. Francis [Y.] Barbry and Jean Pierre Rozain. "Radiolysis Gas Formation and Pressure Increase During A Criticality Excursion."
Subject Codes: A3, T
Summary of: CEA/SRSC 89.08, listed separately.

In *ANS Trans.*, Vol. 63. ANS, June 1991. Papers include:

- pp. 226-228. David L. Hetrick. "Computer Simulation of Hypothetical Criticality Accidents in Aqueous Fissile Solutions."
Subject Codes: A3, T
Summary of: *Proceedings of ICNC'91...*, Vol. 2, pp. VII-72 - VII-84, listed separately.
- p. 228. J[ean] P[ierre] Rozain, et al. "'Criticality Excursions in Wetted UO₂ Powder."
Subject Codes: A3, T
Summary of: *Proceedings of ICNC'91 ... Sept. 1991*, Vol. 2, pp. VII-40 - VII-50, listed separately.
- pp. 228-231. Francis Y. Barbry. "Exposure Risks and Possibilities of Intervention and Diagnosis in Criticality Accidents."
Subject Codes: A3, C3, D, E2, E3
Summary of: *Proceedings of ICNC'91...*, Vol. 2, pp. VII-33 - VII-40, listed separately.

In *ANS Trans.*, Vol. 64. ANS, Nov. 1991. Papers include:

- p. 325. Davis A. Reed. "ANSI/ANS-8.3-1986: American National Standard Criticality Accident Alarm System."
Subject Codes: C5
- p. 327. Richard E. Malenfant. "A Criticism of ANSI/ANS-8.3-1986: Criticality Accident Alarm System."
Subject Codes: A3, C3, C5
Summary of: *Proceedings of ICNC'91...Sept. 1991*, pp. VII-51 - VII-54., listed separately.
Later Work: *Proceedings of the 1993 Topical ... Sept. 1993*, pp. 21-25, listed separately.
- p. 344-346. William D. Newmyer. "Analysis of a Hypothetical Criticality Accident Involving Dry Highly Enriched Uranium Powder."
Subject Codes: (A3, T)
Thesis: William D. Newmyer, Master's thesis, University of Tennessee - Knoxville, listed separately.

In *ANS Trans.*, Vol. 66. ANS, Nov. 1992. Papers include:

- pp. 292-293. K[evin] N. Schwinkendorf. "Dose Calculations for Nuclear Criticality Accidents that Occur Under Large Amounts of Water."
Subject Codes: A3, D

In *ANS Trans.*, Vol. 68. ANS, June 1993. Papers include:

- p. 245. R[obert] H. Kimpland. "An Improved Multi-Region Computer Model for Predicting Nuclear Excursions in Aqueous Homogeneous Solution Assemblies."

Subject Codes: T

Thesis: Kimpland, Robert Herbert, Ph.D. dissertation, University of Arizona, listed separately.

Later work: R[obert] H. Kimpland and D[rew] E. Kornreich, to be published in *Nuclear Science and Engineering*, listed separately.

In *ANS Trans.*, Vol. 69. ANS, Nov. 1993. Papers include:

- pp. 249-250. D[avid] L. Hetrick and T[homas] P. McLaughlin. "Estimating Maximum Pulse Yields for Solution Criticality Accidents."

Subject Codes: A3, T

In *ANS Trans.*, Vol. 70. ANS, June 1994. Papers include:

- pp. 187-188. C[hristopher] F. Haught, et al. "Analysis of Hypothetical Criticality Excursion Accidents in 10- and 20-MW Freezer/Sublimers."

Subject Codes: A3, B1, T

Summary of: *Nuclear Technology*, Vol. 111, pp. 197-218, listed separately.

Earlier Work: C[hristopher] F. Haught, Master's Practice Project, University of Tennessee - Knoxville, listed separately.

- pp. 188-189. C[hristopher] F. Haught, et al. "Shutdown Mechanisms for a Hypothetical Criticality Accident Involving HEU Powder: Preliminary Results."

Subject Codes: A3

- pp. 189-191. M[ichael] J. Plaster, et al. "Analysis of a Hypothetical Criticality Accident in a Waste Super-Compactor."

Subject Codes: A3, T

Summary of: *Nuclear Technology*, Vol. 111, No. 2, pp. 219-226, listed separately.

Thesis: Michael J. Plaster, Master's thesis, University of Tennessee - Knoxville, listed separately.

- pp. 191-192. A[lan] Wilkinson, et al. "Improved Dose Estimates for Nuclear Criticality Accidents: Preliminary Results."

Subject Codes: A3, B1, D, T

Later Work: A[lan] Wilkinson, Master's thesis, University of Tennessee - Knoxville, listed separately. *Nuclear Technology* (ANS), Vol. 111, No. 2, pp. 227-240, listed separately.

Related Work: *ANS Trans.*, Vol. 72, pp. 218-220, listed separately.

Notes: Part of investigation to update Y-DD-145, listed separately

- p. 206. Ronald C. Marble, Tulanda D. Brown, and Jeff C. Wooldridge. "Criticality Accident Alarm System at the Fernald Environmental Management Project."

Subject Codes: (C1, C2, C4)

Summary of: FEMP-2328, listed separately.

- pp. 206-208. B[rian] L. Broadhead, R[obert] L. Childs, and R[obert] M[ichael] Westfall. "Evaluation of Fernald Plant 6 Criticality Alarm Response."

Subject Codes: (A3, C2, C3, C4, D)

Full Report: ORNL/TM-55, listed separately.

Subject Codes: (see full subject code list in the front matter for additional description)

A through A3 = criticality accidents

B1 or B2 = extensive bibliography or references

C1 through C5 = CASs

D = dose, dosimetry, distance and shielding

E through E4 = emergency management

H1 and H2 = hazard-, risk-, and safety-analysis

M = medical

O = other

R = releases and release dispersion

T = computational methods, tools, validation

Parenthesis indicate that code(s) were assigned based on document title, its use as a reference in other documents, or discussions with authors.

- pp. 208-209. G. R. Goebel, T. W. Hines, and A. M. Carver. "Radiation Monitoring During Criticality at a Gaseous Diffusion Plant."
Subject Codes: D, E2, E4
- pp. 209-210. Scott B. Negron, Robert W. Tayloe, Jr., and Donna M. D'Aquila. "Proposed Relocation of Neutron Criticality Clusters for the PGDP."
Subject Codes: A3, C1, C2, C4, D Summary of: POEF-SH-12, listed separately
- pp. 210-211. J[ames] S. Baker, J[acquelyn] A. Smith, and D. T. Berry. "Testing of the Y-12 Criticality Accident Alarm System Detectors at the Sandia Pulsed Reactor Facility."
Subject Codes: (C1, C4)
Report: Y/DD-626, listed separately.

In *ANS Trans.*, Vol. 71. ANS, Nov. 1994. Papers include:

- p. 283-285. M. W[esley] Waddell, Jr. "Development of a Transient Three-Dimensional Neutron Transport Code with Feedback."
Subject Codes: T
- pp. 286-287. Billy L. Lee, [Jr.], et al. "Calculated In-Air Leakage Spectra and Power Levels for the ANSI Standard Minimum Accident of Concern."
Subject Codes: A3, D, O

In *ANS Trans.*, Vol. 72. ANS, June 1995. Papers include:

- pp. 203-204. Sung Lee and David [L.] Hetrick. "Effect of Axial Expansion on the Reactivity of a Cylindrical Fissile Solution Assembly."
Subject Codes: A3, T
- pp. 204-205. David L. Hetrick. "Computation of Nuclear Excursions Induced by Large Reactivity Ramps."
Subject Codes: T
- p. 215. Norman L. Pruvost "Proposed Standard for Nuclear Criticality Accident Emergency Planning and Response."
Subject Codes: E1
- pp. 215-216. Hans Toffer. "Emergency Cadre Take-Along Briefcase."
Subject Codes: E2, E4
- pp. 216-217. D'Aquila, Donna [M.], Michael [A.] Austin, and David [L.] Honkonen. "Evacuation, Reentry, and Rescue During Nuclear Criticality Accident Response."
Subject Codes: E2, E4
- pp. 217-218. Jor-Shan Choi, J. Walter Thompson, and Raymond [L.] Reed. "Estimates of Fission Yields in Nuclear Criticality Excursions."
Subject Codes: A3, E2
- pp. 218-220. B[rian] L. Broadhead and C[alvin] M. Hopper. "Updated Tool for Nuclear Criticality Accident Emergency Response."
Subject Codes: A3, D, T
Related Work: A[lan] Wilkinson, et al., *Nuclear Technology*, Vol. 111, No. 2, pp. 227-240, listed separately.
Notes: Part of investigation to update Hopper, C[alvin] M., Y-DD-145, 1974, listed separately.
- pp. 220-221. Ronald A. Knief. "Emergency Planning Lessons Learned from TMI-2: Potential Applications for Fuel Facilities."
Subject Codes: A2, E2
- pp. 221-222. R. W[illiam] Carson and J[ohn] S. Pearson. "Criticality Safety Drill and Exercise Programs."
Subject Codes: E1, E3

4.5.2 Other Conferences, Meetings, Seminars, and Workshops

In *Proceedings of the International Conference on the Peaceful Uses of Atomic Energy, Geneva Switzerland, Aug. 1955*. UN, 1956. Papers include:

- Vol. 11, pp. 25-34. R. J. Hasterlik and L. D. Marinelli. "Physical Dosimetry and Clinical Observations on Four Human Beings Involved in an Accidental Critical Assembly Excursion."
Subject Codes: A2, D, M Notes: Incident date 06/02/52
- Vol. 11, pp. 35-45. A. K. Guskova and G. D. Dasogolov. "Two Cases of Acute Radiation Disease in Man."
Subject Codes: A2, M Notes: Russian incident during 1953. Details of incident not specified.
- Vol. 13, pp. 88-101. J[oseph] R. Dietrich. "Experimental Determination of the Self Regulation and Safety of Operating Water-Moderated Reactors."
Subject Codes: A3 Full Report: ANL-5323, listed separately.

In *Proceedings of the Second United Nations International Conference on Peaceful Uses of Atomic Energy, Geneva Switzerland, Sept. 1958*, Vol. 12. UN, 1959. Papers include:

- pp. 196-206. W[illiam] R. Stratton, T. H. Colvin, and R. B. Lazarus. "Analyses of Prompt Excursions in Simple Systems and Idealized Fast Reactors."
Subject Codes: A3, T

In *Criticality Control in Chemical and Metallurgical Plant, Karlsruhe Symposium, Karlsruhe Germany, May 1961*. OECD, Nov. 1961. Papers include:

- pp. 465-476. H. Howells and J. T. Daniels. "Organization for Operational Control of Criticality."
Subject Codes: C2, C3, E2, E3, O Notes: Criticality safety program overview
- pp. 477-490. C. L. Schuske. "Administrative and Operational Nuclear Criticality Safety Controls in a Chemical Processing Plant."
Subject Codes: C4, C5, O Notes: Includes review of commercially available CASs for 1961
- pp. 491-533. William R. Stratton. "A Review of Criticality Incidents."
Subject Codes: A, B1, T Notes: Known as *Stratton Report*
Other Ed.s: See DOE/NCT-04 (latest edition of *Stratton Report*), listed separately.

In *Proceedings of the Symposium on Reactor Safety and Hazards Evaluation Techniques*, Vol. 1. IAEA, 1962. Papers include:

- pp. 43-88. A. F. Tardiff. "Some Aspects of the WTR and SL-1 Accidents."
Subject Codes: (A2) Notes: Incident date 01/03/61

In *Proceedings of the Third United Nations International Conference on Peaceful Uses of Atomic Energy, Geneva Switzerland, Aug.-Sept. 1964*, Vol. 13. UN, 1965. Papers include:

- pp. 13-25. W. E. Nyer, G. O. Bright, and R. J. McWhorter. "Reactor Excursion Behavior."
Subject Codes: A2, O Notes: Incident date 06/02/52

Subject Codes: (see full subject code list in the front matter for additional description)

A through A3 = criticality accidents	H1 and H2 = hazard-, risk-, and safety-analysis
B1 or B2 = extensive bibliography or references	M = medical
C1 through C5 = CASs	O = other
D = dose, dosimetry, distance and shielding	R = releases and release dispersion
E through E4 = emergency management	T = computational methods, tools, validation

Parenthesis indicate that code(s) were assigned based on document title, its use as a reference in other documents, or discussions with authors.

- Notes: REAC/TS database which is an ongoing project maintained in conjunction with site for maintaining and training responders for radiation emergencies.
- pp. 17-32. Louis H. Hempelmann, Clarence C. Lushbaugh, and George L. Voelz. "What Happened to the Survivors of the Early Los Alamos Nuclear Accidents?"
Subject Codes: A2, D, M
Notes: Includes re-evaluations of doses based on recommendation changes over the years.
Incident dates 08/21/45 and 05/21/46.
 - pp. 105-112. N. C. Parmentier, J. C. Nénot, and H. J. Jammet. "A Dosimetric Study of the Belgian (1965) and Italian (1975) Accidents."
Subject Codes: A2, D, O
Notes: Incident dates 12/30/65 (criticality accident) and 05/13/75 (cobalt source accident).
 - pp. 291-296. Robert C. Ricks. "REAC/TS: Its Role As a Specialty Referral Center and Training Site."
Subject Codes: D, E5, M, O
Notes: Describes REAC/TS and other centers as a resource for radiological emergency training, response, and information.
 - pp. 297-310. Gould A. Andrews. "Medical Management of Accidental Total-body Irradiation."
Subject Codes: E5, M
 - pp. 451-468. Shirley A. Fry. "The United States Radiation Accident and Other Registries of the REAC/TS Registry System: Their Functions and Current Status."
Subject Codes: (A1, A2, B2, D, M, O)

In *Proceedings of the International Seminar on Criticality Studies Programs and Needs, Dijon France, Sept. 1983*. Centre d' Études de Valduc, France: CEA, 1984. Papers include:

- pp. 12-27. Francis [Y.] Barbry and Raymond Prignet. "Caracteristiques de l'Ensemble de Detction Francais des Accidents de Criticité (System E.D.A.C.)."
Subject Codes: C1, C2, C4
Other Ed.s: *Proceedings of ISCS'87...*, pp. 475-478, listed separately.
Nuclear Technology, Vol. 78, pp. 320-325, listed separately.
Transactions of the Criticality Accident Alarm...1988, pp. 103-110, listed separately.
Earlier Sys: *Proceedings of the Third United Nations... Aug.-Sept. 1964*, Vol. 13, pp. 244-251, listed separately.
CEA-R-4784, listed separately.
- Later Work: *Proceedings of ICNC'91...*, Vol. 2, Sept. 1991, pp. VII-104 - VII-123, listed separately.
- pp. 28-35. A[ustin] A. O'Dell and O. C[linton] Kolar. "A New Criticality Alarm System."
Subject Codes: C2, C4
- pp. 36-52. F[rancis Y.] Barbry, et al. "Fuel Solution Criticality Accident Studies with the Silene Reactor: Phenomenology, Consequence, and Simulated Intervention."
Subject Codes: A3, E2
Earlier Work: *ANS Trans.*, Vol. 41, pp. 358-359, listed separately.
Later Work: *Proceedings of the 1993 Topical...* 1993, pp. 34-40, listed separately.
Final Report: CEA/SRSC 223, listed separately.
- pp. 300-341. R[obert] L. Seale. "Kinetics Calculations."
Subject Codes: A3, T

Subject Codes: (see full subject code list in the front matter for additional description)

A through A3 = criticality accidents	H1 and H2 = hazard-, risk-, and safety-analysis
B1 or B2 = extensive bibliography or references	M = medical
C1 through C5 = CASs	O = other
D = dose, dosimetry, distance and shielding	R = releases and release dispersion
E through E4 = emergency management	T = computational methods, tools, validation

Parenthesis indicate that code(s) were assigned based on document title, its use as a reference in other documents, or discussions with authors.

- pp. 47-57. J[ohn] W. McMahan and J. D. Clayton. "Savannah River MIN System Maintenance Program."
Subject Codes: C1, C2, C4
- pp. 59-66. Eversole, Michael J., and David J. Lindenschmidt. "Criticality Alarm System Design and Operational Experience at the Westinghouse Materials Company of Ohio."
Subject Codes: C1, C2, C4, E3
- pp. 69-78. J[ames] N. Paglieri and R. P. Conner. "Experience with Neutron Criticality Alarm Systems at Westinghouse Hanford Company."
Subject Codes: C1, C2, C4
- pp. 79-101. Ernest E. Hill and O. Clinton Kolar. "Criticality Alarm System for the Lawrence Livermore National Laboratory."
Subject Codes: C1, C2, C4
- pp. 103-110. Francis [Y.] Barbry and Raymond Prignet. "The EDAC System and New Developments Under Consideration at the Commissariat a L'Énergie for Criticality Accident Detection."
Subject Codes: C1, C2, C4
Other Ed.s: *Proceedings of the International Seminar 1983*, pp. 12-27, listed separately.
Proceedings of ISCS'87..., pp. 475-478, listed separately.
Nuclear Technology, Vol. 78, pp. 320-325, listed separately.
Earlier Sys: *Proceedings of the Third United Nations... Aug.-Sept. 1964*, Vol. 13, pp. 244-251, listed separately.
CEA-R-4784, listed separately.
Later Work: *Proceedings of ICNC'91...*, Vol. 2, Sept. 1991, pp. VII-104 - VII-123, listed separately.
- pp. 111-124. H[oward] J. Delafield. "Design Criteria and the Principles Underlying the UKAEA Code of Practice on the Provision of Criticality Alarm Systems."
Subject Codes: A, C1, C2, O 09/30/95 Status: Published
Alt. Contact: LLNL, NTIS, OSTI
- pp. 125-131. William E. Clem. "Transportable Criticality Alarm System."
Subject Codes: C2, C4 09/30/95 Status: Published
Alt. Contact: NTIS, OSTI
- pp. 133-144. Gerd Kindleben. "Design of and Experience with the Gamma-Detecting Criticality Accident Alarm System at Alkem MOX Fuel Fabrication Plant."
Subject Codes: C1, C2, C4, O
- pp. 145-155. Norman L. Pruvost and John A. Schlessor. "MCNP Transport Calculations for Detector Locations."
Subject Codes: C2, T
- pp. 157-162. Paul D. Rittmann. "An Automated Method for Determining the Areas Covered by Gamma Sensitive Criticality Detectors."
Subject Codes: T 09/30/95 Status: Not determined
Notes: Code might not be active
- pp. 163-171. J[ohn] M[urray] Hobson. "Definition of Areas Requiring Criticality Alarm Annunciation and Emergency Control."
Subject Codes: A3, C3, E2, O, T

Subject Codes: (see full subject code list in the front matter for additional description)

A through A3 = criticality accidents	H1 and H2 = hazard-, risk-, and safety-analysis
B1 or B2 = extensive bibliography or references	M = medical
C1 through C5 = CASs	O = other
D = dose, dosimetry, distance and shielding	R = releases and release dispersion
E through E4 = emergency management	T = computational methods, tools, validation

Parenthesis indicate that code(s) were assigned based on document title, its use as a reference in other documents, or discussions with authors.

In *International Meeting on Safety Margins in Criticality Safety, San Francisco, California USA, Nov. 1989.*

ANS, Nov. 1989. Papers include:

- pp. 70-78. David L. Hetrick. "Simulation of Power Pulses in Criticality Accidents with Fissile Solutions."
Subject Codes: A3, T
- pp. 79-88. R. Kato, T. Naramura, and Y. Senda. "The Code CREST to Simulate Criticality Accident Power Excursion in Fuel Solution."
Subject Codes: A3, T
Code Report: ———. "The Code CREST to Simulate Criticality Accident Power Excursion in Fuel Solution" (in Japanese?). Mitsubishi Atomic Power Industries, Japan, no date.
Notes: CREST might not be available to the public.
- pp. 195-198. S[tephan] J. Walls. "Application of Probabilistic Risk Assessment at BNFL, Sellafield."
Subject Codes: H2, O
- pp. 207-213. W. Thomas and B. Gamal. "In-Depth Analysis of Accidental Criticality in a Reprocessing Plant."
Subject Codes: H1, O
- pp. 214-220. J[oseph] Chang, et al. "An Application of Probabilistic Risk Analysis in Nuclear Criticality Safety Design."
Subject Codes: H1, O

In *Proceedings, Nuclear Criticality Safety, El Paso, Texas USA, April 1990, SAND80-1675.* Albuquerque, New Mexico USA: Sandia National Laboratories, 1990. Papers include:

Alt. Contact: NTIS, OSTI 09/30/95 Status: Published

- pp. 141-165. H. Krug and W. Thomas. "Criticality Safety in the Federal Republic of Germany."
Subject Codes: A3, T, O
- pp. 277-299. D[onald] E. Six. "The Influence of Safeguards and Fire Protection on Criticality Safety."
Subject Codes: E2, E5, H1, H2, O
- pp. 301-316. William A. Pryor. "Accident Consequences and Emergency Planning."
Subject Codes: A3, D, E2, E3, O
Notes: Overview of criticality accident and emergency planning history, with emphasis on developing emergency management resources including REAC/TS

In *Proceedings of ICNC'91 International Conference on Nuclear Criticality Safety, Oxford England, Sept. 1991, Vol. 2.* UKAEA Tech., Sept. 1991. Papers include:

- pp. VII-1 - VII-11. Thomas P. McLaughlin. "Process Criticality Accident Likelihoods, Consequences and Emergency Planning."
Subject Codes: A3, C3, H1
- pp. VII-12 - VII-16. Richard E. Malenfant. "Los Alamos Critical Experiments Facility."
Subject Codes: C1, O
- pp. VII-17 - VII-24. Dong H. Nguyen. "Source Term Analysis for a Criticality Accident in Metal Production Line Glove Boxes."
Subject Codes: A3, T
- pp. VII-25 - VII-32. Ken Nakajima and Yeong-Chan Kim. "Comparisons of Void-Models and Effects of Initial Neutron Density in Criticality Accident Analysis."
Subject Codes: A3, T
- pp. VII-33 - VII-40. Francis Y. Barbry. "Exposure Risks and Possibilities of Intervention and Diagnosis in Criticality Accidents."
Subject Codes: A3, C3, D, E2, E3
Summary: *ANS Trans.*, Vol. 63, pp. 228-231, listed separately.

- pp. VII-40 - VII-50. J[ean] P[ierre] Rozain, et al. "Criticality Excursions in Wetted UO₂ Powder."
Subject Codes: A3, T
Summary: *ANS Trans.*, Vol. 63, p. 228, listed separately.
- pp. VII-51 - VII-54. Richard E. Malenfant. "Criticality Accident Alarm System."
Subject Codes: A3, C3, C5
Summary: *ANS Trans.*, Vol. 64, p. 327, listed separately.
Later Work: *Proceedings of the 1993 Topical... Sept. 1993*, pp. 21-25, listed separately.
- pp. VII-55 - VII-61. A[ndrew] J[ames] Cooper and J[ohn] M[urray] Hobson. "Assessment of Design Implications of Detecting and Responding to Accidental Criticality Incidents."
Subject Codes: C2, C3, C4, E2, T
- pp. VII-62 - VII-71. D[onald] J. Mather, et al. "Validation of the Critex Code."
Subject Codes: T
- pp. VII-72 - VII-84. David L. Hetrick. "Computer Simulation of Hypothetical Criticality Accidents."
Subject Codes: A3, T
Summary: *ANS Trans.*, Vol. 63, pp. 226-228, listed separately.
- pp. VII-85 - VII-96. D[onald] J. Mather, et al. "Examination of Some Fissile Solution Scenarios Using Critex."
Subject Codes: A3, T
Replaces: D[onald] J. Mather and P. M. Shaw. "Calculations of Criticality Excursions in Fissile Liquid Solutions." In *Proceedings of the International Seminar on Criticality Studies Programs and Needs, Dijon France, Sept. 1983*. Centre d' Études de Valduc, France: CEA, 1984, pp. 485-515.
- pp. VII-97 - VII-103. H[oward] J. Delafield, D. M. Barker, and C. A. Perks. "The Use of an Expert System in Criticality Accident Dosimetry."
Subject Codes: D, E2, T
- pp. VII-104 - VII-123. Raymond Prignet and Martial Huver. "Detection of Criticality Accidents, The Intertechnique EDAC II System."
Subject Codes: A3, C1, C2, C3, C4
Other Ed.s: *Proceedings of the International Seminar 1983*, pp. 12-27, listed separately.
Proceedings of ISCS'87..., pp. 475-478, listed separately.
Nuclear Technology, Vol. 78, pp. 320-325, listed separately.
Transactions of the Criticality Accident Alarm... 1988, pp. 103-110, listed separately.
Earlier Sys: *Proceedings of the Third United Nations... Aug.-Sept. 1964*, Vol. 13, pp. 244-251, listed separately.
CEA-R-4784, listed separately.
Later Work: *Proceedings of ICNC'91...*, Vol. 2, Sept. 1991, pp. VII-104 - VII-123, listed separately.

In *Proceedings of the First Annual Nuclear Criticality Safety Technology Project, Gaithersburg, Maryland USA, May 1992*, LA-12556-C. LANL, 1992. Papers include: (Alt. Contact: NTIS, OSTI)

- pp. 107-110. Tyree, W[illiam] H., et al. "An Improved Criticality Alarm System."
Subject Codes: C1, C2, C4

Subject Codes: (see full subject code list in the front matter for additional description)

A through A3 = criticality accidents	H1 and H2 = hazard-, risk-, and safety-analysis
B1 or B2 = extensive bibliography or references	M = medical
C1 through C5 = CASs	O = other
D = dose, dosimetry, distance and shielding	R = releases and release dispersion
E through E4 = emergency management	T = computational methods, tools, validation

Parenthesis indicate that code(s) were assigned based on document title, its use as a reference in other documents, or discussions with authors.

In *Proceedings of the WM'93 Symposium on Waste Management, Tucson, Arizona, USA, Feb.-Mar. 1993*. ANS, 1993, pp. 1267-1270. David L. Hetrick and Drew E. Kornreich. "Hypothetical Criticality Accidents in Dilute Plutonium-Water Solutions: A Potential Trans-Uranic Storage Hazard."

Subject Codes: A3, T

In *Proceeding of the Conference on Mathematical Methods and Supercomputing in Nuclear Applications, Karlsruhe Germany, April 1993*. No publication data, p. 633. M. W[esley] Waddell, Jr. and H. L[ee] Dodds, [Jr.]. "A Method for Transient, Three-Dimensional Neutron Transport Calculations."

Subject Codes: (T)

09/30/95 Status: Published

In *Proceedings of the 1993 Topical Meeting on Physics and Methods in Criticality Safety, Nashville, Tennessee USA, Sept. 1993*. ANS, Sept. 1993. Papers include:

- pp. 21-25. Francis Y. Barbry and Richard E. Malenfant. "Need for a Revision of the Standard on Criticality Accident Detection System."

Subject Codes: A3, C3, C5

Earlier Work: *ICNC'91, England, Sept. 1991*, Vol. 2, pp. VII-51 - VII-54, listed separately.

- pp. 34-40. Francis Y. Barbry. "A Review of the Silene Criticality Excursion Experiments."

Subject Codes: A3

Earlier Work: *ANS Trans.*, Vol. 41, pp. 358-359, listed separately.

Proceedings of the International...Sept 1983, 1984, pp. 36-52, listed separately.

Final Report: CEA/SRSC 223, listed separately.

- pp. 80-86. D[avid] L. Hetrick, R[obert] H. Kimpland, and D[rew] E. Kornreich. "Computer Model for Predicting the Effects of Criticality Accidents in Solution."

Subject Codes: A3, T

Later Work: *ANS Topical Meeting on Physics...Nov. 1994*, listed separately.

- pp. 160-166. R[oger] W. Brewer, et al. "Transient Analysis of a Hypothetical Array Criticality Accident."

Subject Codes: A3, T

Thesis: R[oger] W. Brewer, Master's thesis, May 1993, listed separately.

In *ANS Topical Meeting on Physics, Safety, and Applications of Pulse Reactors, Washington DC USA, Nov. 1994*. ANS, 1994, no page numbers. D[avid] L. Hetrick, R[obert] H. Kimpland, and D[rew] E. Kornreich. "Computer Simulations of Homogeneous Water Solution Pulse Reactors and Criticality Accidents."

Subject Codes: (A3, T)

Earlier Work: *Proceedings of the 1993 Topical...Sept. 1993*, pp. 80-86, listed separately.

In *Proceedings of the Topical Meeting on DOE Spent Nuclear Fuel - Challenges and Initiatives, Salt Lake City, Utah USA, Dec. 1994*. ANS, Dec. 1994, pp. 389-393. Dennis R. Evans, Paul J. Sentieri, and James R. Wilson. "Evaluating the Consequences of a Repository Criticality."

Subject Codes: A3, D, R

Notes: Well shielded underground accident. Included for general interest and for fission yield and shielding considerations; not for CASs or emergency planning.

In *ICNC'95 Proceedings of the Fifth International Conference on Nuclear Criticality Safety, Albuquerque, New Mexico USA, Sept. 1995*, Vol. I. UNM, Sept. 1995. Papers include:

- pp. P-23-P-30. V[ladimir] V. Frolov, B[oris] G. Ryazanov, and V[ictor] I. Sviridov. "A Review of Criticality Accidents which Occurred in the Russian Industry."

Subject Codes: A1, A2

Notes: 11 process criticality accidents, 1 critical facility accident; 1953-1978.

- pp. P•31-P•36. N[ikolay] P. Volshin, I. S. Pogrebov, and V. A. Teryokhin. "RFNC-VNIITF Physical Experimental Division and a Historical Sketch of Critical Mass Measurements."
Subject Codes: A2, A3, O Notes: Incident date 04/05/68.
- pp. 6•38-6•43. Cassiano R. E. deOliveira, et al. "Three-Dimensional Time-Dependent Finite Element Radiation Transport Methods for Criticality Assessment."
Subject Codes: D, T

In ICNC'95 *Proceedings of the Fifth International Conference on Nuclear Criticality Safety, Albuquerque, New Mexico USA, Sept. 1995*, Vol. II. UNM, Sept. 1995. Papers include:

- pp. 7•3-7•6. Stephen J. Walls and Peter R. Thorne. "The Integration of Probabilistic Assessment into Traditional Criticality Safety."
Subject Codes: A3, H1, O
- pp. 7•7-7•10. K. Smith and D[avid] N. Simister. "The UK Regulatory Approach to Deterministic and Probabilistic Safety Analysis in Criticality Safety Cases."
Subject Codes: H1, O
- pp. 7•11-7•15. B[oris] G. Ryazanov, V. Goriounov, and V[ictor I.] Sviridov. "Quantitative Evaluation of Nuclear Criticality Safety Level for Nuclear Industry."
Subject Codes: H1, O
- pp. 7•16-7•21. Helmut A. Worle and Glen J. Briscoe. "A Probabilistic Approach to Criticality Safety of Stored Transuranic Waste."
Subject Codes: H1, O
Notes: Paper does not so indicate but the approach reported does not yet have final approval.
- pp. 10•3-10•10. Milan P. Pešić and Miodrag J. Milošević. "A Study on the 'RB' Reactor Accident."
Subject Codes: A2 Notes: Incident date 10/15/58.
- pp. 10•11-10•18. D[onald] J. Mather. "Analysis of Radiolytic Gas Nucleation during Criticality Transients."
Subject Codes: A3, T
- pp. 10•19-10•24. T[oshihiro] Yamamoto. "Space-Dependent Kinetics Analysis of a Hypothetical Criticality Accident Involving Units of Aqueous Uranyl Fluoride."
Subject Codes: A3, T
Notes: Analysis includes use of TDKENO which might not be available to the public.
- pp. 11•25-11•28. Yasushi Nomura and Hiroshi Okuno. "Simplified Evaluation Models for Total Fission Number in a Criticality Accident."
Subject Codes: A3, T
Full paper: *Nuclear Technology*, Vol. 109, pp. 142-152, listed separately.
- pp. 11•37-11•42. F[iona] M. Ogilvie. "Thermal Oxide Reprocessing Plant Basket Handling Cave - An Integrated Deterministic/Probabilistic Criticality Analysis."
Subject Codes: H1, T
- pp. 11•126-11•130. J[ames] S. Baker and J[acquelyn] A. Smith. "Estimating Radius of Coverage of the Y-12 Plant Criticality Accident Alarm System from Experiments at the Los Alamos Critical Experiments Facility."
Subject Codes: A3, C1, C4, D

Subject Codes: (see full subject code list in the front matter for additional description)

A through A3 = criticality accidents	H1 and H2 = hazard-, risk-, and safety-analysis
B1 or B2 = extensive bibliography or references	M = medical
C1 through C5 = CASs	O = other
D = dose, dosimetry, distance and shielding	R = releases and release dispersion
E through E4 = emergency management	T = computational methods, tools, validation

Parenthesis indicate that code(s) were assigned based on document title, its use as a reference in other documents, or discussions with authors.

- pp. 11•131-11•136. David [L.] Hetrick and Sung Lee. "Progress Toward a Method of Estimating Maximum Pulse Yields for Solution Criticality Accidents."
Subject Codes: A3, T
- pp. 11•158-11•165. S[hean] P. Monahan. "The Neutron Physics of Concrete Reflectors."
Subject Codes: D
- pp. 13•3-13•6. K[athleen] E. Bhanot, R[ussell] L. Bowden, and P[eter] R. Thorne. "Development of a Criticality Emergency Planning Programme."
Subject Codes: A3, C2, C3, E2
- pp. 13•7-13•15. T[im] B. Austin, C[hristopher] R. J. Sunman, and S[tephan] J. Walls. "Aspects of Criticality Emergency Planning - Criticality Excursion Yields and Criticality Incident Detection and Alarm System Reliabilities."
Subject Codes: A3, C1, C3, E2
- pp. 13•16-13•21. B[ryan] L. Broadhead, R[obert] L. Childs, and C[alvin] M. Hopper. "Verification of Criticality Accident Alarm System for Environmental Restoration Activities."
Subject Codes: C2, C4, D

4.6 Other

Allison, W. L. "Nuclear Incident at United Nuclear Corporation, Wood River Junction, Rhode Island, July 24, 1964." New Haven Connecticut: United Nuclear Corporation, Aug. 21, 1964.

Subject Codes: (A1)

09/30/95 Status: Issued

Summary: *Nuclear Safety*, Vol. 6, No. 3, listed separately.

Supplement: TID-21995, listed separately.

DOE Emergency Operations. "DOE Emergency Management Guide: Standard Format and Content for Emergency Plans." DOE, December 11, 1991.

Subject Codes: E5

09/30/95 Status: Not determined

Kouts, Herbert, et al. (Technical Review Committee appointed by the AEC Director of Regulation). "Report on the Criticality Incident at the Wood River Junction Plant." No publication data, Nov. 6, 1964.

Subject Codes: (A1)

09/30/95 Status: Issued

Alt. Contact: LANL, NTIS

Notes: Incident date 07/24/64.

Title as specified in references vary but the above title seems most complete. Document retrieval has been delayed due to uncertainty of title and publication data.

REAC/TS. "Radiation Accident Registries: Serious Radiation Accidents Worldwide." ORAU, updated periodically.

Subject Codes: (A1, A2, B2, D, M, O)

09/30/95 Status: Ongoing project

Notes: REAC/TS database maintained in conjunction with site for maintaining and training responders for radiation emergencies.

Description: *The Medical Basis for ... Oct. 1979, 1980, pp. 451-468, listed separately.*

Example: An example of the data were included on pages 6-16 of the same proceedings.

Richey, C. R., and T. W. Jeffs. "Criticality Detection and Alarm System." PNL, Dec. 1977.

Subject Codes: C1, C2, C4

09/30/95 Status: Issued

5 Selected Publisher and Alternate Contact Information

Organization	Address and Other Information *
ANL	ARGONNE NATIONAL LABORATORY 9700 S CASS AVE ARGONNE, IL 60439 USA phone: 1 708 252-2000 notes: Information current as of Jan. 1995
ANS	AMERICAN NUCLEAR SOCIETY, INC. 555 N KENSINGTON AVE LA GRANGE PARK, IL 60525 USA phone: 1 708 352-6611
ANSI	ATTENTION: CUSTOMER SERVICE AMERICAN NATIONAL STANDARDS INSTITUTE 11 W 42ND ST NEW YORK, NY 10036 USA internet: http://www.ansi.org phone: 1 212 642-4900 fax: 1 212 302-1286
ANSWERS	THE ANSWERS SOFTWARE SERVICE AEA TECHNOLOGY WINFRITH TECHNOLOGY CENTRE DORCHESTER DORSET DT2 8DH UK phone: 44 1205 202004 fax: 44 1305 202194 e-mail: answers@aeat.co.uk or answers@aea.orgn.uk
BMI	BATTELLE MEMORIAL INSTITUTE 505 KING AVE COLUMBUS, OH 43201 USA phone: 1 614 424-6424 fax: 1 614 424-5263 notes: Information current as of Jan. 1995
Brookhaven	BROOKHAVEN NATIONAL LABORATORY P.O. BOX 5000 UPTON, LONG ISLAND, NY 11973-5000 USA phone: 1 516 282-2123 notes: Information current as of Jan. 1995

* Unless otherwise noted, information was confirmed to be accurate during September, 1995.

Organization Address and Other Information *

CEA COMMISSARIAT À L'ÉNERGIE ATOMIQUE
29-33 RUE DE LA FÉDÉRATION
75752 PARIS CEDEX 15 FRANCE
phone: 33 1 40 56 10 00
notes: Currently there is no central reports distribution office. For the CEA documents referenced in this bibliography, currently contact:
FRANCIS Y. BARBRY
CEA VALDUC
ISPN/DRS/SRS
21120 IS SUR TILLE
FRANCE

DOE notes: Contact OSTI for DOE standards and either OSTI or NTIS for executive orders. Both organizations are listed separately here.

for copies of DOE Orders:
U. S. DEPARTMENT OF ENERGY
DOE SECONDARY DISTRIBUTION
WASHINGTON D.C. 20585 USA
phone: 1 202 586-9642
fax: 1 202 586-0753
contact: Mark Sliney

for library:
U. S. DEPARTMENT OF ENERGY
1000 INDEPENDENCE AVE SW
WASHINGTON D.C. 20585 USA
phone: 1 202 586-5955

Elsevier ELSEVIER SCIENCE INC.
600 WHITE PLAINS RD
TARRYTOWN, NY 10591-5153 USA

or

ELSEVIER SCIENCES LTD
THE BOULEVARD
LANGFORD LANE
KIDLINGTON
OXFORD OX5 1GB UK
e-mail: nlinfo-f@elsevier.nl
URL: <http://www.elsevier.nl>

* Unless otherwise noted, information was confirmed to be accurate during September, 1995.

Organization	Address and Other Information *
GPO	U. S. GOVERNMENT PRINTING OFFICE SUPERINTENDENT OF DOCUMENTS, MAIL STOP SSOP WASHINGTON, DC 20402-9328 USA phone: 1 202 783-3238 note 1: Direct <i>Nuclear Safety</i> inquiries to Operational Performance Technology Section at ORNL, 1 (423) 574-0394 or fax 1 (423) 574-0382. note 2: CFRs can be downloaded via internet at URL http://www.pls.com:8001/his/cfr.html (U. S. House experimental CFR Server) or http://www.pls.com:8001/his/ufc.htm (U. S. House experimental US Code Server). note 3: GPO generally enforces a 6-month shelf-life for its documents. Check NTIS and/or OSTI for older documents.
Hanford	DOE PUBLIC READING ROOM HANFORD, BATTELLE, PACIFIC NORTHWEST LABORATORIES PO BOX 999 MS H2-53 RICHLAND, WA 99352 USA phone: 1 509 376-8583 notes: Information current as of Aug. 1995.
HMSO	HMSO PUBLICATION CENTRE P.O. BOX 276 LONDON SW8 5DT U. K. notes: Information current as of Aug. 1995.
HPS	HEALTH PHYSICS SOCIETY 1313 DOLLEY MADISON BLVD SUITE 402 MCLEAN, VA 22101 phone: 1 703 790-1745 contact: Richard J. Bank, Jr., Executive Secretary
H&R Technical Assoc	H&R TECHNICAL ASSOCIATES, INC. P.O. BOX 4159 OAK RIDGE, TN 37831 USA phone: 1 423 481-5201 fax: 1 423 483-8040 notes: Information current as of Feb. 1994 with telephone and fax numbers updated for new area code

* Unless otherwise noted, information was confirmed to be accurate during September, 1995.

Organization	Address and Other Information *
IAEA	INTERNATIONAL ATOMIC ENERGY AGENCY WAGRAMERSTRASSE 5 PO BOX 100, A-1400 VIENNA AUSTRIA notes: Order publications through official sales agent in your country. In the USA the agent is UNIPUB, listed separately here.
ICRU	ICRU PUBLICATIONS 7910 WOODMONT AVE SUITE 800 BETHESDA MD 20814 USA phone: 1 301 657-2652 fax: 1 301 907-8768 notes: Information current as of Nov. 1994
IEC	BUREAU CENTRAL DE LA COMMISSION ELECTROTECHNIQUE INTERNATIONALE 3, RUE DE VAREMBÉ GENÈVE, SUISSE notes: Order publications through a member body (in the USA, order through ANSI which is listed separately here).
IEEE	THE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS, INC. 345 E 47TH ST NEW YORK, NY 10017 USA phone: 1 212 705-7900 fax: 1 212 752-4929 notes: Information current as of Jan. 1995
INEL	ATTN: IDAHO NATIONAL ENGINEERING LABORATORY TECHNICAL LIBRARY AND INFORMATION CENTER LOCKHEED IDAHO TECHNOLOGIES COMPANY P. O. BOX 1625 IDAHO FALLS, ID 83415-2300 USA phone: 1 (208) 526-1191 fax: 1 (208) 526-0211 internet: http://www.inel.gov (library link is under construction)

* Unless otherwise noted, information was confirmed to be accurate during September, 1995.

Organization	Address and Other Information *
ISO	ISO Central Secretariat 1, rue de Varembo Case postale 56 CH-1211 GenÈve 20 Switzerland internet: http://www.iso.ch notes: Order publications through a member body (in the USA, order through ANSI which is listed separately here).
JAERI	ATTN: INFORMATION DIVISION, DEPARTMENT OF TECHNICAL INFORMATION JAPAN ATOMIC ENERGY RESEARCH INSTITUTE TOKAI-MURA NAKA-GUN IBARAKI-KEN, 319-11 JAPAN
LANL	ATTN: LANL STUDY CENTER LOS ALAMOS NATIONAL LABORATORY PO BOX 1663 LOS ALAMOS, NM 87545 USA
LLNL	LAWRENCE LIVERMORE NATIONAL LABORATORY 7000 E AVE LIVERMORE, CA 94550 USA
MAPI	MINATO-KU, TOKYO 105, JAPAN notes: Information current as of Oct. 1987.
McGraw Hill	MCGRAW HILL 1221 AVENUE OF THE AMERICAS NEW YORK, NY 10020 USA phone: 1 212 512-6410 (business office) fax: 1 212 512-2723 (business office) notes: Published <i>Nucleonics</i> , publishes <i>Nucleonics Week</i>
NCRP	NCRP PUBLICATIONS 7910 WOODMONT AVE SUITE 800 BETHESDA, MD 20814-3095 USA notes: Information current as of Dec. 1994

* Unless otherwise noted, information was confirmed to be accurate during September, 1995.

Organization	Address and Other Information *
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION BATTERYMARCH PARK QUINCY, MA 02269 USA notes: Information current as of Jan. 1995
NRC	ATTENTION: DISTRIBUTION AND MAIL SERVICES SECTION U. S. NUCLEAR REGULATORY COMMISSION OFFICE OF ADMINISTRATION WASHINGTON, D.C. 20555 USA fax: 1 301 415-2260
NTIS	NATIONAL TECHNICAL INFORMATION SERVICE U. S. DEPARTMENT OF COMMERCE 5285 PORT ROYAL RD SPRINGFIELD, VA 22161 USA phone: 1 703 487-4650 (orders) 1 703 487-4780 (research) fax: 1 703 321-8547 internet: http://www.fedworld.gov/ntis/ntishome.html notes: DOE and DOE-contractor personnel should contact OSTI for documents from AEC- and DOE-funded projects.
Reed Business Publishing	REED BUSINESS PUBLISHING QUADRANT HOUSE, THE QUADRANT SUTTON, SURREY SME 5AS U. K. phone: 44 81 652-3998 International +081 652-3998 U. K. notes: Information current as of summer 1995 Publishes <i>Nuclear Engineering International</i>

* Unless otherwise noted, information was confirmed to be accurate during September, 1995.

Organization	Address and Other Information *
OECD	<p>OECD PUBLICATIONS 2 RUE ANDRÉ PASCAL 75775 PARIS CEDEX 16 FRANCE</p> <p>phone: 33 1 4524 8200 fax: 33 1 4910 4276</p> <p>note 1: With the exception of the <i>International Handbook of Evaluated Criticality Safety Benchmark Experiments</i>, first contact the official sales agent within your country. For the U.S., the agent is OECD Publications and Information Center, listed below.</p> <p>note 2: For the <i>International Handbook of Evaluated Criticality Safety Benchmark Experiments</i>, address queries to OECD's Nuclear Energy Agency.</p> <p>OECD PUBLICATIONS AND INFORMATION CENTER 2001 L ST NW SUITE 650 WASHINGTON DC 20036-4910</p> <p>phone: 1 202 785-6323 fax: 1 202 785-0350</p>
ORAU	<p>OAK RIDGE ASSOCIATED UNIVERSITIES OAK RIDGE INSTITUTE FOR SCIENCE AND EDUCATION ATTENTION: OFFICE OF INFORMATION SERVICES P. O. BOX 117 OAK RIDGE, TN 37831-0117 USA</p> <p>phone: 1 423 576-3147</p>
OSTI	<p>ATTN: INFORMATION SERVICES OFFICE OF SCIENCE AND TECHNICAL INFORMATION U. S. DEPARTMENT OF ENERGY PO BOX 62 OAK RIDGE, TN 37831 USA</p> <p>phone: 1 423 576-8401 fax: 1 423 576-2865</p> <p>internet: http://apollo.osti.gov/html/osti/ostipg.html e-mail: reports@adonis.osti.gov (documents) usertalk@adonis.osti.gov (general)</p> <p>notes: Sole-source and free documents are available to the public through OSTI. Other documents are available to DOE or DOE contractor personnel through OSTI, and to the public through NTIS, which is listed separately. However, research services to identify documents and their ordering numbers are available to the public for any documents from AEC- and DOE-funded projects.</p>

* Unless otherwise noted, information was confirmed to be accurate during September, 1995.

Organization	Address and Other Information *
Pergamon Press	PERGAMON PRESS 395 SAWMILL RD ELMSFORD, NY 10523 USA notes: Published <i>Health Physics</i> Vol. 1 through 61. Also see Elsevier, of which Pergamon is an imprint, listed separately
PNC	POWER REACTOR AND NUCLEAR FUEL DEVELOPMENT CORPORATION 1-9-13 KASAKA MINATO-KU, TOKYO 107 JAPAN notes: Information current as of Oct. 1987
RSIC	RADIATION SHIELDING INFORMATION CENTER P. O. BOX 2008 OAK RIDGE, TN 37831-6362 USA phone: 1 (423) 574-6176 fax: 1 (423) 574-6182 e-mail: pdc@ornl.gov notes: generally must register with RSIC
UA	UNIVERSITY OF ARIZONA DEPARTMENT OF NUCLEAR AND ENERGY ENGINEERING TUCSON, AZ USA
UKAEA	UNITED KINGDOM ATOMIC ENERGY AUTHORITY HARWELL OXON. OX11 0RA UK phone: 44 1235 821111 fax: 44 1235 432916 notes: Information current as of Jan. 1995
UN	UNITED NATIONS PUBLICATIONS 2 UNITED NATIONS PLAZA NEW YORK, NY 10017 USA
UNIPUB	UNIPUB 4611-F ASSEMBLY DR LANHAM, MD 20706-9909 USA phone: 1 301 459-7666 or 1 800 274-4888 fax: 1 800 865-3450 e-mail: order@kraus.com (lowercase please) notes: official USA sales agent for IAEA publications

* Unless otherwise noted, information was confirmed to be accurate during September, 1995.

Organization	Address and Other Information *
UNM	UNIVERSITY OF NEW MEXICO CHEMICAL & NUCLEAR ENGINEERING DEPARTMENT 209 FARRIS ENGINEERING CENTER ALBUQUERQUE, NM 87131-1341 USA notes: Currently address queries for ICNC'95 proceedings to the attention of Cheryl Brozena at 1 505 277-2225, Fax 1 505 277-5433, e-mail cbrozena@unm.edu
UT-Knoxville	UNIVERSITY OF TENNESSEE - KNOXVILLE DEPARTMENT OF NUCLEAR ENGINEERING 315 PASQUA ENGINEERING BUILDING KNOXVILLE, TN 37996-2300 USA phone: 1 423 974-2525 fax: 1 423 974-0668
Williams and Wilkins	WILLIAMS AND WILKINS 351 WEST CAMDEN ST BALTIMORE, MD 21201-2436 USA phone: 1 800 882-0483 in USA and Canada 1 410 528-8555 fax: 1 410 528-8596 notes: Publishes <i>Health Physics</i> Vol. 62-present

* Unless otherwise noted, information was confirmed to be accurate during September, 1995.

This page intentionally blank.

* Unless otherwise noted, information was confirmed to be accurate during September, 1995.