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Annual Compilation for 1997

U.S. Nuclear Regulatory Commission

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Documents such as theses, dissertations, foreign reports and translations, and non-NRC conference proceedings are available for purchase from the organization sponsoring the publication cited.

Single copies of NRC draft reports are available free, to the extent of supply, upon written request to the Office of Administration, Distribution and Mail Services Section, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001.

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Regulatory and Technical Reports (Abstract Index Journal)

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L. L. Stevenson, Project Manager

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PREFACE

This compilation consists of bibliographic data and abstracts for the formal regulatory and technical reports issued by the U.S. Nuclear Regulatory Commission (NRC) Staff and its contractors. It is NRC's intention to publish this compilation quarterly and to cumulate it annually. Your comments will be appreciated. Please send them to:

Publishing Services Branch
Office of the Chief Information Officer
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Washington, D.C. 20555-0001

The main citations and abstracts in this compilation are listed in NUREG number order: NUREG-XXXX, NUREG/CP-XXXX, NUREG/CR-XXXX, and NUREG/IA-XXXX. These precede the following indexes:

Secondary Report Number Index
Personal Author Index
Subject Index
NRC Originating Organization Index (Staff Reports)
NRC Originating Organization Index (International Agreements)
NRC Contract Sponsor Index (Contractor Reports)
Contractor Index
International Organization Index
Licensed Facility Index

A detailed explanation of the entries precedes each index.

The bibliographic elements of the main citations are the following:

Staff Report

NUREG-0808: MARK II CONTAINMENT PROGRAM EVALUATION AND ACCEPTANCE CRITERIA. ANDERSON, C. J. Division of Safety Technology. August 1981. 90 pp. 8109140048. 09570:200.

Where the entries are (1) report number, (2) report title, (3) report author, (4) organizational unit of author, (5) date report was published, (6) number of pages in the report, (7) the NRC Document Control System accession number, (8) the microfiche address (for internal NRC use).

Conference Report

NUREG/CP-0017: EXECUTIVE SEMINAR ON THE FUTURE ROLE OF RISK ASSESSMENT AND RELIABILITY ENGINEERING IN NUCLEAR REGULATION. JANERP, J.S. Argonne National Laboratory. May 1981. 141 pp. 8105280299. ANL-81-3. 08632:070.

Where the entries are (1) report number, (2) report title, (3) report author, (4) organization that compiled the proceedings, (5) date report was published, (6) number of pages in the report, (7) the NRC Document Control System accession number, (8) the report number of the originating organization, (9) the microfiche address (for NRC internal use).

Contractor Report

NUREG/CR-1556: STUDY OF ALTERNATE DECAY HEAT REMOVAL CONCEPTS FOR LIGHT WATER REACTORS-CURRENT SYSTEMS AND PROPOSED OPTIONS. BERRY, D.L.; BENNETT, P.R. Sandia Laboratories. May 1981. 100 pp. 8107010449. SAND80-0929. 08912:242.

Where the entries are (1) report number, (2) report title, (3) report authors, (4) organizational unit of authors or publisher, (5) date report was published, (6) number of pages in the report, (7) the NRC Document Control System accession number, (8) the report number of the originating organization (if given), (9) the microfiche address (for NRC internal use).

Grant Report

NUREG/GR-0013: APPLICATIONS OF A NEW MAGNETIC MONITORING TECHNIQUE TO IN SITU EVALUATION OF FATIGUE DAMAGE IN FERROUS COMPONENTS. JILES, D.C.; BINER, S.B.; GOVINDARAJU, M.; et al. Iowa State Univ., Ames, IA. June 1994. 41 pp. 9407250286. 80328:195.

Where the entries are (1) report number, (2) report title, (3) report authors, (4) organizational unit of authors or publisher, (5) date report was published, (6) number of pages in the report, (7) the NRC Document Control System accession number, (8) the report number of the originating organization (if given), (9) the microfiche address (for NRC internal use).

International Agreement Report

NUREG/IA-0001: ASSESSMENT OF TRAC-PD2 USING SUPER CANNON AND HDR EXPERIMENTAL DATA. NEUMANN, U. Kraftwerk Union. August 1986. 223 pp. 8608270424. 37659:138.

Where the entries are (1) report number, (2) report title, (3) report author, (4) organizational unit of author, (5) date report was published, (6) number of pages in the report, (7) the NRC Document Control System accession number, (8) the report number of the originating organization (if given), and (9) the microfiche address (for NRC internal use).

The following abbreviations are used to identify the document status of a report:

ADD	- addendum
APP	- appendix
DRFT	- draft
ERR	- errata
N	- number
R	- revision
S	- supplement
V	- volume

Availability of NRC Publications

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NRC Report Codes

The NUREG designation, NUREG-XXXX, indicates that the document is a formal NRC staff-generated report. Contractor-prepared formal NRC reports carry the report code NUREG/CR-XXXX. This type of identification replaces contractor-established codes such as ORNL/NUREG/TM-XXX and TREE-NUREG-XXXX, as well as various other numbers that could not be correlated with NRC sponsorship or the work being reported.

In addition to the NUREG and NUREG/CR codes, NUREG/CP is used for NRC-sponsored conference proceedings NUREG/GR is used for NRC grant reports, and NUREG/IA is used for international agreement reports.

All these report codes are controlled and assigned by the staff of the Publications Branch of the NRC Office of Information Resources Management.

Main Citations and Abstracts

The report listings in this compilation are arranged by report number, where NUREG-XXXX is an NRC staff-originated report, NUREG/CP-XXXX is an NRC-sponsored conference report, NUREG/CR-XXXX is an NRC contractor-prepared report, and NUREG/IA-XXXX is an international agreement report. The bibliographic information (see Preface for details) is followed by a brief abstract of this report.

NUREG-0040 V20 N03: LICENSEE CONTRACTOR AND VENDOR INSPECTION STATUS REPORT. Quarterly Report, July-September 1996. (White Book) * Office of Nuclear Reactor Regulation (Post 941001). January 1997. 147pp. 9702060133. 91659:001.

This periodical covers the results of inspections performed by the NRC's Special Inspection Branch, Vendor Inspection Section, that have been distributed to the inspected organizations during the period from July through September 1996.

NUREG-0040 V20 N04: LICENSEE CONTRACTOR AND VENDOR INSPECTION STATUS REPORT. Quarterly Report, October-December 1996. (White Book) * Office of Nuclear Reactor Regulation (Post 941001). March 1997. 154pp. 9703200250. 92191:001.

This periodical covers the results of inspections performed by the NRC's Special Inspection Branch, Vendor Inspection Section, that have been distributed to the inspected organizations during the period from October - December 1996.

NUREG-0040 V21 N01: LICENSEE CONTRACTOR AND VENDOR INSPECTION STATUS REPORT. Quarterly Report, January-March 1997. (White Book) * Office of Nuclear Reactor Regulation (Post 941001). July 1997. 69pp. 9707240136. 93885:282.

This periodical covers the results of inspections performed by the NRC's Special Inspection Branch, Vendor Inspection Section, that have been distributed to the inspected organizations during the period from January through March 1997.

NUREG-0040 V21 N02: LICENSEE CONTRACTOR AND VENDOR INSPECTION STATUS REPORT. Quarterly Report, April-June 1997. (White Book) * Office of Nuclear Reactor Regulation (Post 941001). November 1997. 98pp. 9712230277. A1501:045.

This periodical covers the results of inspections performed between April 1997 and June 1997 by the NRC's Special Inspection Branch, Vendor Inspection Section, that have been distributed to the inspected organizations.

NUREG-0040 V21 N03: LICENSEE CONTRACTOR AND VENDOR INSPECTION STATUS REPORT. Quarterly Report, July-September 1997. (White Book) * Office of Nuclear Reactor Regulation (Post 941001). November 1997. 167pp. 9712110121. A1386:143.

This periodical covers the results of inspections that were performed by the NRC's Special Inspection Branch, Vendor Inspection Section, and that were distributed to the inspected organizations during the period from July through September 1997.

NUREG-0090 V19: REPORT TO CONGRESS ON ABNORMAL OCCURRENCES. Fiscal Year 1996. * Office for Analysis & Evaluation of Operational Data, Director. April 1997. 47pp. 9704250153. 92624:314.

Section 208 of the Energy Reorganization Act of 1974 (PL 93-438) identifies an abnormal occurrence (AO) as an unscheduled incident or event that the Nuclear Regulatory Commission (NRC) determines to be significant from the standpoint of public health or safety. The Federal Reports Elimination and Sunset

Act of 1995 (PL 104-66) requires that AOs be reported to Congress on an annual basis. This report includes those events that NRC determined to be AOs during fiscal year 1996. This report addresses eighteen AOs at NRC-licensed facilities. Two involved events at nuclear power plants, eleven involved medical brachytherapy misadministrations, and five involved radiopharmaceutical misadministrations. Eight AOs submitted by the Agreement States are included. One involved stolen radiography cameras, one involved a ruptured source, one involved release of radioactive material while being transported, one involved a lost source, two involved medical brachytherapy misadministrations, and two involved radiopharmaceutical misadministrations. Four updates of previously reported AOs are included in this report. Three "Other Events of Interest" events are being reported, and one previously reported "Other Events of Interest" event is being updated.

NUREG-0304 V21 N03: REGULATORY AND TECHNICAL REPORTS (ABSTRACT INDEX JOURNAL). Compilation For Third Quarter 1996, July-September. * Office of Information Resources Management (Post 890205). February 1997. 41pp. 9703100239. 92020:309.

This journal includes all formal reports in the NUREG series prepared by the NRC staff and contractors; proceedings of conferences and workshops; as well as international agreement reports. The entries in this compilation are indexed for access by title and abstract, secondary report number, personal author, subject, NRC organization for staff and international agreements, contractor, international organization, and licensed facility.

NUREG-0304 V21 N04: REGULATORY AND TECHNICAL REPORTS (ABSTRACT INDEX JOURNAL). Annual Compilation For 1996. * Office of Information Resources Management (Post 890205). April 1997. 93pp. 9705010326. 92697:233.

See NUREG-0304, V21, N03 abstract.

NUREG-0304 V22 N01: REGULATORY AND TECHNICAL REPORTS (ABSTRACT INDEX JOURNAL). Compilation For First Quarter 1997, January-March. * Office of Information Resources Management (Post 890205). June 1997. 42pp. 9709030367. A0236:196.

See NUREG-0304, V21, N03 abstract.

NUREG-0304 V22 N02: REGULATORY AND TECHNICAL REPORTS (ABSTRACT INDEX JOURNAL). Compilation For Second Quarter 1997, April-June. * Office of Information Resources Management (Post 890205). October 1997. 47pp. 9711030077. A0990:053.

See NUREG-0304, V21, N03 abstract.

NUREG-0325 R22: U.S. NUCLEAR REGULATORY COMMISSION ORGANIZATION CHARTS AND FUNCTIONAL STATEMENTS. November 1997. * NRC - No Detailed Affiliation Given. November 1997. 78pp. 9801130012. A1763:204.

Functional statements and organization charts for the U.S. Nuclear Regulatory Commission offices, divisions, and branches are presented.

2 Main Citations and Abstracts

NUREG-0383 V01 R20: DIRECTORY OF CERTIFICATES OF COMPLIANCE FOR RADIOACTIVE MATERIALS PACKAGES. Report Of NRC-Approved Packages. * Office of Nuclear Material Safety & Safeguards. October 1997. 629pp. 9711060093. A1003:001.

The purpose of this directory is to make available a convenient source of information on packagings approved by the U.S. Nuclear Regulatory Commission. To assist in identifying packaging, an index by Model Number and corresponding Certificate of Compliance Number is included at the front of Volumes 1 and 2. An alphabetical listing by user name is included in the back of Volume 3 of approved Quality Assurance programs. The reports include a listing of all users of each package design and approved Quality Assurance programs prior to the publication date.

NUREG-0383 V02 R20: DIRECTORY OF CERTIFICATES OF COMPLIANCE FOR RADIOACTIVE MATERIALS PACKAGES. Certificates Of Compliance. * Office of Nuclear Material Safety & Safeguards. October 1997. 571pp. 9711060101. A1005:001.

See NUREG-0383,V01,R20 abstract.

NUREG-0383 V03 R17: DIRECTORY OF CERTIFICATES OF COMPLIANCE FOR RADIOACTIVE MATERIALS PACKAGES. Report Of NRC-Approved Quality Assurance Programs For Radioactive Materials Packages. * Office of Nuclear Material Safety & Safeguards. October 1997. 81pp. 9711060104. A1004:266.

See NUREG-0383,V01,R20 abstract.

NUREG-0386 D08: UNITED STATES NUCLEAR REGULATORY COMMISSION STAFF PRACTICE AND PROCEDURE DIGEST. Commission, Appeal Board And Licensing Board Decisions. July 1972 - June 1996. * Office of the General Counsel (Post 860701). July 1997. 695pp. 9708080183. 94729:001.

This 8th edition of the NRC Practice and Procedure Digest contains a digest of a number of Commission, Atomic Safety and Licensing Appeal Board, and the Atomic Safety and Licensing Board decisions issued during the period of July 1, 1972 to June 30, 1996, interpreting the NRC's Rules.

NUREG-0390 V11: TOPICAL REPORT REVIEW STATUS. * Office of Nuclear Reactor Regulation (Post 941001). August 1997. 36pp. 9708200111. A0141:127.

This report provides industry with procedures for submitting topical reports, guidance on how the U.S. Nuclear Regulatory Commission (NRC) processes and responds to topical report submittals, and an accounting, with review schedules, of all topical reports currently accepted for review by the NRC. This report is published annually.

NUREG-0525 V02 R05: SAFEGUARDS SUMMARY EVENT LIST (SSEL). January 1, 1990 Through December 31, 1996. FADDEN, M.A. Operations Branch. July 1997. 94pp. 9707140081. 93738:158.

The Safeguards Summary Event List provides brief summaries of hundreds of safeguards-related events involving nuclear material or facilities regulated by the U.S. Nuclear Regulatory Commission. Events are described under the categories: Bomb-related, Intrusion, Missing/Allegedly Stolen, Transportation-related, Tampering/Vandalism, Arson, Firearms-related, Radiological Sabotage, Non-radiological Sabotage, and Miscellaneous. Because of the public interest, the Miscellaneous category also includes events reported involving source material, byproduct material, and natural uranium, which are exempt from safeguards requirements. Information in the event descriptions was obtained from official NRC sources.

NUREG-0540 V18 N11: TITLE LIST OF DOCUMENTS MADE PUBLICLY AVAILABLE. November 1-30, 1996. * Office of Information Resources Management (Post 890205). January 1997. 315pp. 9702070195. 91666:001.

This document is a monthly publication containing descriptions of information received and generated by the U.S. Nuclear

Regulatory Commission (NRC). This information includes (1) docketed material associated with civilian nuclear power plants and other uses of radioactive materials, and (2) nondocketed material received and generated by NRC pertinent to its role as a regulatory agency. The following indexes are included: Personal Author, Corporate Source, Report Number, and Cross Reference of Enclosures to Principal Documents.

NUREG-0540 V18 N12: TITLE LIST OF DOCUMENTS MADE PUBLICLY AVAILABLE. December 1-31, 1996. * Office of Information Resources Management (Post 890205). March 1997. 298pp. 9704040207. 92332:001.

See NUREG-0540,V18,N11 abstract.

NUREG-0540 V19 N01: TITLE LIST OF DOCUMENTS MADE PUBLICLY AVAILABLE. January 1-31, 1997. * Office of Information Resources Management (Post 890205). March 1997. 325pp. 9704170086. 92517:001.

See NUREG-0540,V18,N11 abstract.

NUREG-0540 V19 N02: TITLE LIST OF DOCUMENTS MADE PUBLICLY AVAILABLE. February 1-28, 1997. * Office of Information Resources Management (Post 890205). April 1997. 370pp. 9706130158. 93345:026.

See NUREG-0540,V18,N11 abstract.

NUREG-0540 V19 N03: TITLE LIST OF DOCUMENTS MADE PUBLICLY AVAILABLE. March 1-31, 1997. * Office of Information Resources Management (Post 890205). May 1997. 382pp. 9706130161. 93344:001.

See NUREG-0540,V18,N11 abstract.

NUREG-0540 V19 N04: TITLE LIST OF DOCUMENTS MADE PUBLICLY AVAILABLE. April 1-30, 1997. * Office of Information Resources Management (Post 890205). June 1997. 405pp. 9707180204. 93804:001.

See NUREG-0540,V18,N11 abstract.

NUREG-0540 V19 N05: TITLE LIST OF DOCUMENTS MADE PUBLICLY AVAILABLE. May 1-31, 1997. * Office of Information Resources Management (Post 890205). July 1997. 385pp. 9708060231. 94697:001.

See NUREG-0540,V18,N11 abstract.

NUREG-0540 V19 N06: TITLE LIST OF DOCUMENTS MADE PUBLICLY AVAILABLE. June 1-30, 1997. * Office of Information Resources Management (Post 890205). August 1997. 324pp. 9709120056. A0355:001.

See NUREG-0540,V18,N11 abstract.

NUREG-0540 V19 N07: TITLE LIST OF DOCUMENTS MADE PUBLICLY AVAILABLE. July 1-31, 1997. * Office of Information Resources Management (Post 890205). September 1997. 419pp. 9710060476. A0622:001.

See NUREG-0540,V18,N11 abstract.

NUREG-0540 V19 N08: TITLE LIST OF DOCUMENTS MADE PUBLICLY AVAILABLE. August 1-31, 1997. MORRIS, E.B. Office of Information Resources Management (Post 890205). October 1997. 353pp. 9711140040. A1107:114.

See NUREG-0540,V18,N11 abstract.

NUREG-0540 V19 N09: TITLE LIST OF DOCUMENTS MADE PUBLICLY AVAILABLE. September 1-30, 1997. * NRC - No Detailed Affiliation Given. November 1997. 337pp. 9712110117. A1363:001.

See NUREG-0540,V18,N11 abstract.

NUREG-0540 V19 N10: TITLE LIST OF DOCUMENTS MADE PUBLICLY AVAILABLE. October 1-31, 1997. * NRC - No Detailed Affiliation Given. December 1997. 343pp. 9801120063. A1737:001.

See NUREG-0540,V18,N11 abstract.

NUREG-0713 V17: OCCUPATIONAL RADIATION EXPOSURE AT COMMERCIAL NUCLEAR POWER REACTORS AND OTHER FACILITIES, 1995. Twenty-Eighth Annual Report. THOMAS, M.L. Division of Regulatory Applications (Post 941217). HAGEMeyer, D. Science Applications International Corp. (formerly Science Applications, Inc.). January 1997. 300pp. 9702190015. 91803:001.

This report summarizes the occupational exposure data that are maintained in the U.S. Nuclear Regulatory Commission's Radiation Exposure Information and Reporting System (REIRS). The bulk of the information contained in the report was compiled from the 1995 annual reports submitted by the classes of NRC licensees subject to the reporting requirements of 10 CFR 20.2206. Annual reports for 1995 were received from a total of 294 NRC licensees, of which 109 were operators of nuclear power reactors in commercial operation. Compilations of the reports submitted by the 294 licensees indicated that 142,518 individuals were monitored, 76,822 of whom received a measurable dose. The collective dose incurred by these individuals was 24,536 person-cSv (person-rem) which represents a 1% decrease from the 1994 value. The number of workers receiving a measurable dose also decreased, resulting in the average measurable dose of 0.32 cSv (rem) for 1995. The average measurable dose is defined to be the total collective dose divided by the number of workers receiving a measurable dose. The figures have been adjusted to account for transient reactor workers. In 1995, the annual collective dose per reactor for light water reactor licensees was 199 person-cSv (person-rem). This is the same value that was reported for 1994. The annual collective dose per reactor for boiling water reactors was 256 person-cSv (person-rem) and, for pressurized water reactors it was 170 person-cSv (person-rem). Analyses of transient worker data indicated that 17,153 individuals completed work assignments at two or more licensees during the monitoring year. The dose distributions are adjusted each year to account for the duplicate reporting of transient workers by multiple licensees. In 1995, the average measurable dose calculated from reported data was 0.26 cSv (rem). The corrected dose distribution resulted in an average measurable dose of 0.32 cSv (rem).

NUREG-0725 R12: PUBLIC INFORMATION CIRCULAR FOR SHIPMENTS OF IRRADIATED REACTOR FUEL. * Office of Nuclear Material Safety & Safeguards. October 1997. 36pp. 9711030080. A0980:317.

This circular has been prepared to provide information on the shipment of irradiated reactor fuel (spent fuel) subject to regulation by the U.S. Nuclear Regulatory Commission (NRC). It provides a brief description of spent fuel shipment safety and safeguards requirements of general interest, a summary of data for 1979-1996 highway and railway shipments, and a listing, by State, of recent highway and railway shipment routes. The enclosed route information reflects specific NRC approvals that have been granted in response to requests for shipments of spent fuel. This publication does not constitute authority for carriers or other persons to use the routes described to ship spent fuel, other categories of nuclear waste, or other materials.

NUREG-0750 V44 I01: INDEXES TO NUCLEAR REGULATORY COMMISSION ISSUANCES. July-September 1996. * Office of Information Resources Management (Post 890205). January 1997. 21pp. 9701160166. 91456:300.

Digests and indexes for issuances of the Commission, the Atomic Safety and Licensing Board Panel, the Administrative Law Judges, the Directors' Decisions, and the Decisions on Petitions for Rulemaking are presented.

NUREG-0750 V44 I02: INDEXES TO NUCLEAR REGULATORY COMMISSION ISSUANCES. July-December 1996. * Office of Information Resources Management (Post 890205). April 1997. 52pp. 9704300062. 92696:262.

See NUREG-0750,V44,I01 abstract.

NUREG-0750 V44 N05: NUCLEAR REGULATORY COMMISSION ISSUANCES FOR NOVEMBER 1996. Pages 229-314. * Office of Information Resources Management (Post 890205). January 1997. 95pp. 9703030170. 91940:135.

Legal issuances of the Commission, the Atomic Safety and Licensing Board Panel, the Administrative Law Judges, and NRC Program Offices are presented.

NUREG-0750 V44 N06: NUCLEAR REGULATORY COMMISSION ISSUANCES FOR DECEMBER 1996. Pages 315-432. * Office of Information Resources Management (Post 890205). February 1997. 123pp. 9703170243. 92128:222.

See NUREG-0750,V44,N05 abstract.

NUREG-0750 V45 I01: INDEXES TO NUCLEAR REGULATORY COMMISSION ISSUANCES. January-March 1997. * Office of Information Resources Management (Post 890205). June 1997. 29pp. 9709020298. A0255:150.

See NUREG-0750,V44,I01 abstract.

NUREG-0750 V45 I02: INDEXES TO NUCLEAR REGULATORY COMMISSION ISSUANCES. January-June 1997. * Office of Information Resources Management (Post 890205). September 1997. 47pp. 9710100233. A0701:313.

See NUREG-0750,V44,I01 abstract.

NUREG-0750 V45 N01: NUCLEAR REGULATORY COMMISSION ISSUANCES FOR JANUARY 1997. Pages 1-47. * Office of Information Resources Management (Post 890205). March 1997. 53pp. 9704040210. 92330:268.

See NUREG-0750,V44,N05 abstract.

NUREG-0750 V45 N02: NUCLEAR REGULATORY COMMISSION ISSUANCES FOR FEBRUARY 1997. Pages 49-93. * Office of Information Resources Management (Post 890205). April 1997. 52pp. 9705090049. 92827:001.

See NUREG-0750,V44,N05 abstract.

NUREG-0750 V45 N03: NUCLEAR REGULATORY COMMISSION ISSUANCES FOR MARCH 1997. Pages 95-263. * Office of Information Resources Management (Post 890205). May 1997. 175pp. 9706180464. 93393:036.

See NUREG-0750,V44,N05 abstract.

NUREG-0750 V45 N04: NUCLEAR REGULATORY COMMISSION ISSUANCES FOR APRIL 1997. Pages 265-353. * Office of Information Resources Management (Post 890205). June 1997. 96pp. 9707140026. 93738:001.

See NUREG-0750,V44,N05 abstract.

NUREG-0750 V45 N05: NUCLEAR REGULATORY COMMISSION ISSUANCES FOR MAY 1997. Pages 355-435. * Office of Information Resources Management (Post 890205). July 1997. 88pp. 9707230346. 93857:239.

See NUREG-0750,V44,N05 abstract.

NUREG-0750 V45 N06: NUCLEAR REGULATORY COMMISSION ISSUANCES FOR JUNE 1997. Pages 437-495. * Office of Information Resources Management (Post 890205). August 1997. 66pp. 9708200220. A0141:061.

See NUREG-0750,V44,N05 abstract.

NUREG-0750 V46 N01: NUCLEAR REGULATORY COMMISSION ISSUANCES FOR JULY 1997. Pages 1-20. * NRC - No Detailed Affiliation Given. December 1997. 27pp. 9801130019. A1762:289.

See NUREG-0750,V44,N05 abstract.

NUREG-0750 V46 N02: NUCLEAR REGULATORY COMMISSION ISSUANCES FOR AUGUST 1997. Pages 21-48. * NRC - No Detailed Affiliation Given. December 1997. 34pp. 9801260109. A1879:108.

See NUREG-0750,V44,N05 abstract.

4 Main Citations and Abstracts

NUREG-0837 V16 N03: NRC TLD DIRECT RADIATION MONITORING NETWORK. Progress Report. July-September 1996. STRUCKMEYER, R. Region 1 (Post 820201). January 1997. 228pp. 9702060125. 91655:001.

This report provides the status and results of the NRC Thermoluminescent Dosimeter (TLD) Direct Radiation Monitoring Network. It presents the radiation levels measured in the vicinity of NRC licensed facilities throughout the country for the third quarter of 1996.

NUREG-0837 V16 N04: NRC TLD DIRECT RADIATION MONITORING NETWORK. Progress Report. October-December 1996. STRUCKMEYER, R. Region 1 (Post 820201). March 1997. 322pp. 9704170167. 92513:001.

This report provides the status and results of the NRC Thermoluminescent Dosimeter (TLD) Direct Radiation Monitoring Network. It presents the radiation levels measured in the vicinity of NRC licensed facilities throughout the country for the fourth quarter of 1996.

NUREG-0837 V17 N01: NRC TLD DIRECT RADIATION MONITORING NETWORK. Progress Report. January-March 1997. STRUCKMEYER, R. Region 1 (Post 820201). May 1997. 238pp. 9706160216. 93368:001.

This report provides the status and results of the NRC Thermoluminescent Dosimeter (TLD) Direct Radiation Monitoring Network. It presents the radiation levels measured in the vicinity of NRC licensed facilities throughout the country for the first quarter of 1997.

NUREG-0837 V17 N02: NRC TLD DIRECT RADIATION MONITORING NETWORK. Progress Report. April-June 1997. STRUCKMEYER, R. Region 1 (Post 820201). September 1997. 229pp. 9710100236. A0703:069.

This report provides the status and results of the NRC Thermoluminescent Dosimeter (TLD) Direct Radiation Monitoring Network. It presents the radiation levels measured in the vicinity of NRC licensed facilities throughout the country for the second quarter of 1997.

NUREG-0936 V15 N02: NRC REGULATORY AGENDA. Semiannual Report. July-December 1996. * Rules & Directives Review Branch (Post 920323). March 1997. 58pp. 9704080379. 92389:001.

The NRC Regulatory Agenda is a compilation of all rules on which the NRC has recently completed action, or has proposed action, or is considering action, and all petitions for rulemaking which have been received by the Commission and are pending disposition by the Commission. The Regulatory Agenda is updated and issued semiannually.

NUREG-0936 V16 N01: NRC REGULATORY AGENDA. Semiannual Report. January-June 1997. * Office of Administration, Director (Post 940714). August 1997. 70pp. 9709120059. A0354:287.

See NUREG-0936, V15, N02 abstract.

NUREG-0940 V15 N2 P1: ENFORCEMENT ACTIONS: SIGNIFICANT ACTIONS RESOLVED INDIVIDUAL ACTIONS. Semiannual Progress Report, July-December 1996. * Ofc of Enforcement (Post 870413). April 1997. 407pp. 9705230149. 93068:001.

This compilation summarizes significant enforcement actions that have been resolved during the period (July - December 1996) and includes copies of Orders and Notices of Violation sent by the Nuclear Regulatory Commission to individuals with respect to these enforcement actions. It is anticipated that the information in this publication will be widely disseminated to managers and employees engaged in activities licensed by the NRC. The Commission believes this information may be useful to licensees in making enforcement decisions.

NUREG-0940 V15 N2 P2: ENFORCEMENT ACTIONS: SIGNIFICANT ACTIONS RESOLVED REACTOR LICENSEES. Semiannual Progress Report, July-December 1996. * Ofc of Enforcement (Post 870413). April 1997. 400pp. 9705210290. 93063:001.

This compilation summarizes significant enforcement actions that have been resolved during the period (July - December 1996) and includes copies of letters, Notices, and Orders sent by the Nuclear Regulatory Commission to reactor licensees with respect to these enforcement actions. It is anticipated that the information in this publication will be widely disseminated to managers and employees engaged in activities licensed by the NRC, so that actions can be taken to improve safety by avoiding future violations similar to those described in this publication.

NUREG-0940 V15 N2 P3: ENFORCEMENT ACTIONS: SIGNIFICANT ACTIONS RESOLVED MATERIAL LICENSEES. Semiannual Progress Report, July-December 1996. * Ofc of Enforcement (Post 870413). April 1997. 300pp. 9705140378. 92886:001.

This compilation summarizes significant enforcement actions that have been resolved during the period (July - December 1996) and includes copies of letters, Notices, and Orders sent by the Nuclear Regulatory Commission to material licensees with respect to these enforcement actions. It is anticipated that the information in this publication will be widely disseminated to managers and employees engaged in activities licensed by the NRC, so that actions can be taken to improve safety by avoiding future violations similar to those described in this publication.

NUREG-0940 V16 N1 P1: ENFORCEMENT ACTIONS: SIGNIFICANT ACTIONS RESOLVED INDIVIDUAL ACTIONS. Semiannual Progress Report, January-June 1997. * Ofc of Enforcement (Post 870413). September 1997. 422pp. 9710070386. A0639:001.

This compilation summarizes significant enforcement actions that have been resolved during the period (January - June 1997) and includes copies of Orders and Notices of Violation sent by the Nuclear Regulatory Commission to individuals with respect to these enforcement actions. It is anticipated that the information in this publication will be widely disseminated to managers and employees engaged in activities licensed by the NRC. The Commission believes this information may be useful to licensees in making employment decisions.

NUREG-0940 V16 N1 P2: ENFORCEMENT ACTIONS: SIGNIFICANT ACTIONS RESOLVED REACTOR LICENSEES. Semiannual Progress Report, January-June 1997. * Ofc of Enforcement (Post 870413). September 1997. 430pp. 9710070391. A0640:059.

This compilation summarizes significant enforcement actions that have been resolved during the period (January - June 1997) and includes copies of letters, Notices, and Orders sent by the Nuclear Regulatory Commission to reactor licensees with respect to these enforcement actions. It is anticipated that the information in this publication will be widely disseminated to managers and employees engaged in activities licensed by the NRC, so that actions can be taken to improve safety by avoiding future violations similar to those described in this publication.

NUREG-0940 V16 N1 P3: ENFORCEMENT ACTIONS: SIGNIFICANT ACTIONS RESOLVED MATERIAL LICENSEES. Semiannual Progress Report, January-June 1997. * Ofc of Enforcement (Post 870413). September 1997. 425pp. 9710100160. A0702:001.

This compilation summarizes significant enforcement actions that have been resolved during the period (January - June 1997) and includes copies of letters, Notices, and Orders sent by the Nuclear Regulatory Commission to material licensees with respect to these enforcement actions. It is anticipated that

the information in this publication will be widely disseminated to managers and employees engaged in activities licensed by the NRC, so that actions can be taken to improve safety by avoiding future violations similar to those described in this publication.

NUREG-1021 INT R08: OPERATOR LICENSING EXAMINATION STANDARDS FOR POWER REACTORS. * Office of Nuclear Reactor Regulation (Post 941001). January 1997. 460pp. 9703050343. 91953:001.

NUREG-1021, "Operator Licensing Examination Standards for Power Reactors," establishes the policies, procedures, and practices for examining licensees and applicants for reactor operator and senior reactor operator licenses at power reactor facilities pursuant to Title 10, Part 55, of the Code of Federal Regulations (10 CFR Part 55). The examination standards are intended to assist NRC examiners and facility licensees to better understand the processes associated with initial and requalification examinations. The standards also ensure the equitable and consistent administration of examinations for all applicants. The standards are for guidance purposes and are not a substitute for the operator licensing regulations (i.e., 10 CFR Part 55), and they are subject to revision or other changes in internal operator licensing policy. This interim revision permits facility licensees to prepare their initial operator licensing examinations on a voluntary basis pending an amendment to 10 CFR Part 55 that will require facility preparation. The NRC intends to solicit comments on this revision during the rulemaking process and to issue a final Revision 8 in conjunction with the final rule.

NUREG-1100 V13: BUDGET ESTIMATES. Fiscal Year 1998. * Division of Budget & Analysis (Post 890205). February 1997. 148pp. 9702190053. 91802:045.

This report contains the fiscal year budget justification to Congress. The budget provides estimates for salaries and expenses and for the Office of the Inspector General for fiscal year 1998.

NUREG-1125 V18: A COMPILATION OF REPORTS OF THE ADVISORY COMMITTEE ON REACTOR SAFEGUARDS. 1996 Annual. * ACRS - Advisory Committee on Reactor Safeguards. April 1997. 128pp. 9706250071. 93502:001.

This compilation contains 47 ACRS reports submitted to the Commission, or to the Executive Director for Operations, during calendar year 1996. It also includes a report to the Congress on the NRC Safety Research Program. All reports have been made available to the public through the NRC Public Document Room, the U.S. Library of Congress, and the Internet at <http://www.nrc.gov/ACRSACNW>. The reports are divided into two groups: Part 1: ACRS Reports on Project Reviews, and Part 2: ACRS Reports on Generic Subjects. Part 1 contains ACRS reports by project name and by chronological order within project name. Part 2 categorizes the reports by the most appropriate generic subject area and by chronological order within subject area.

NUREG-1145 V13: U.S. NUCLEAR REGULATORY COMMISSION 1996 ANNUAL REPORT. * Office of Information Resources Management (Post 890205). September 1997. 316pp. 9711030085. A0980:001.

This report covers the major activities, events, decisions, and planning that took place during Fiscal Year 1996 within the U.S. Nuclear Regulatory Commission (NRC) or involving the NRC.

NUREG-1275 V12: OPERATING EXPERIENCE FEEDBACK REPORT. Assessment Of Spent Fuel Cooling. IBARRA, J.G.; JONES, W.R.; LANIK, G.F.; et al. Division of Safety Programs (Post 870413). February 1997. 48pp. 9703170237. 92131:199.

This report is an assessment of the likelihood and consequences of loss of spent fuel pool cooling in the nuclear power industry. A generic pressurized water reactor spent fuel pool configuration is developed, and a generic boiling water reactor spent fuel pool configuration is developed. Over twelve years of operational data is reviewed and assessed. Six site visits were conducted to gather specific information on spent fuel pool

physical configuration, licensee practices, and licensee procedures. The regulations on spent fuel pools were reviewed. Independent engineering assessments on the spent fuel pool system were performed on the electrical system, instrumentation, heat loads, and radiation. An assessment on the risk of loss of spent fuel cooling was performed. The overall conclusions are that the typical plant may need improvements in spent fuel pool instrumentation, operator procedures and training, and configuration control.

NUREG-1307 R07: REPORT ON WASTE BURIAL CHARGES. Escalation Of Decommissioning Waste Disposal Costs At Low-Level Waste Burial Facilities. * Division of Regulatory Applications (Post 941217). November 1997. 72pp. 9712110125. A1387:194.

One of the requirements placed upon nuclear power reactor licensees by the U.S. Nuclear Regulatory Commission (NRC) is for the licensees to periodically adjust the estimate of the cost of decommissioning their plants, in dollars of the current year, as part of the process to provide reasonable assurance that adequate funds for decommissioning will be available when needed. This report, which is scheduled to be revised periodically, contains the development of a formula for escalating decommissioning cost estimates that is acceptable to the NRC, and contains values for the escalation of radioactive waste burial costs, by site and by year. The licensees may use the formula, the coefficients, and the burial escalation from this report in their escalation analyses, or they may use an escalation rate at least equal to the escalation approach presented herein.

NUREG-1350 V09: NUCLEAR REGULATORY COMMISSION INFORMATION DIGEST. 1997 Edition. GARVER, M. Division of Budget & Analysis (Post 890205). May 1997. 144pp. 9707180165. 93805:045.

The Nuclear Regulatory Commission Information Digest (digest) provides a summary of information about the U.S. Nuclear Regulatory Commission (NRC), NRC's regulatory responsibilities, NRC licensed activities, and general information on domestic and worldwide nuclear energy. The digest published annually, is a compilation of nuclear and NRC-related data and is designed to provide a quick reference to major facts about the agency and the industry it regulates. In general, the data cover 1975 through 1996, with exceptions noted. Information on generating capacity and average capacity factor for operating U.S. commercial nuclear power reactors is obtained from monthly operating reports that are submitted directly to the NRC by the licensee. This information is reviewed by the NRC for consistency only and no independent validation and/or verification is performed.

NUREG-1415 V10 N01: OFFICE OF THE INSPECTOR GENERAL. Semiannual Report To Congress, April 1, 1997 - September 30, 1997. * Office of the Inspector General (Post 890417). November 1997. 46pp. 9801120057. A1733:228.

The Inspector General Act of 1978, as amended, requires that Inspectors General submit a "Semiannual Report to Congress" summarizing program activities. The Inspector General's report is submitted to the Chairman of the NRC not later than April 30 and October 31 for each reporting period. The Chairman comments on the report and prepares the NRC's Semiannual Report to Congress as required by the Act. The Chairman then submits the agency's report and the OIG's report to Congress no later than November 30 and May 31, respectively.

NUREG-1423 V07: A COMPILATION OF REPORTS OF THE ADVISORY COMMITTEE ON NUCLEAR WASTE. July 1996 - June 1997. * Advisory Committee on Nuclear Waste. August 1997. 83pp. 9709120064. A0354:151.

This compilation contains 11 reports issued by the Advisory Committee on Nuclear Waste (ACNW) during the ninth year of its operation. The reports were submitted to the Chairman and Commissioners of the U.S. Nuclear Regulatory Commission. All reports prepared by the Committee have been made available

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to the public through the NRC Public Document Room, the U.S. Library of Congress, and the internet at <http://www.nrc.gov/ACRSACNW>.

NUREG-1462 S01: FINAL SAFETY EVALUATION REPORT RELATED TO THE CERTIFICATION OF THE SYSTEM 80+ DESIGN. Docket No. 52-002. (Asea Brown Boveri-Combustion Engineering) * Office of Nuclear Reactor Regulation (Post 941001). May 1997. 32pp. 9709020345. A0234:112.

This report supplements the final safety evaluation report (FSER) for the System 80+ standard design. The FSER was issued by the U.S. Nuclear Regulatory Commission (NRC) staff as NUREG-1462 in August 1994 to document the NRC staff's technical review of the System 80+ design. The application for the System 80+ design was submitted by Combustion Engineering, Inc., now Asea Brown Boveri - Combustion Engineering (ABB-CE) pursuant to Subpart B of 10 CFR Part 52. This supplement documents the NRC staff's review of the changes to the System 80+ design documentation since the issuance of the FSER. ABB-CE made these changes as a result of its review of the System 80+ design details. The NRC staff concludes that the changes to the System 80+ design documentation are acceptable, and that ABB-CE's application for design certification meets the requirements of Subpart B to 10 CFR Part 52 that are applicable and technically relevant to the System 80+ design.

NUREG-1492: REGULATORY ANALYSIS ON CRITERIA FOR THE RELEASE OF PATIENTS ADMINISTERED RADIOACTIVE MATERIAL. Final Report. SCHNEIDER, S.; MCGUIRE, S.A. Division of Regulatory Applications (Post 941217). February 1997. 79pp. 9703200259. 92191:156.

This regulatory analysis was developed to respond to three petitions for rulemaking to amend 10 CFR Parts 20 and 35 regarding release of patients administered radioactive material. The petitions requested revision of these regulations to remove the ambiguity that existed between the 1-mSv (0.1-rem) total effective dose equivalent (TEDE) public dose limit in Part 20, adopted in 1991, and the activity-based release limit in 10 CFR 35.75 that, in some instances, would permit release of individuals in excess of the current public dose limit. Three alternatives for resolution of the petitions were evaluated. Under Alternative 1, NRC would amend its patient release criteria in 10 CFR 35.75 to match the annual public dose limit in Part 20 of 1 mSv (0.1 rem) TEDE. Alternative 2 would maintain the status quo of using the activity-based release criteria currently found in 10 CFR 35.75. Under Alternative 3, the NRC would revise the release criteria in 10 CFR 35.75 to specify a dose limit of 5 mSv (0.5 rem) TEDE. The evaluation demonstrates that adoption of Alternative 1 would be considerably more expensive to the public compared to Alternative 2 (the status quo), primarily due to increased health care costs associated with more patients remaining in the hospital than under the current activity-based requirements. The evaluation also demonstrates that adoption of the 5-mSv (0.5-rem) dose limit under Alternative 3 would result in a higher net value to the public compared to Alternative 2 (the status quo), primarily due to lower health care costs and the increased psychological benefits to patients and their families by permitting earlier release from the hospital. Based on this analysis, the decision was made that adoption of the 5-mSv (0.5-rem) TEDE limit is consistent with the provisions in 10 CFR 20.1301(c), and the recommendations of the International Commission on Radiological Protection that an individual be allowed to receive annual doses up to 5 mSv (0.5 rem) TEDE under certain circumstances. Further, it no longer restricts patient release to a specific activity, and therefore, permits release of patients with activities that are greater than currently allowed. The primary benefit is in reduced hospital stays that provide emotional benefits to patients and their families, and result in lower health care costs.

NUREG-1496 V01: FINAL GENERIC ENVIRONMENTAL IMPACT STATEMENT IN SUPPORT OF RULEMAKING ON RADIOLOGICAL CRITERIA FOR LICENSE TERMINATION OF NRC-LICENSED NUCLEAR FACILITIES. Main Report. Final Report. * Division of Regulatory Applications (Post 941217). July 1997. 124pp. 9707230337. 93857:115.

The action being considered in this Final Generic Environmental Impact Statement (GEIS) is an amendment to the Nuclear Regulatory Commission's (NRC) regulations in 10 CFR Part 20 to include radiological criteria for decommissioning of lands and structures at nuclear facilities. Under the National Environmental Policy Act (NEPA), all Federal agencies must consider the effect of their actions on the environment. To fulfill NRC's responsibilities under NEPA, the Commission is preparing this GEIS which analyzes alternative courses of action and the costs and impacts associated with those alternatives. In preparing the final GEIS, the following approach was taken: (1) a listing was developed of regulatory alternatives for establishing radiological criteria for decommissioning; (2) for each alternative, a detailed analysis and comparison of incremental impacts, both radiological and nonradiological, to workers, members of the public, and the environment, and costs were performed; and (3) based on the analysis of impacts and costs, conclusions on radiological criteria for decommissioning were provided. Contained in the GEIS are results and conclusions related to achieving, as an objective of decommissioning ALARA, reduction to preexisting background, the radiological criterion for unrestricted use, decommissioning ALARA analysis for soils and structures containing contamination, restricted use and alternative analysis for special site-specific situations and groundwater cleanup.

NUREG-1496 V02: FINAL GENERIC ENVIRONMENTAL IMPACT STATEMENT IN SUPPORT OF RULEMAKING ON RADIOLOGICAL CRITERIA FOR LICENSE TERMINATION OF NRC-LICENSED NUCLEAR FACILITIES. Appendices A And B. Final Report. * Division of Regulatory Applications (Post 941217). July 1997. 478pp. 9707230341. 93856:001.

See NUREG-1496, V01 abstract.

NUREG-1496 V03: FINAL GENERIC ENVIRONMENTAL IMPACT STATEMENT IN SUPPORT OF RULEMAKING ON RADIOLOGICAL CRITERIA FOR LICENSE TERMINATION OF NRC-LICENSED NUCLEAR FACILITIES. Appendices C-H. Final Report. * Division of Regulatory Applications (Post 941217). July 1997. 651pp. 9707230343. 93854:001.

See NUREG-1496, V01 abstract.

NUREG-1503 S01: FINAL SAFETY EVALUATION REPORT RELATED TO THE CERTIFICATION OF THE ADVANCED BOILING WATER REACTOR DESIGN. Supplement No. 1. Docket No. 52-001. (General Electric Nuclear Energy) * Office of Nuclear Reactor Regulation (Post 941001). May 1997. 49pp. 9706120299. 93337:217.

This report supplements the final safety evaluation report (FSER) for the U.S. Advanced Boiling Water Reactor (ABWR) standard design. The FSER was issued by the U.S. Nuclear Regulatory Commission (NRC) staff as NUREG-1503 in July 1994 to document the NRC staff's review of the U.S. ABWR design. The U.S. ABWR design was submitted by GE Nuclear Energy (GE) in accordance with the procedures of Subpart B to Part 52 of Title 10 of the Code of Federal Regulations. This supplement documents the NRC staff's review of the changes to the U.S. ABWR design documentation since the issuance of the FSER. GE made these changes primarily as a result of first-of-a-kind-engineering (FOAKE) and as a result of the design certification rulemaking for the ABWR design. On the basis of its evaluation, the NRC staff concludes that the confirmatory issues in NUREG-1503 are resolved, that the changes to the ABWR design documentation are acceptable, and that GE's application for design certification meets the requirements of Subpart B to 10 CFR Part 52 that are applicable and technically relevant to the U.S. ABWR design.

NUREG-1508: FINAL ENVIRONMENTAL IMPACT STATEMENT TO CONSTRUCT AND OPERATE THE CROWNPOINT URANIUM SOLUTION MINING PROJECT, CROWNPOINT, NEW MEXICO. Docket No. 40-8968. (Hydro Resources, Inc.) * Division of Waste Management (NMSS 940403). February 1997. 432pp. 9703200270. BLM NM010-93-02. 92192:001.

This Final Environmental Impact Statement (FEIS) addresses issuing a combined source and 11e(2) byproduct material license and minerals operating leases for Federal and Indian lands to Hydro Resources, Inc. (HRI). This action would authorize the company to conduct in situ leach uranium mining in McKinley County, New Mexico. Such mining would involve drilling wells to the ore bodies, then recirculating ground water fortified with dissolved oxygen and sodium bicarbonate to mobilize uranium minerals found in the rock. Uranium would then be removed from the aqueous mining solutions using ion exchange technology in processing plants located in three separate project areas. A central plant would provide drying and packaging equipment for yellow-cake production for the entire project. The FEIS was prepared by a joint interagency review group, including the U.S. Nuclear Regulatory Commission (NRC), the U.S. Bureau of Land Management (BLM) and the U.S. Bureau of Indian Affairs (BIA). This FEIS describes the staffs analyses concerning the evaluation of: (1) the purpose of and need for the proposed action; (2) alternatives to the proposed action; (3) the environmental resources that could be affected by the proposed action and alternatives; (4) the potential environmental consequences of the proposed action and alternatives; and (5) the economic costs and benefits associated with the proposed action. The evaluation is based on a comprehensive review of HRI's license application, environmental reports, related submittals, independent information sources, and written and oral comments received on the Draft Environmental Impact Statement. On the basis of its independent review, the staff concludes that the potential significant impacts of the proposed project can be mitigated, and that HRI should be issued a combined source and 11e(2) byproduct material license from NRC, and minerals operating leases from BLM and BIA.

NUREG-1516: MANAGEMENT OF RADIOACTIVE MATERIAL SAFETY PROGRAMS AT MEDICAL FACILITIES. Final Report. CAMPER, L.W.; SCHLUETER, J.; WOODS, S.; et al. Division of Industrial & Medical Nuclear Safety (Post 870729). May 1997. 193pp. 9706120304. 93341:100.

A Task Force composed of eight U.S. Nuclear Regulatory Commission and two Agreement State program staff members developed the guidance contained in this report. The purpose of this report is to describe a systematic approach for effective management of radiation safety programs at medical facilities. This is accomplished by emphasizing the roles of institution executive management, radiation safety committee, and radiation safety officer. Various aspects of program management are discussed and include guidance on selecting the radiation safety officer, determining adequate resources for the program, the use of contractual services such as consultants and service companies, the conduct of audits, the roles of authorized users and supervised individuals, NRC's reporting and notification requirements, and a general description of how NRC's licensing, inspection, and enforcement programs work. Appendices provide detailed guidance on specific aspects of a radiation safety program and the glossary defines terms used throughout the report. The guidance contained herein does not represent new or proposed regulatory requirements and licensees will not be inspected against any portion of it. Additionally, regulatory compliance with all applicable regulations is not assured by licensees who adopt any portion of, or apply the principles described in, this report.

NUREG-1532: FINAL TECHNICAL EVALUATION REPORT FOR THE PROPOSED REVISED RECLAMATION PLAN FOR THE ATLAS CORPORATION MOAB MILL. Source Material License No. SUA-917. Docket No. 40-3453. (Atlas Corporation) FLIEGEL, M.; BRUMMETT, E.; IBRAHIM, A.; et al. Division of Waste Management (NMSS 940403). March 1997. 200pp. 9704100173. 92418:016.

This final Technical Evaluation Report (TER) summarizes the U.S. Nuclear Regulatory Commission staff's review of Atlas Corporation's proposed reclamation plan for its uranium mill tailings pile near Moab, Utah. The proposed reclamation would allow Atlas to (1) reclaim the tailings pile for permanent disposal and long-term custodial care by a government agency in its current location on the Moab site, (2) prepare the site for closure, and (3) relinquish responsibility of the site after having its NRC license terminated. The NRC staff concludes that, subject to license conditions identified in the TER, the proposed reclamation plan meets the requirements identified in NRC regulations, which appear primarily in 10 CFR Part 40.

NUREG-1536: STANDARD REVIEW PLAN FOR DRY SPENT FUEL STORAGE SYSTEMS. Final Report. * Office of Nuclear Material Safety & Safeguards. January 1997. 179pp. 9703130386. 92107:104.

The Standard Review Plan (SRP) for Dry Cask Storage Systems provides guidance to the Nuclear Regulatory Commission staff in the Spent Fuel Project Office for performing safety reviews of dry cask storage systems. The SRP is intended to ensure the quality and uniformity of the staff reviews and present a basis for the review scope and requirements. Part 72, Subpart B generally specifies the information needed in a license application for the independent storage of spent nuclear fuel and high level radioactive waste. Regulatory Guide 3.61, "Standard Format and Content for a Topical Safety Analysis Report for a Spent Fuel Dry Storage Cask" contains an outline of the specific information required by the staff. The SRP is divided into 14 sections which reflect the standard application format. Regulatory requirements, staff position, industry codes and standards, acceptance criteria, and other information are discussed. Comments, errors or omissions, and suggestions for improvement should be sent to the Director, Spent Fuel Project Office, U.S. Nuclear Regulatory Commission, DC 20555-0001.

NUREG-1542 V02: ACCOUNTABILITY REPORT FISCAL YEAR 1996. CONNELLY, S.R. Office of the Controller (Post 890205). April 1997. 92pp. 9705210298. 93064:001.

The U.S. Nuclear Regulatory Commission (NRC) is one of six Federal agencies participating in a pilot project to streamline financial management reporting. The goal of this pilot is to consolidate performance-related reporting into a single accountability report in accordance with the Government Management Reform Act (GMRA) of 1994. The NRC's second accountability report consolidates the information previously reported in the NRC's annual financial statement required by the Chief Financial Officers Act of 1990, as amended; the chairman's annual report to the President and the Congress, required by the Federal Managers' Financial Integrity Act of 1982; and the Chairman's semiannual report to the Congress on management decisions and final actions on Office of Inspector General (OIG) audit recommendations, required by the Inspector General Act of 1978, as amended. This report also includes performance measures, as required by the Chief Financial Officers Act of 1990.

NUREG-1545: EVALUATION CRITERIA FOR COMMUNICATIONS-RELATED CORRECTIVE ACTION PLANS. * Office of Nuclear Reactor Regulation (Post 941001). * Division of Systems Technology (Post 941217). February 1997. 69pp. 9703100227. 92020:240.

This document provides guidance and criteria for U.S. Nuclear Regulatory Commission (NRC) personnel to use in evaluating corrective action plans for nuclear power plant communications.

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The document begins by describing the purpose, scope, and applicability of the evaluation criteria. Next, it presents background information concerning the communications process, root causes of communication errors, and development and implementation of corrective actions. The document then defines specific criteria for evaluating the effectiveness of the corrective action plan, interview protocols, and an observation protocol related to communication processes. This document is intended only as guidance. It is not intended to have the effect of a regulation, and it does not establish any binding requirements or interpretations of NRC regulations.

NUREG-1555 DRFT: ENVIRONMENTAL STANDARD REVIEW PLAN. Standard Review Plans For Environmental Reviews For Nuclear Power Plants. * Office of Nuclear Reactor Regulation (Post 941001). August 1997. 650pp. 9801120289. A1734:001.

This document, for public review and comment, provides guidance to the staff in implementing provisions of 10CFR51, "Environmental Protection Regulations for Domestic Licensing and Related Regulatory Functions," related to new site/plant applications and license renewals. It supersedes "Environmental Standard Review Plans for the Environmental Review of Construction Permit Applications for Nuclear Power Plants," NUREG-0555, issued in 1978. Since then, new technical issues—such as environmental justice and severe-accident mitigation design alternatives—and new licensing structures—such as early site permits, combined licenses, and license renewal—have raised the need for new regulatory guidance.

NUREG-1556 V01: CONSOLIDATED GUIDANCE ABOUT MATERIALS LICENSES. Program-Specific Guidance About Portable Gauge Licenses. Final Report. VACCA, P.C.; WHITTEN, J.E.; PELCHAT, J.M.; et al. Division of Industrial & Medical Nuclear Safety (Post 870729). May 1997. 146pp. 9706180459. 93393:214.

As part of its redesign of the materials licensing process, NRC is consolidating and updating numerous guidance documents into a single comprehensive repository as described in NUREG-1539 and draft NUREG-1541. NUREG-1556, Vol. 1, is the first program-specific guidance developed for the new process and will serve as a template for subsequent program-specific guidance. This document is intended for use by applicants, licensees, and NRC staff and will also be available to Agreement States. This document supersedes the guidance previously found in draft Regulatory Guide DG-0008, "Applications for the Use of Sealed Sources in Portable Gauging Devices," and in NMSS Policy and Guidance Directive 2-07, "Standard Review Plan for Applications for Use of Sealed Sources in Portable Gauging Devices." This final report takes a more risk-informed, performance-based approach to licensing portable gauges, and reduces the information (amount and level of detail) needed to support an application to use these devices. It incorporates many suggestions submitted during the comment period on draft NUREG-1556, Vol. 1. When published, this final report should be used in preparing portable gauge license applications. NRC staff will use this final report in reviewing these applications.

NUREG-1556 V2 DRF FC: CONSOLIDATED GUIDANCE ABOUT MATERIALS LICENSES. Program Specific Guidance About Industrial Radiography Licenses. Draft Report For Use And Comment. CARRICO, J.B.; COLLINS, D.J.; WHITE, D.; et al. Division of Industrial & Medical Nuclear Safety (Post 870729). August 1997. 170pp. 9710150143. A0729:046.

This document is ultimately intended for use by applicants, licensees, and NRC staff and will also be available to Agreement States. This guidance corresponds with the revision to 10 CFR Part 34 published in May 1997. This document combines and supersedes the guidance previously found in draft Regulatory Guide FC 401-4, "Guide for the Preparation of Applications for the Use of Sealed Sources and Devices for Performing Industrial Radiography," and in NMSS Policy and Guidance Directive FC 84-15, "Standard Review Plan for Applications for the Use

of Sealed Sources and Devices for Performing Industrial Radiography." This draft report, where applicable, provides a more risk-informed, performance-based approach to industrial radiography licensing consistent with the current regulations. This draft NUREG Report is being distributed for comment to encourage public participation in its development. It represents the current position of NRC staff, which is subject to change after the review of public comments. Comments received will be considered in developing the final NUREG Report that represents the official NRC staff position. Until the final NUREG Report is published, this draft NUREG Report represents the best available guidance, and may be used when preparing requests for licensing actions. Once the final NUREG Report is published, NRC staff will use it in its review of requests for licensing actions. The draft and final NUREG Reports may differ. If your license was issued or amended based on recommendations in the draft NUREG Report and you feel that the final guidance is more advantageous to you, you may choose to request an amendment.

NUREG-1556 V3 DRF FC: CONSOLIDATED GUIDANCE ABOUT MATERIALS LICENSES. Applications for Sealed Source And Device Evaluation And Registration. Draft Report For Comment. LUBINSKI, J.; BAGGETT, S.; BROADBENT, D.; et al. Division of Industrial & Medical Nuclear Safety (Post 870729). September 1997. 134pp. 9801120269. A1740:160.

As part of its redesign of the materials licensing process, NRC is consolidating and updating numerous guidance documents into a single comprehensive repository as described in NUREG-1539 and draft NUREG-1541. NUREG-1556, Vol. 3, is intended for use by applicants, registrants, and NRC staff in applying for and evaluating applications for registration of sealed sources and devices. The final version of this document is intended to supersede guidance provided in NUREG-1550, "Standard Review Plan for Applications for Sealed Source and Device Evaluations," Regulatory Guide 10.10, "Guide for the Preparation of Applications for Radiation Safety Evaluation and Registration of Devices Containing Byproduct Material," and Regulatory Guide 10.11, "Guide for the Preparation of Applications for Radiation Safety Evaluation and Registration of Sealed Sources Containing Byproduct Material."

NUREG-1556 V4 DRF FC: CONSOLIDATED GUIDANCE ABOUT MATERIALS LICENSES. Program Specific Guidance About Fixed Gauge Licenses. Draft Report For Comment. HENDERSON, P.J.; KIRKWOOD, A.S.; LEWIS, S.H.; et al. Division of Industrial & Medical Nuclear Safety (Post 870729). October 1997. 190pp. 9801120274. A1739:001.

As part of its redesign of the materials licensing process, NRC is consolidating and updating numerous guidance documents into a single comprehensive repository as described in NUREG-1539 and draft NUREG-1541. Draft NUREG-1556, Vol. 4, "Consolidated Guidance about Materials Licenses: Program-Specific Guidance about Fixed Gauges Licenses," dated October 1997, is the fourth program-specific guidance developed for the new process and is intended for use by applicants, licensees, and NRC staff, and will also be available to Agreement States. This document combines and updates the guidance found in Draft Regulatory Guide and Value Impact Statement, FC 404-4, "Guide for the Preparation of Applications for Licenses for the Use of Sealed Sources and Nonportable Gauging Devices," dated January 1985, and in NMSS Policy and Guidance Directive, FC 85-4, "Standard Review Plan for Applications for Use of Sealed Sources and Nonportable Gauging Devices," dated February 6, 1985. This draft report takes a more risk-informed, performance-based approach to licensing fixed gauges, and reduces the information (amount and level of detail) needed to support an application to use these devices. Note that this document is strictly for public comment and is NOT for use in preparation or review of fixed gauge licenses until it is published in final form.

NUREG-1556 V5 DRF FC: CONSOLIDATED GUIDANCE ABOUT MATERIALS LICENSES. Program-Specific Guidance About Self-Shielded Irradiator Licenses. Draft Report For Comment. VACCA,P.C.; COLLINS,D.J.; MITCHELL,M.W.; et al. Division of Industrial & Medical Nuclear Safety (Post 870729). October 1997. 180pp. 9801120276. A1740:001.

As part of its redesign of the materials licensing process, NRC is consolidating and updating numerous guidance documents into a single comprehensive repository as described in NUREG-1539, "Methodology and Findings of the NRC's Materials Licensing Process Redesign," dated April 1996, and draft NUREG-1541, "Process and Design for Consolidating and Updating Materials Licensing Guidance," dated April 1996. NUREG-1556, Vol. 5, "Consolidated Guidance about Materials Licenses: Program-Specific Guidance about Self-Shielded Irradiator Licenses," dated October 1997, is the fifth program-specific guidance developed for the new process and is intended for use by applicants, licensees, and NRC staff and will also be available to Agreement States. This document combines and updates the guidance found in Regulatory Guide 10.9, Revision 1, "Guide for the Preparation of Applications for Licenses for the Use of Self-Contained Dry Source-Storage Gamma Irradiators," dated December 1988, and in NMSS Policy and Guidance Directive FC 84-16, Revision 1, "Standard Review Plan for Applications for Use of Self-Contained Dry Source-Storage Gamma Irradiators," dated January 26, 1989. This draft report takes a more risk-informed, performance-based approach to licensing self-shielded irradiators, and reduces the information (amount and level of detail) needed to support an application to use these devices. Note that this document is strictly for public comment and is not for use in preparing or reviewing self-shielded irradiator licenses until it is published in final form.

NUREG-1562 DRFT FC: STANDARD REVIEW PLAN FOR APPLICATIONS FOR LICENSES TO DISTRIBUTE BYPRODUCT MATERIAL TO PERSONS EXEMPT FROM THE REQUIREMENTS FOR AN NRC LICENSE. 10CFR Parts 30.14,30.15, 30.16,30.18,30.19 & 30.20. CAMPER,L.W.; RICH,T.; GREENE,S. Division of Industrial & Medical Nuclear Safety (Post 870729). January 1997. 82pp. 9702190058. 91802:274.

Exemptions from the requirements for an NRC license to persons who receive, possess, use, transfer, own, or acquire byproduct material in exempt distribution products are provided in 10 CFR Part 30, "Rules of General Applicability to Domestic Licensing of Byproduct Material." Exempt distribution products include silicon chips, electron tubes, resins, check sources, gun-sights, and smoke detectors and are generally distributed by persons who have a specific license from the Commission authorizing such distribution to persons exempt from the requirements for an NRC license. This document provides assistance to applicants and licensees in preparing license applications and describes the methods acceptable to NRC license reviewers in implementing the regulations and the techniques used by the reviewers in evaluating the applications to determine if the proposed exempt distribution activity is acceptable for licensing purposes. The guidance contained herein does not represent new or proposed regulatory requirements, and licensees will not be inspected against any portion of it. In accordance with NRC usage, the word "should" is used when discussing or referencing NRC regulations. Additionally, regulatory compliance with all applicable regulations is not assured by licensees who adopt any portion of, or apply the principles described in, this guidance.

NUREG-1569 DRFT: DRAFT STANDARD REVIEW PLAN FOR IN SITU LEACH URANIUM EXTRACTION LICENSE APPLICATIONS. * Division of Waste Management (NMSS 940403). October 1997. 250pp. 9801120284. A1738:001.

A Nuclear Regulatory Commission source and byproduct material license is required to recover uranium by in situ leach extraction techniques under the provisions of Title 10 Code of Federal Regulations, Part 40 (10 CFR 40), Domestic Licensing of Source Material. An applicant for a research and develop-

ment or commercial-scale license, or for the renewal or amendment of an existing license is required to provide detailed information on the facilities, equipment, and procedures used and an environmental report that discusses the effects of proposed operations on the health and safety of the public and on the environment. The Standard Review Plan is prepared for the guidance of staff reviewers in the Office of Nuclear Material Safety and Safeguards in performing safety and environmental reviews of applications to develop and operate uranium in situ leach facilities. It provides guidance for new license applications, renewals, and amendments. The principal purpose of the standard review plan is to assure the quality and uniformity of staff reviews and to present a well-defined base from which to evaluate changes in the scope and requirements of a review. The standard review plan is written to cover a variety of site conditions and facility designs. Each section is written to provide a description of the areas of review, review procedures, acceptance criteria, and evaluation of findings. However, for a given application, the staff reviewers may select and emphasize particular aspects of each standard review plan section as is appropriate for the application.

NUREG-1571: INFORMATION HANDBOOK ON INDEPENDENT SPENT FUEL STORAGE INSTALLATIONS. RADDATZ,M.G.; WATERS,M.D. Office of Nuclear Material Safety & Safeguards. December 1996. 140pp. 9703030211. 91940:001.

In this information handbook, the staff of the U.S. Nuclear Regulatory Commission describes (1) background information regarding the licensing history of independent spent fuel storage installations (ISFSIs), (2) a discussion of the licensing process, (3) a description of all currently approved or certified models of dry cask storage systems (DCSSs), and (4) a description of sites currently storing spent fuel in an ISFSI. Storage of spent fuel at ISFSIs must be in accordance with the provisions of 10 CFR PART 72. The staff has provided this handbook for information purposes only. The accuracy of any information herein is not guaranteed. For verification or for more details, the reader should refer to the respective docket files for each DCSS and ISFSI site. The information in this handbook is current as of September 1, 1996.

NUREG-1572: SAFETY EVALUATION REPORT RELATED TO THE RENEWAL OF THE OPERATING LICENSE FOR THE RESEARCH REACTOR AT NORTH CAROLINA STATE UNIVERSITY. * Office of Nuclear Reactor Regulation (Post 941001). April 1997. 120pp. 9705280265. 93126:178.

This safety evaluation report (SER) summarizes the findings of a safety review conducted by the staff of the U.S. Nuclear Regulatory Commission (NRC), Office of Nuclear Reactor Regulation (NRR). The staff conducted this review in response to a timely application filed by North Carolina State University (the licensee or NCSU) for a 20-year renewal of Facility Operating License R-120 to continue to operate the NCSU PULSTAR research reactor. The facility is located in the Burlington Engineering Laboratory complex on the NCSU campus in Raleigh, North Carolina. In its safety review, the staff considered information submitted by the licensee (including past operating history recorded in the licensee's annual reports to the NRC), as well as inspection reports prepared by NRC Region II personnel and first-hand observations. On the basis of this review, the staff concludes that NCSU can continue to operate the PULSTAR research reactor, in accordance with its application, without endangering the health and safety of the public.

NUREG-1574: STANDARD REVIEW PLAN ON ANTITRUST REVIEWS. Final Report. LAMBE,W.M.; DAVIS,M.J. Office of Nuclear Reactor Regulation (Post 941001). December 1997. 31pp. 9712230314. A1501:014.

The Nuclear Regulatory Commission is issuing this Standard Review Plan to describe the procedure used to implement the antitrust review and enforcement process prescribed in Sections 105 and 186 of the Atomic Energy Act of 1954, as amended.

10 Main Citations and Abstracts

This SRP reflects current regulations and policy, and will be updated to reflect changes in NRC regulations.

NUREG-1574 DRFT FC: STANDARD REVIEW PLAN ON ANTITRUST. Draft Report For Comment. LAMBE, W.M.; DAVIS, M.J. Office of Nuclear Reactor Regulation (Post 941001). January 1997. 31pp. 9702190059. 91804:328.

The Nuclear Regulatory Commission is issuing this draft Standard Review Plan to describe the procedure used to implement the antitrust review and enforcement prescribed in Sections 105 and 186 of the Atomic Energy Act of 1954, as amended. This draft SRP reflects current regulations and policy, and will be updated to reflect changes in NRC regulations.

NUREG-1577 DRFT FC: STANDARD REVIEW PLAN ON POWER REACTOR LICENSEE FINANCIAL QUALIFICATIONS AND DE-COMMISSIONING FUNDING ASSURANCE. Draft Report For Comment. WOOD, R.S. Office of Nuclear Reactor Regulation (Post 941001). January 1997. 20pp. 9702190062. 91809:334.

The Nuclear Regulatory Commission is issuing this draft Standard Review (SRP) to describe the process it uses to review the financial qualifications and methods of providing decommissioning funding assurance required of power reactor licensees. This draft SRP reflects current regulations and policy, and will be updated to reflect changes in NRC regulations.

NUREG-1601: CHEMICAL PROCESS SAFETY AT FUEL CYCLE FACILITIES. AYRES, D.A. Division of Fuel Cycle Safety & Safeguards (Post 930207). August 1997. 26pp. 9708180186. A0077:187.

This NUREG provides broad guidance on chemical safety issues relevant to fuel cycle facilities. It describes an approach acceptable to the NRC staff, with examples that are not exhaustive, for addressing chemical process safety in the safe storage, handling, and processing of licensed nuclear material. It expounds to license holders and applicants a general philosophy of the role of chemical process safety with respect to NRC-licensed materials; sets forth the basic information needed to properly evaluate chemical process safety; and describes plausible methods of identifying and evaluating chemical hazards and assessing the adequacy of the chemical safety of the proposed equipment and facilities. Examples of equipment and methods commonly used to prevent and/or mitigate the consequences of chemical incidents are discussed in this document.

NUREG-1602 DRFT FC: THE USE OF PRA IN RISK-INFORMED APPLICATIONS. Draft Rept For Comment. * Division of Systems Technology (Post 941217). June 1997. 150pp. 9707140029. 93737:167.

In August 1995, the Nuclear Regulatory Commission issued a policy statement proposing improved regulatory decisionmaking "by increasing the use of PRA [probabilistic risk assessment/analysis] in all regulatory matters to the extent supported by the state-of-the-art in PRA methods and data." To support the implementation of the Commission's policy, regulatory guidance documents have been developed by the staff (as drafts for public comment) describing how PRA can be used in specific regulatory activities, many of which relate to licensee-proposed changes to their current licensing basis (CLB). In addition, a more general regulatory guide has been developed which describes an overall approach to using PRA in risk-informed regulation. One key aspect of this general guidance is the attributes of an acceptable PRA for such regulatory activities. Detailed discussion is provided for a full-scope PRA (i.e., a PRA that considers both internal and external events for all modes of operation). In addition, discussions are provided for the use and limitations of importance measures and sensitivity studies. Finally, the subject of peer review of a PRA is also discussed.

NUREG-1603 DRFT: INDIVIDUAL PLANT EXAMINATION DATABASE. User's Guide. SU, T.M. Office of Nuclear Regulatory Research (Post 941217). DANZIGER, L.M. Office of Information Resources Management (Post 890205). LIN, C.C.; et al. Brookhaven National Laboratory. April 1997. 150pp. 9705010320. 92697:069.

The individual Plant Examination (IPE) database stores structured information about plant designs, core damage frequency (CDF) and containment performance. It records the presence or absence of hardware in each design, characterizes its functional dependencies, and relates these features to the CDF and containment performance. The IPE database supports detailed inquiries into these characteristics for a specific plant or class of plants. In particular, the IPE database is designed to answer questions that enable interested parties to compare the CDF and containment performance of boiling- and pressurized- water reactors (BWRs and PWRs) as a function of their design features, on the basis of information found in the IPE submittals. To query the IPE database, two programs have been developed. The first is a self-contained, user friendly, menu-driven program written in Microsoft's Visual Basic language. This program answers the "basic queries" most often asked about the IPEs, through a process of sorting records within the IPE database. Queries of this type can be improvised on the spot. Other "advanced queries" that call for calculations, linking of data files, and ranking or sorting on the basis of calculation can be performed using the programming language within such personal computer data management applications as dBase, Access, or Paradox. This IPE database user's guide provides guidance for formulating basic and advanced queries. The guidance for advanced queries is given in terms of Microsoft Access 2.0.

NUREG-1604: CIRCUMFERENTIAL CRACKING OF STEAM GENERATOR TUBES. KARWOSKI, K.J. Office of Nuclear Reactor Regulation (Post 941001). April 1997. 171pp. 9705160211. 93024:113.

On April 28, 1995, the U.S. Nuclear Regulatory Commission (NRC) issued Generic Letter (GL) 95-03, "Circumferential Cracking of Steam Generator Tubes." GL 95-03 was issued to obtain information needed to verify licensee compliance with existing regulatory requirements regarding the integrity of steam generator tubes in domestic pressurized-water reactors (PWRs). This report briefly describes the design and function of domestic steam generators and summarizes the staff's assessment of the responses to GL 95-03. The report concludes with several observations related to steam generator operating experience. This report is intended to be representative of significant operating experience pertaining to circumferential cracking of steam generator tubes from April 1995 through December 1996. Operating experience prior to April 1995 is discussed throughout the report, as necessary, for completeness.

NUREG-1606 DRFT FC: PROPOSED REGULATORY GUIDANCE RELATED TO IMPLEMENTATION OF 10 CFR 50.59 (CHANGES, TESTS, OR EXPERIMENTS). Draft Report For Comment. MCKENNA, E.M. Office of Nuclear Reactor Regulation (Post 941001). April 1997. 61pp. 9705140368. 92887:102.

The Nuclear Regulatory Commission is issuing this draft guidance document for public comment that describes current interpretations related to the process by which power reactor licensees may make certain plant changes without prior NRC approval. The draft guidance reaffirms existing regulatory practice in many areas; clarifies the staff's expectations in areas where industry practice or position differs from the staff's and establishes guidance in areas where guidance did not previously exist.

NUREG-1607: SAFETY EVALUATION REPORT RELATED TO

THE DEPARTMENT OF ENERGY'S PROPOSAL FOR THE IRRADIATION OF LEAD TEST ASSEMBLIES CONTAINING TRITIUM-PRODUCING BURNABLE ABSORBER RODS IN COMMERCIAL LIGHT-WATER REACTORS. * Office of Nuclear Reactor Regulation (Post 941001). May 1997. 78pp. 9706190451. 93409:250.

The NRC staff has reviewed a report, submitted by DOE to determine whether the use of a commercial light-water reactor (CLWR) to irradiate a limited number of tritium-producing burnable absorber rods (TPBARs) in lead test assemblies (LTAs) raises generic issues involving an unreviewed safety question. The staff has prepared this safety evaluation to address the acceptability of these LTAs in accordance with the provision of 10 CFR 50.59 without NRC licensing action. As summarized in Section 10 of this safety evaluation, the staff has identified issues that require NRC review. The staff has also identified a number of areas in which an individual licensee undertaking irradiation of TPBAR LTAs will have to supplement the information in the DOE report before the staff can determine whether the proposed irradiation is acceptable at a particular facility. The staff concludes that a licensee undertaking irradiation of TPBAR LTAs in a CLWR will have to submit an application for amendment to its facility operating license before inserting the LTAs into the reactor.

NUREG-1608 DRFT FC: CATEGORIZING AND TRANSPORTING LOW SPECIFIC ACTIVITY MATERIALS AND SURFACE CONTAMINATED OBJECTS. Draft Rept For Comment. * Office of Nuclear Material Safety & Safeguards. * Transportation, Dept. of. June 1997. 60pp. 9707140018. 93738:098.

The primary purpose of this guidance is to assist shippers in preparing low specific activity materials (LSA) and surface contaminated objects (SCOs) for shipment in compliance with Federal regulations. Guidance is provided in question and answer format on the classification, characterization, packaging and transportation of LSA and SCOs, including the definition of LSA and SCOs, the determination of distribution on of activity in LSA material or on SCO surfaces, mixing LSA and SCOs in a package, radiation level measurements, and various other aspects of transporting LSA and SCOs. There are many requirements, other than those addressed herein, imposed in the shipment of LSA and SCOs. The guidance represents one or more methods of demonstrating compliance with the regulatory requirements for LSA material and SCOs that have been found acceptable to NRC staff; however, additional methods may also be found to be acceptable with adequate justification. This document is being issued for public comment. As a result of the public comments, or internal peer review and discussions, the content of the final guidance may be significantly different from that presented in this document.

NUREG-1609 DRFT FC: STANDARD REVIEW PLAN FOR TRANSPORTATION PACKAGES FOR RADIOACTIVE MATERIAL. Draft Report For Comment. * Office of Nuclear Material Safety & Safeguards. November 1997. 132pp. 9801120281. A1739:174.

The Standard Review Plan for Transportation Packages for Radioactive Material provides guidance for the review and approval of applications for packages used to transport radioactive material (other than irradiated nuclear fuel) under 10 CFR Part 71. The Standard Review Plan is intended for use by the U.S. Nuclear Regulatory Commission staff. Its objectives are to (1) summarize 10 CFR Part 71 requirements for package approval, (2) describe the procedures by which the NRC staff determines that these requirements have been satisfied, and (3) document the practices developed by the staff in previous reviews of package applications. A separate Standard Review Plan for Transportation Packages for Spent Nuclear Fuel (NUREG-1617) is in preparation. Draft NUREG-1617 is scheduled to be published for comment in the spring of 1998. Comments, including comments regarding errors or omissions, as well as suggestions for improvement, should be sent to the Chief, Rules Review and Directives Branch, Division of Freedom of Information and Publi-

cation Services, Mail Stop T-6D59, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001.

NUREG-1610: CONTROLLING THE ATOM. The Beginnings of Nuclear Regulation, 1946-1962. MAZUZAN, G.T.; WALKER, S. Office of the Secretary of the Commission. May 1997. 558pp. 9707220273. 93827:001.

Controlling the Atom is a study of the early history of nuclear regulation. It focuses on the activities of the U.S. Atomic Energy Commission (predecessor of the Nuclear Regulatory Commission), the agency that exercised primary responsibility for safeguarding public health and safety from the hazards of nuclear power. The book reconstructs the context in which the AEC established its regulatory program, weighing the relationship between the AEC's regulatory programs and its other major functions: developing and testing of nuclear weapons and encouraging expanded use of civilian nuclear energy. A persistent theme is the AEC's effort to ensure adequate protection of public health and safety without imposing restrictive or inflexible regulations that would impede the growth of the nuclear industry. The book provides detailed accounts of key issues such as licensing nuclear power reactors, siting of plants, developing standards for radiation protection, and disposing of radioactive wastes.

NUREG-1611: AGING MANAGEMENT OF NUCLEAR POWER PLANT CONTAINMENTS FOR LICENSE RENEWAL. LIU, W.C.; KUO, P.T.; LEE, S.S. Office of Nuclear Reactor Regulation (Post 941001). September 1997. 63pp. 9710100155. A0703:297.

In 1990, the Nuclear Management and Resources Council (NUMARC), now the Nuclear Energy Institute (NEI), submitted for NRC review, the industry reports (IRs), NUMARC Report 90-01 and NUMARC Report 90-10, addressing aging management issues associated with PWR containments and BWR containments for license renewal, respectively. In 1996, the Commission amended 10 CFR 50.55a to promulgate requirements for inservice inspection of containment structures. This rule amendment incorporates by reference the 1992 Edition with the 1992 Addenda of Subsections IWE and IWL of the ASME Code addressing the inservice inspection of metal containments/liners and concrete containments, respectively. The purpose of this report is to reconcile the technical information and agreements resulting from the NUMARC IR reviews which are generally described in NUREG-1557 and the inservice inspection requirements of subsections IWE and IWL as promulgated in §50.55a for license renewal consideration. This report concludes that Subsections IWE and IWL as endorsed in §50.55a are generally consistent with the technical agreements reached during the IR reviews. Specific exceptions are identified and additional evaluations and augmented inspections for renewal are recommended.

NUREG-1612: STATUS REPORT: REACTOR VESSEL INTEGRITY DATABASE. FAIRBANKS, C.J.; LEE, A.D.; MEDOFF, J.; et al. Office of Nuclear Reactor Regulation (Post 941001). July 1997. 65pp. 9707140087. 93738:255.

The U.S. Nuclear Regulatory Commission (NRC) developed the Reactor Vessel Integrity Database (RVID) following the staff's review of licensee responses to Generic Letter (GL) 92-01, Revision 1 (Ref. 1). The database summarizes the properties of the reactor pressure vessel (RPV) beltline materials for each operating commercial nuclear power plant. The RVID contains four tables for each plant: (1) background information table, (2) chemistry data table, (3) upper-shelf energy table, and (4) pressure-temperature limits or pressurized thermal shock table. References and notes follow each table documenting the source(s) of data and presenting supplemental information. Additionally, the RVID has "sort" and "data search" capabilities. The user can select a desired grouping of plants and then specify information categories to search and list. The design of the RVID consolidates the industry's RPV data in a convenient and accessible manner. Some of the data categories contain

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data inputs of "docketed" information; other data categories contain computed numerical values, which may or may not be "docketed". The programming logic used for calculations in the RVID follows the methodology in Regulatory Guide (RG) 1.99, Revision 2 (Ref. 2). For the Palisades RPV, the data and information contained in the RVID, Version 1.1, are current through April 12, 1995; the data and information for the RPVs of all other operating commercial nuclear power plants are current through December 31, 1994. The staff will update the RVID periodically to reflect the latest information available. Information contained in the industry's responses to the closeout letters to GL 92-01, Revision 1, and in the industry's responses to GL 92-01, Revision 1, Supplement 1 (Ref. 3), are not necessarily reflected in this version, but will appear in a future version of the RVID.

NUREG-1614 V01: NRC STRATEGIC PLAN. Fiscal Year 1997 - Fiscal Year 2002. * NRC - No Detailed Affiliation Given. October 1997. 39pp. 9712110109. A1387:155.

The U.S. Nuclear Regulatory Commission (NRC) has developed general goals consistent with its regulatory mission for civilian use of byproduct, source, and special nuclear materials to ensure adequate protection of the public health and safety, to promote the common defense and security, and to protect the environment. This report addresses the strategies for attaining these goals for Fiscal Year 1997 through Fiscal Year 2002.

NUREG-1616: FEASIBILITY OF UNDERWATER WELDING OF HIGHLY IRRADIATED IN-VESSEL COMPONENTS OF BOILING WATER REACTORS. A Literature Review. LUND, A.L. Division of Engineering Technology (Post 941217). November 1997. 46pp. 9711280297. A1248:311.

In February 1997, the U.S. Nuclear Regulatory Commission (NRC), Office of Nuclear Regulatory Research (RES), initiated a literature review to assess the state of underwater welding technology. The objective of this literature review was to evaluate the viability of underwater welding in-vessel components of boiling water reactor (BWR) in-vessel components, especially those components fabricated from stainless steels that are subjected to high neutron fluences. This literature review revealed a preponderance of general information about underwater welding technology, as a result of the active research in this field sponsored by the U.S. Navy and offshore oil and gas industry concerns. However, the literature search yielded only a limited amount of information about underwater welding of components in low-fluence areas of BWR in-vessel environments, and no information at all concerning underwater welding experiences in high-fluence environments. Research reported by the staff of the U.S. Department of Energy (DOE) Savannah River Site and researchers from the international fusion reactor program documented relevant experience concerning welding of stainless steel materials in air environments exposed to high neutron fluences. It also addressed problems with welding highly irradiated materials, primarily helium-induced cracking in the material, and suggested some solutions to these problems.

NUREG/CP-0153: PROCEEDINGS OF THE 24TH DOE/NRC NUCLEAR AIR CLEANING AND TREATMENT CONFERENCE. Held in Portland, Oregon, July 15-18, 1996. FIRST, M.W. Harvard School of Public Health, Boston, MA. August 1997. 1,041pp. 9709120076. CONF-960715. A0347:001.

This report contains the papers presented at the 24th DOE/NRC Nuclear Air Cleaning and Treatment Conference and the associated discussions. Major topics are: (1) nuclear air cleaning issues, (2) waste management, (3) instrumentation and measurement, (4) testing air and gas cleaning systems, (5) progress and challenges in cleaning up Hanford, (6) international nuclear programs, (7) standardized test methods, (8) HVAC, (9) decommissioning, (10) computer modeling applications, (11) iodine treatment, (12) filters, and (13) codes and standards for filters and adsorbers.

NUREG/CP-0154: PROCEEDINGS OF THE CNRA/CSNI WORKSHOP ON STEAM GENERATOR TUBE INTEGRITY IN NUCLEAR POWER PLANTS. DIERCKS, D.R. Argonne National Laboratory. February 1997. 625pp. 9703100272. ANL-96/14. 92026:001.

An International Workshop on Steam Generator Tube Integrity in Nuclear Power Plants, sponsored by the Committee on Nuclear Regulatory Activities (CNRA) and the Committee on the Safety of Nuclear Installations (CSNI) of the OECD-NEA, was held at Oak Brook (suburban Chicago), Illinois, on October 30-November 2, 1995. The USNRC Office of Nuclear Regulatory Research served as host. The objective of the workshop was to provide a working forum for the exchange of information by contributing experts on current issues related to PWR steam generator tube integrity. One hundred persons from 15 countries attended the workshop, including 36 from regulatory and nuclear policy agencies, 28 from research and development laboratories, 18 from nuclear vendors and consulting firms, and 18 from electrical utilities. The workshop opened with a plenary session; the first part of the session covered international steam generator regulatory practices and issues, featuring speakers from regulatory bodies in Belgium, France, Japan, Spain, and the United States. In Part 2 of the plenary session, comprehensive technical overviews on steam generator tubing degradation, inspection, and integrity were presented by authorities in these fields from the United States, France, and Belgium. Parallel working sessions on the second and third days of the workshop then developed findings and recommendations in the areas of (1) tubing degradation, (2) tubing inspection, (3) tubing integrity, (4) preventative and corrective measures, and (5) operational aspects and risk analysis. On the final day of the workshop, the working-session facilitators presented summaries of their sessions to the workshop attendees.

NUREG/CP-0155: PROCEEDINGS OF THE SEMINAR ON LEAK BEFORE BREAK IN REACTOR PIPING AND VESSELS. FAIDY, C. France. GILLES, PH. FRAMATOME. April 1997. 774pp. 9704240208. 92599:001.

The sixth in a series of international Leak-Before-Break (LBB) Seminars was held at Hotel Sofitel in Lyon, France on October 9 through 11, 1995. The seminar updated international policies and supporting research on LBB. Attendees included representatives from regulatory agencies, electric utility representatives, fabricators of nuclear power plants, research organizations, and academic institutions. The objective of the seminar was to present the current state of the art in LBB methodology development, validation, and application in an international forum. With particular emphasis on industrial applications and regulatory policies, the seminar provided an opportunity to compare approaches, experiences, and codifications developed by different countries. The seminar was organized into four topic areas: Status of LBB Applications, Technical Issues in LBB, Methodology, Complementary Requirements (Leak Detection and Inspection), and LBB Assessment and Margins. In addition to the formal sessions where papers were presented by participants from France, Germany, Japan, Korea, Belgium, the United Kingdom, the Czech Republic, Finland, Russia, Sweden, Canada, the Netherlands, and the United States, informal LBB poster sessions were available outside the presentation hall. As a result of this seminar, better estimates of the limits to the LBB approach should follow, as well as an improvement in codifying methodologies.

NUREG/CP-0157 V01: PROCEEDINGS OF THE TWENTY-FOURTH WATER REACTOR SAFETY INFORMATION MEETING. Plenary Session, High Burnup Fuel, Containment And Structural Aging. MONTELEONE, S. Brookhaven National Laboratory. January 1997. 357pp. 9703120266. 92077:003.

This three-volume report contains papers presented at the Twenty-Fourth Water Reactor Safety Information Meeting held at the Bethesda Marriott Hotel, Bethesda, Maryland, October 21-23, 1996. The papers are printed in the order of their pres-

entation in each session and describe progress and results of programs in nuclear safety research conducted in this country and abroad. Foreign participation in the meeting included papers presented by researchers from Finland, France, Japan, Norway, Russia and the United Kingdom. The titles of the papers and the names of the authors have been updated and may differ from those that appeared in the final program of the meeting.

NUREG/CP-0157 V02: PROCEEDINGS OF THE TWENTY-FOURTH WATER REACTOR SAFETY INFORMATION MEETING. Reactor Pressure Vessel Embrittlement And Thermal Annealing, Reactor Vessel Lower Head Integrity And Evaluation And Projection of Steam Generator tube.... MONTELEONE, S. Brookhaven National Laboratory. February 1997. 444pp. 9703120276. 92075:001.

See NUREG/CP-0157, V01 abstract.

NUREG/CP-0157 V03: PROCEEDINGS OF THE TWENTY-FOURTH WATER REACTOR SAFETY INFORMATION MEETING. PRA And HRA, And Probabilistic Seismic Hazard Assessment And Seismic Siting Criteria. MONTELEONE, S. Brookhaven National Laboratory. February 1997. 180pp. 9703120285. 92076:081.

See NUREG/CP-0157, V01 abstract.

NUREG/CP-0158: PROCEEDINGS OF THE OECD/CSNI SPECIALISTS MEETING ON BORON DILUTION REACTIVITY TRANSIENTS. Held In State College, Pennsylvania, USA, October 18-20, 1995. * Organization for Economic Cooperation & Development. * Pennsylvania State Univ., University Park, PA. June 1997. 468pp. 9707180208. NEA/CSNI/R(96)3. 93800:001.

A CSNI Specialist Meeting on Boron Dilution Reactivity Transients was held in State College, Pennsylvania, USA, from October 18-20, 1995. The meeting was sponsored by the United States Nuclear Regulatory Commission (USNRC) in collaboration with the Committee on the Safety of Nuclear Installation (CSNI) of the OECD Nuclear Energy Agency (NEA) and the Pennsylvania State University. The objective of the meeting was to bring together experts involved in the different activities related to boron dilution transients, to promote discussion among these experts, and to focus on the technical issues of concern in resolving the safety significance of such events.

NUREG/CP-0159: PROCEEDINGS OF THE OECD/CSNI WORKSHOP ON TRANSIENT THERMAL-HYDRAULIC AND NEUTRONIC CODES REQUIREMENTS. Held In Annapolis, Maryland, USA, November 5-8, 1996. * Organization for Economic Cooperation & Development. * SCIENTECH, Inc. July 1997. 842pp. 9708210006. NEA/CSNI/R(97)4. A0172:001.

This is a report on the CSNI Workshop on Transient Thermal-Hydraulic and Neutronic Codes Requirements held at Annapolis, Maryland, USA, November 5-8, 1996. This experts' meeting consisted of 140 participants from 21 countries; 65 invited papers were presented. The meeting was divided into five areas: (1) current and prospective plans of thermal-hydraulic codes development; (2) current and anticipated uses of thermal-hydraulic codes; (3) advances in modeling of thermal-hydraulic phenomena and associated additional experimental needs; (4) numerical methods in multi-phase flows; and (5) programming language, code architectures and user interfaces. The workshop consensus identified the following important action items to be addressed by the international community in order to maintain and improve the calculational capability: - preserve current code expertise and institutional memory; - preserve the ability to use the existing investment in plant transient analysis codes; - maintain essential experimental capabilities; - develop advanced measurement capabilities to support future code validation work; - integrate existing analytical capabilities so as to improve performance and reduce operating costs; - exploit the proven advances in code architecture, numerics, graphical user interfaces, and modularization in order to improve code performance and scrutibility, and - more effectively utilize user experience in modifying and improving the codes.

NUREG/CP-0161: TRANSACTIONS OF THE TWENTY-FIFTH WATER REACTOR SAFETY INFORMATION MEETING. MONTELEONE, S. Brookhaven National Laboratory. September 1997. 125pp. 9710100229. A0705:001.

This report contains summaries of papers on reactor safety research to be presented at the 25th Water Reactor Safety Information Meeting at the Bethesda Marriott Hotel in Bethesda, Maryland, October 20-22, 1997. The summaries briefly describe the programs and results of nuclear safety research sponsored by the Office of Nuclear Regulatory Research, U.S. NRC. Summaries of invited papers concerning nuclear safety issues from U.S. government laboratories, the electric utilities, the nuclear industry, and from foreign governments and industry are also included. The summaries have been compiled in one report to provide a basis for meaningful discussion of information exchanged during the course of the meeting, and are given in order of their presentation in each session.

NUREG/CR-0200 R5V1P1: SCALE: A MODULAR CODE SYSTEM FOR PERFORMING STANDARDIZED COMPUTER ANALYSES FOR LICENSING EVALUATION. Control Modules C4, C6. * Oak Ridge National Laboratory. March 1997. 599pp. 9705120302. ORNLNUREGCSD2R5. 92830:001.

SCALE-a modular code system for Standardized Computer Analyses Licensing Evaluation-has been developed by Oak Ridge National Laboratory at the request of the U.S. Nuclear Regulatory Commission. The SCALE system utilizes well-established computer codes and methods within standard analysis sequences that (1) allow an input format designed for the occasional user and/or novice, (2) automated the data processing and coupling between modules, and (3) provide accurate and reliable results. System development has been directed at problem-dependent cross-section processing and analysis of criticality safety, shielding, heat transfer, and depletion/decay problems. Since the initial release of SCALE in 1980, the code system has been heavily used for evaluation of nuclear fuel facility and package designs. This revision documents Version 4.3 of the system.

NUREG/CR-0200 R5V1P2: SCALE: A MODULAR CODE SYSTEM FOR PERFORMING STANDARDIZED COMPUTER ANALYSES FOR LICENSING EVALUATION. Control Modules S1 - H1. * Oak Ridge National Laboratory. March 1997. 556pp. 9705120305. ORNLNUREGCSD2R5. 92832:001.

See NUREG/CR-0200, R5, V1, P1 abstract.

NUREG/CR-0200 R5V2P1: SCALE: A MODULAR CODE SYSTEM FOR PERFORMING STANDARDIZED COMPUTER ANALYSES FOR LICENSING EVALUATION. Functional Modules F1 - F8. * Oak Ridge National Laboratory. March 1997. 705pp. 9705120317. ORNLNUREGCSD2R5. 92843:001.

See NUREG/CR-0200, R5, V1, P1 abstract.

NUREG/CR-0200 R5V2P2: SCALE: A MODULAR CODE SYSTEM FOR PERFORMING STANDARDIZED COMPUTER ANALYSES FOR LICENSING EVALUATION. Functional Modules F9 - F11. * Oak Ridge National Laboratory. March 1997. 832pp. 9705120321. ORNLNUREGCSD2R5. 92866:001.

See NUREG/CR-0200, R5, V1, P1 abstract.

NUREG/CR-0200 R5V2P3: SCALE: A MODULAR CODE SYSTEM FOR PERFORMING STANDARDIZED COMPUTER ANALYSES FOR LICENSING EVALUATION. Functional Modules F16 - F17. * Oak Ridge National Laboratory. March 1997. 606pp. 9705120322. ORNLNUREGCSD2R5. 92869:001.

See NUREG/CR-0200, R5, V1, P1 abstract.

NUREG/CR-0200 R5V3: SCALE: A MODULAR CODE SYSTEM FOR PERFORMING STANDARDIZED COMPUTER ANALYSES FOR LICENSING EVALUATION. Miscellaneous. * Oak Ridge National Laboratory. March 1997. 764pp. 9705120311. ORNLNUREGCSD2R5. 92840:001.

See NUREG/CR-0200, R5, V1, P1 abstract.

14 Main Citations and Abstracts

NUREG/CR-4012 V04: REPLACEMENT ENERGY COSTS FOR NUCLEAR ELECTRICITY-GENERATING UNITS IN THE UNITED STATES: 1997-2001. VANKUIKEN, J.C.; GUZIEL, K.A.; TOMPKINS, M.M.; et al. Argonne National Laboratory. September 1997. 54pp. 9710100244. ANL-AA-30. A0705:220.

This report updates previous estimates of replacement energy costs for potential short-term shutdowns of 109 U.S. nuclear electricity units. This information was developed to assist the U.S. Nuclear Regulatory Commission (NRC) in its regulatory impact analyses, specifically those that examine the impacts of proposed regulations requiring retrofitting of or safety modifications to nuclear reactors. Such actions might necessitate shutdowns of nuclear power plants while these changes are being implemented. The change in energy cost represents one factor that the NRC must consider when deciding to require a particular modification. Cost estimates were derived from probabilistic production cost simulations of pooled utility system operations. Factors affecting replacement energy costs, such as random unit failures, maintenance and refueling requirements, and load variations, are treated in the analysis. This report describes an abbreviated analytical approach as it was adopted to update the cost estimates published in NUREG/CR-4012, Vol. 3. The updates were made to extend the time frame of cost estimates and to account for recent changes in utility system conditions, such as change in fuel prices, construction and retirement schedules, and system demand projections.

NUREG/CR-4219 V12 N2: HEAVY-SECTION STEEL TECHNOLOGY PROGRAM. Semiannual Progress Report For April 1995 Through September 1995. PENNELL, W.E. Oak Ridge National Laboratory. January 1997. 98pp. 9702070204. ORNL/TM-9593. 91667:001.

The Heavy-Section Steel Technology (HSST) Program is conducted for the Nuclear Regulatory Commission (NRC) by Oak Ridge National Laboratory (ORNL). The program's focus is on the development and validation of technology for the assessment of fracture-prevention margins in commercial nuclear reactor vessels. The HSST program is organized in seven tasks: (1) program management, (2) constraint effects analytical development and validation, (3) evaluation of cladding effects, (4) ductile-to-cleavage fracture-mode conversion, (5) fracture analysis methods development and application, (6) material property data and test methods, and (7) integration of results. The program tasks have been structured to place emphasis on resolution of fracture mechanics issues with near-term licensing significance. Resources to execute the research tasks are drawn from ORNL with sub-contract support from universities, and other research laboratories. Close contact is maintained with the sister Heavy-Section Steel Irradiation (HSSI) Program at ORNL and with related research programs both in the United States and abroad. This report provides an overview of principal developments in each of the seven program tasks from April 1995 through September 1995.

NUREG/CR-4219 V13 N1: HEAVY-SECTION STEEL TECHNOLOGY PROGRAM. Semiannual Progress Report For October 1995 - March 1996. PENNELL, W.E. Oak Ridge National Laboratory. September 1997. 95pp. 9710100227. ORNL/TM-9593. A0705:126.

The Heavy-Section Steel Technology (HSST) Program is conducted for the U.S. Nuclear Regulatory Commission (NRC) by the Oak Ridge National Laboratory (ORNL). The program focus is on the development and validation of technology for the assessment of fracture-prevention margins in commercial nuclear reactor pressure vessels. The HSST Program is organized in seven tasks: (1) program management, (2) constraint effects analytical development and validation, (3) evaluation of cladding effects, (4) ductile to cleavage fracture mode conversion, (5) fracture analysis methods development and applications, (6) material property data and test methods, and (7) integration of results into a state-of-the-art methodology. The program tasks have been structured to place emphasis on the resolution fracture issues with near-term licensing significance. Resources to

execute the research tasks are drawn from ORNL with sub-contract support from universities and other research laboratories. Close contact is maintained with the sister Heavy-Section Steel Irradiation Program at ORNL with related research programs both in the United States and abroad. This report provides an overview of principal developments in each of the seven program tasks from October 1995 - March 1996.

NUREG/CR-4409 V06: DATA BASE ON DOSE REDUCTION PROJECTS FOR NUCLEAR POWER PLANTS. KHAN, T.A.; XIE, J.W. Brookhaven National Laboratory. January 1997. 167pp. 9702060168. BNL-NUREG-51934. 91659:149.

This is the sixth volume in a series of reports that provide information on dose reduction research and health physics technology for nuclear power plants. The information is taken from two of several databases maintained by Brookhaven National Laboratory's ALARA Center for the U.S. Nuclear Regulatory Commission. The research section of the report covers dose reduction projects that are in the experimental or development phase. It includes topics such as need for cost-effective measures to control radiation fields, the highly effective full-system decontamination, progress in addressing the increase in radiation fields upon switching from normal water chemistry to hydrogen water chemistry in BWRs, addition of depleted zinc to reduce radiation fields, and cobalt free wear-resistant alloys. The section on health physics technology discusses dose reduction efforts that are in place or in the process of being implemented at nuclear power plants. A total of 67 new or updated projects are described. The appendix provides a complete listing of all the material in this area, including that from previous reports. The material is available through a fax machine from our ACEFAX on-line ss*ERR17*ystem. The procedure for accessing ACEFAX is also described.

NUREG/CR-4667 V22: ENVIRONMENTALLY ASSISTED CRACKING IN LIGHT WATER REACTORS. Semiannual Report, January 1996 - June 1996. CHOPRA, O.K.; CHUNG, H.M.; GAVENDA, D.J.; et al. Argonne National Laboratory. May 1997. 98pp. 9706110115. ANL-97/9. 93318:150.

This report summarizes work performed by Argonne National Laboratory on fatigue and environmentally assisted cracking (EAC) in light water reactors from January 1996 to June 1996. Topics that have been investigated include (a) fatigue of carbon, low-alloy, and austenitic stainless steels (SSs) used in reactor piping and pressure vessels, (b) irradiation-assisted stress corrosion cracking of Type 304 SS, and (c) EAC of Alloys 600 and 690. Fatigue tests were conducted on ferritic and austenitic SSs in water that contained various concentrations of dissolved oxygen (DO) to determine whether a slow strain rate applied during various portions of a tensile-loading cycle are equally effective in decreasing fatigue life. Slow-strain-rate-tensile tests were conducted in simulated boiling water reactor (BWR) water at 288 degrees C on SS specimens irradiated to a low fluence in the Halden reactor and the results were compared with similar data from a control-blade sheath and neutron-absorber tubes irradiated in BWRs to the same fluence level. Crack-growth-rate tests were conducted on compact-tension specimens from several heats of Alloys 600 and 690 in air and high-purity, low-DO water.

NUREG/CR-4667 V23: ENVIRONMENTALLY ASSISTED CRACKING IN LIGHT WATER REACTORS. Semiannual Report, July-December 1996. CHOPRA, O.K.; CHUNG, H.M.; GAVENDA, D.J.; et al. Argonne National Laboratory. October 1997. 108pp. 9711030083. ANL-97/10. A0990:251.

This report summarizes work performed by Argonne National Laboratory on fatigue and environmentally assisted cracking (EAC) in light water reactors from July 1996 to December 1996. Topics that have been investigated include (a) fatigue of carbon, low-alloy, and austenitic stainless steels (SSs) used in reactor piping and pressure vessels, (b) irradiation-assisted stress corrosion cracking of Type 304 SS, (c) EAC of Alloy 600,

and (d) characterization of residual stresses in welds of boiling water reactor (BWR) core shrouds by numerical models. Fatigue tests were conducted on ferritic and austenitic SSs in water that contained various concentrations of dissolved oxygen to determine whether a slow strain rate applied during various portions of a tensile-loading cycle are equally effective in decreasing fatigue life. Slow-strain-rate-tensile tests were conducted in simulated BWR water at 288 degrees C on SS specimens irradiated to a low fluence in the Halden reactor and the results were compared with similar data from a control-blade sheath and neutron-absorber tubes irradiated in BWRs to the same fluence level. Crack-growth-rate tests were conducted on compact-tension specimens from a low-carbon content heat of Alloy 600 in high-purity oxygenated water at 289 degrees C. Residual stresses and stress intensity factors were calculated for BWR core shroud welds.

NUREG/CR-4674 V23: PRECURSORS TO POTENTIAL SEVERE CORE DAMAGE ACCIDENTS: 1995. A Status Report. BELLES,R.J.; CLETCHER,J.W.; COPINGER,D.A.; et al. Oak Ridge National Laboratory. April 1997. 300pp. 9706120307. ORNL/NOAC-232. 93343:041.

Ten operational events that affected ten commercial light-water reactors (LWRs) during 1995 that are considered to be precursors to potential severe core damage are described. All of these events had conditional probabilities of subsequent core damage greater than or equal to 1.0×10^{-6} . These events were identified by computer-screening the 1995 licensee event reports from commercial LWRs to identify those that could be potential precursors. Candidate precursors were then selected and evaluated in a process similar to that used in previous assessments. Selected events underwent engineering evaluation that identified, analyzed, and documented the precursors. Other events designated by the Nuclear Regulatory Commission (NRC) also underwent a similar evaluation. Finally, documented precursors were submitted for review by licensees and NRC staff to ensure that the plant design and its response to the precursor were correctly characterized. This study is a continuation of earlier work, which evaluated 1969-1981 and 1984-1994 events. The report discusses the general rationale for this study, the selection and documentation of events as precursors, and the estimation of conditional probabilities of subsequent severe core damage for events.

NUREG/CR-4674 V24: PRECURSORS TO POTENTIAL SEVERE CORE DAMAGE ACCIDENTS: 1982-83. A Status Report. FORESTER,J.A.; SCHRINER,H.K.; et al. Sandia National Laboratories. MINARICK,J.W. Science Applications International Corp. (formerly Science Applications, Inc.). April 1997. 515pp. 9706120352. SAND97-0807. 93338:001.

This study is a continuation of earlier work that evaluated 1969-1981 and 1984-1994 events affecting commercial light-water reactors. One-hundred nine operational events that affected 51 reactors during 1982 and 1983 and that are considered to be precursors to potential severe core damage are described. All these events had conditional probabilities of subsequent severe core damage greater than or equal to 1.0×10^{-6} . These events were identified by first computer screening the 1982-83 licensee event reports from commercial light-water reactors to select events that could be precursors to core damage. Candidates underwent engineering evaluation that identified, analyzed, and documented the precursors. This report discusses the general rationale for the study, the selection and documentation of events as precursors, and the estimation of conditional probabilities of subsequent severe core damage for the events.

NUREG/CR-4918 V10: CONTROL OF WATER INFILTRATION

INTO NEAR SURFACE LOW-LEVEL WASTE DISPOSAL UNITS. Final Report On Field Experiments At A Humid Region Site, Beltsville, Maryland. SCHULZ,R.K. California, Univ. of, Los Angeles, CA. RIDKY,R.W. Maryland, Univ. of, College Park, MD. O'DONNELL,E. Division of Regulatory Applications (Post 941217). September 1997. 31pp. 9711190252. A1149:329.

The project objective was to assess means for controlling waste infiltration through waste disposal unit covers in humid regions. Experimental work was carried out in large scale lysimeters (70'x45'x10') at Beltsville, MD and results of the assessment are applicable to disposal of LLW, uranium mill tailings, hazardous waste, and sanitary landfills. Three concepts were under investigation: (1) resistive layer barrier, (2) conductive layer barrier, and (3) bioengineering water management. The resistive layer barrier consisted of compacted earth (clay). The conductive layer barrier was a special case of the capillary barrier and it requires a flow layer (e.g. fine sandy loam) over a capillary break. As long as unsaturated conditions are maintained water is conducted by the flow layer to below the waste. This barrier is most efficient at low flow rates and is thus best placed below a resistive layer barrier. Such a combination of the resistive layer over the conductive layer barrier promises to be highly effective provided there is no appreciable subsidence. Bioengineering water management is a surface cover that is designed to accommodate subsidence. It consisted of impermeable panels which enhance run-off and limit infiltration. Vegetation was planted in narrow openings between panels to transpire water from below the panels. This system has successfully dewatered two lysimeters thus demonstrating that this procedure could be used for remedial action ("drying out") existing waterlogged disposal sites at low cost.

NUREG/CR-5229 V09: FIELD LYSIMETER INVESTIGATIONS: LOW-LEVEL WASTE DATA BASE DEVELOPMENT PROGRAM FOR FISCAL YEAR 1996. Annual Report. MCCONNELL,J.W.; ROGERS,R.D. Idaho National Engineering & Environmental Laboratory. SANFORD,W.E.; et al. Oak Ridge National Laboratory. August 1997. 55pp. 9709150098. INEL-94/0278. A0362:267.

The Field Lysimeter Investigations: Low-Level Waste Data Base Development Program, funded by the U.S. Nuclear Regulatory Commission, is (a) studying the degradation effects in organic ion-exchange resins caused by radiation, (b) examining the adequacy of test procedures recommended in the Branch Technical Position on Waste Form to meet the requirements of 10 CFR 61 using solidified ion-exchange resins, (c) obtaining performance information on solidified ion-exchange resins in a disposal environment, and (d) determining the condition of liners used to dispose the ion-exchange resins. During the field testing experiments, both portland type I-II cement and Dow vinyl ester-styrene waste form samples were tested in lysimeter arrays located at Argonne National Laboratory-East (ANL-E) in Illinois and at Oak Ridge National Laboratory (ORNL). The study was designed to provide continuous data on nuclide release and movement, as well as environmental conditions, over an extended period. Those experiments have been shut down and are to be exhumed. This report discusses the plans for removal, sampling, and analysis of waste form and soil cores from the lysimeters. Results of partition coefficient determinations are presented, as well as application of a source term computer code using those coefficients to predict the lysimeter results. A study of radionuclide-containing colloids associated with the leachate waters removed from these lysimeters is described. An update of upward migration of radionuclides in the sand-filled lysimeter at ORNL is included.

NUREG/CR-5591 V07 N1: HEAVY-SECTION STEEL IRRADIATION PROGRAM. Semiannual Progress Report For October 1995 Through March 1996. CORWIN,W.R. Oak Ridge National Laboratory. April 1997. 63pp. 9705120292. ORNL/TM-11568. 92828:054.

16 Main Citations and Abstracts

The goal of the Heavy-Section Steel Irradiation Program is to provide a thorough, quantitative assessment of effects of neutron irradiation on material behavior, and in particular the fracture toughness properties, of typical pressure vessel steels as they relate to light-water reactor pressure-vessel integrity. Effects of specimen size, material chemistry, product form and microstructure, irradiation fluence, flux, temperature and spectrum, and post-irradiation annealing are being examined on a wide range of fracture properties. The HSSI Program is arranged into 14 tasks: (1) program management, (2) fracture toughness (K(Ic)) curve shift in high-copper welds, (3) crack-arrest toughness (K(Ia)) curve shift in high-copper welds, (4) irradiation effects on cladding, (5) K(Ic) and K(Ia) curve shifts in low upper-shelf welds, (6) annealing effects in low upper-shelf welds, (7) irradiation effects in a commercial low upper-shelf weld, (8) microstructural analysis of irradiation effects, (9) in-service aged material evaluations, (10) correlation monitor materials, (11) special technical assistance, (12) JPDR steel examination, (13) technical assistance for JCCCNRS Working Groups 3 and 12, and (14) additional requirements for materials. This report provides an overview of the activities within each of these tasks from October 1995 Through March 1996.

NUREG/CR-5591 V07 N2: HEAVY-SECTION STEEL IRRADIATION PROGRAM. Semiannual Progress Report For April Through September 1996. CORWIN, W.R. Oak Ridge National Laboratory. September 1997. 71pp. 9710070369. ORNL/TM-11568. A0642:202.

The goal of the Heavy-Section Steel Irradiation Program is to provide a thorough, quantitative assessment of effects of neutron irradiation on material behavior, and in particular the fracture toughness properties, of typical pressure vessel steels as they relate to light-water reactor pressure-vessel integrity. Effects of specimen size, material chemistry, product form and microstructure, irradiation fluence, flux, temperature and spectrum, and post-irradiation annealing are being examined on a wide range of fracture properties. The HSSI Program is arranged into 14 tasks: (1) program management, (2) fracture toughness (K(Ic)) curve shift in high-copper welds, (3) crack-arrest toughness (K(Ia)) curve shift in high-copper welds, (4) irradiation effects on cladding, (5) K(Ic) and K(Ia) curve shifts in low upper-shelf welds, (6) annealing effects in low upper-shelf welds, (7) irradiation effects in a commercial low upper-shelf weld, (8) microstructural analysis of irradiation effects, (9) in-service aged material evaluations, (10) correlation monitor materials, (11) special technical assistance, (12) JPDR steel examination, (13) technical assistance for JCCCNRS Working Groups 3 and 12, and (14) additional requirements for materials. This report provides an overview of the activities within each of these tasks from April Through September 1996.

NUREG/CR-5661: RECOMMENDATIONS FOR PREPARING THE CRITICALITY SAFETY EVALUATION OF TRANSPORTATION PACKAGES. DYER, H.R.; PARKS, C.V. Oak Ridge National Laboratory. April 1997. 58pp. 9705160214. ORNL/TM-11936. 93024:284.

This report provides recommendations on preparing the criticality safety section of an application for approval of a transportation package containing fissile material. The analytical approach to the evaluation is emphasized rather than the performance standards that the package must meet. Where performance standards are addressed, this report incorporates the requirements of 10 CFR Part 71.

NUREG/CR-6037: MEASUREMENT OF RESIDUAL RADIOACTIVE SURFACE CONTAMINATION BY 2-D LASER HEATED TLD. JONES, S.C. Keithley Instruments, Inc. June 1997. 100pp. 9706240042. 93499:001.

The feasibility of applying and adapting a two-dimensional laser heated thermoluminescence dosimetry system to the problem of surveying for radioactive surface contamination was studied. The system consists of a CO(2) laser-based reader and monolithic arrays of thin dosimeter elements. The arrays consist

of 10,201 thermoluminescent phosphor elements of 40 micron thickness, covering a 900 CM(2) area. Array substrates are 1.25 micron thick polyimide sheets, enabling them to easily conform to regular surface shapes, especially for survey of surfaces that are inaccessible for standard survey instruments. The passive, integrating radiation detectors are sensitive to alpha and beta radiation at contamination levels below release guideline limits. Required contact times with potentially contaminated surfaces are under one hour to achieve detection of transuranic alpha emission at 100 dpm/100 cm(2). Positional information obtained from array evaluation is useful for locating contamination zones. Unique capabilities of this system for survey of sites, facilities and material include measurement inside pipes and other geometrical configurations that prevent standard surveys, and below-surface measurement of alpha and beta emitters in contaminated soils. These applications imply a reduction of material that must be classified as radioactive waste by virtue of its possibility of contamination, and cost savings in soil sampling at contaminated sites.

NUREG/CR-6042 R01: PERSPECTIVES ON REACTOR SAFETY. HASKIN, F.E. New Mexico, Univ. of, Albuquerque, NM. CAMP, A.L. Sandia National Laboratories. HODGE, S.A. Oak Ridge National Laboratory. November 1997. 714pp. 9712230312. SAND93-0971. A1499:001.

The U.S. Nuclear Regulatory Commission (NRC) maintains a technical training center at Chattanooga, Tennessee to provide appropriate training to both new and experienced NRC employees. This document describes a one-week course in reactor safety concepts. The course consists of five modules: (1) the development of safety concepts; (2) severe accident perspectives; (3) accident progression in the reactor vessel; (4) containment characteristics and design bases; and (5) source terms and offsite consequences. The course text is accompanied by slides and videos during the actual presentation of the course.

NUREG/CR-6074 V03: SEALED SOURCE AND DEVICE DESIGN SAFETY TESTING. Technical Report On The Findings Of Task 4. Investigation Of A Failed Brachytherapy Needle Applicator. LUKEZICH, S.J. Southwest Research Institute. May 1997. 77pp. 9706110126. 04-4448-012. 93335:225.

As a result of an incident in which a radioactive brachytherapy treatment source was temporarily unable to be retracted, an analysis was performed on the needle applicator used during the treatment. In this report, the results of laboratory evaluations of the physical, mechanical, and metallurgical condition of the subject applicator and two additional applicators are presented. A kink formed in the subject applicator during the incident. The laboratory investigation focused on identifying characteristics which would increase the susceptibility of an applicator to form a kink when subjected to bending loads. The results obtained during this investigation could not conclusively identify the cause of the kink. The subject applicator exhibited no unique features which would have made it particularly susceptible to forming a kink. The three applicators examined represent two methods of manufacturing. A number of characteristics inherent to the method used to manufacture the subject applicator which could lead to an increased susceptibility to the formation of a kink were observed. The use of an insertion device, such as the biopsy needle used during this incident, could also dramatically increase the likelihood of the formation of a kink if the applicator is subjected to bending loads.

NUREG/CR-6153: A SIMPLIFIED MODEL OF DECONTAMINATION BY BWR STEAM SUPPRESSION POOLS. POWERS, D.A. Sandia National Laboratories. May 1997. 463pp. 9706120310. 93340:001.

An uncertainty analysis of aerosol removal by nuclear reactor steam suppression pools is described. Uncertainties considered in the analyses include uncertainties in boundary conditions dictated by accident progression, uncertainties in bubble behavior, and uncertainties in aerosol properties. Uncertainty distribution

for decontamination factors, aerosol particle sizes, and the geometric standard deviation of the size distributions are developed as functions of suppression pool depth. Results of the uncertainty distribution are used to construct a simplified model of decontamination by steam suppression pools.

NUREG/CR-6167: LATE-PHASE MELT PROGRESSION EXPERIMENT MP-2. Results And Analysis. GASSER, R.D.; GAUNTT, R.O.; BOURCIER, S.C.; et al. Sandia National Laboratories. May 1997. 275pp. 9707180201. SAND93-3931. 93801:105.

A series of in-pile experiments addressing the phenomenology associated with Late-Phase processes in Light Water Reactors (LWRs) has been performed in the Annular Core Research Reactor (ACRR) at Sandia National Laboratories. The Melt Progression (MP) experiments were designed to provide information as part of the effort to develop and verify computer models for the LWR core damage during severe accidents. The MP-2 experiment is the second experiment in this series. The MP-2 experiment examines the formation and movement of ceramic molten pools that form in the disrupted regions of a reactor core. The MP-2 experiment assembly consisted of three regions: (1) a rubble bed composed of enriched UO₂ and ZrO₂ that simulated the severely disrupted regions of the reactor core, (2) a composite ceramic/metallic crust which represented the blockage formed by the early phase melting, relocation, and refreezing of mostly metallic core components, and (3) an intact rod stub region that remained in place below the blockage region. The test assembly was fission heated in the central cavity of the ACRR at an average rate of ~0.2 K/s ultimately achieving a peak temperature in the molten pool of 3400 K. As ACRR power levels were increased over time, the crust gradually remelted and reformed, penetrating into and attacking the ceramic/metallic blockage. The metallic components of the blockage region melted and relocated downward to the bottom of the intact rod stub region. The ceramic pool penetrated halfway into the blockage region at the end of the experiment. Post-experiment examination of the assembly with the associated material interactions and metallurgy are discussed in detail together with the analyses and interpretation of the results.

NUREG/CR-6181 R01: A PILOT APPLICATION OF RISK-INFORMED METHODS TO ESTABLISH INSERVICE INSPECTION PRIORITIES FOR NUCLEAR COMPONENTS AT SURRY UNIT 1 NUCLEAR POWER STATION. VO, T.V.; PHAN, H.K.; GORE, B.F.; et al. Battelle Memorial Institute, Pacific Northwest National Laboratory. February 1997. 74pp. 9703100220. PNNL-9020. 92027:244.

As part of the Nondestructive Evaluation Reliability Program sponsored by the U.S. Nuclear Regulatory Commission, the Pacific Northwest National Laboratory has developed risk-informed approaches for inservice inspection plans of nuclear power plants. This method uses probabilistic risk assessment (PRA) results to identify and prioritize the most risk-important components for inspection. The Surry Nuclear Power Station Unit 1 was selected for pilot application of this methodology. This report, which incorporates more recent plant-specific information and improved risk-informed methodology and tools, is Revision 1 of the earlier report (NUREG/CR-6181). The methodology discussed in the original report is no longer current and a preferred methodology is presented in this Revision. This report, NUREG/CR-6181, Rev. 1, therefore supersedes the earlier NUREG/CR-6181 published in August 1994. The specific systems addressed in this report are the auxiliary feedwater, the low-pressure injection, and the reactor coolant systems. The results provide a risk-informed ranking of components within these systems.

NUREG/CR-6233 V02: STABILITY OF CRACKED PIPE UNDER SEISMIC/DYNAMIC DISPLACEMENT-CONTROLLED STRESSES. Subtask 1.2 Final Report. KRAMER, G.; VIETH, P.; MARSCHALL, C.; et al. Battelle Memorial Institute, Columbus Laboratories. June 1997. 170pp. 9707140055. BMI-2177. 93737:001.

Results of displacement-controlled pipe fracture experiments, analyses, and material characterization efforts performed within the International Piping Integrity Research Group, IPIRG, Program Subtask 1.2 are discussed. Effects of dynamic versus quasi-static and monotonic versus cyclic loading were evaluated for ductile tearing of two materials, A106 Grade B ferritic steel and TP304 austenitic steel. Twelve through-wall-cracked pipe experiments were conducted on 6-inch diameter Schedule 120 pipe at 288 C (550 F). The results indicated dynamic loading at seismic strain rates marginally increased the load-carrying capacity of austenitic steel. The ferritic steel tested was sensitive to dynamic strain-aging, and consequently, its load-carrying capacity decreased at dynamic strain rates. Two parameters were found to affect the apparent ductile crack growth resistance during cyclic loading, load ratio (R) and incremental plastic displacement that occurs in a cycle. Cyclic (R = 0) loading had minimal effect on ductile tearing for both materials. However, fully reversed loading decreased the load-carrying capacity and toughness for both materials. The incremental plastic displacement can be as important as the load ratio; however, it is harder to quantify from design stress reports. Large plastic displacements will minimize the effect of negative load ratios.

NUREG/CR-6233 V03: CRACK STABILITY IN A REPRESENTATIVE PIPING SYSTEM UNDER COMBINED INERTIAL AND SEISMIC/DYNAMIC DISPLACEMENT-CONTROLLED STRESSES. Subtask 1.3 Final Report. SCOTT, P.; OLSON, R.; WILKOWSKI, G.M.; et al. Battelle Memorial Institute, Columbus Laboratories. June 1997. 558pp. 9707140064. BMI-2177. 93734:001.

This report presents the results from Subtask 1.3 of the International Piping Integrity Research Group (IPIRG) program. The objective of Subtask 1.3 is to develop data to assess analysis methodologies for characterizing the fracture behavior of circumferentially cracked pipe in a representative piping system under combined inertial and displacement-controlled stresses. A unique experimental facility was designed and constructed. The piping system evaluated is an expansion loop with over 30 meters of 16-inch diameter Schedule 100 pipe. The experimental facility is equipped with special hardware to ensure system boundary conditions could be appropriately modeled. The test matrix involved one uncracked and five cracked dynamic pipe-system experiments. The uncracked experiment was conducted to evaluate piping system damping and natural frequency characteristics. The cracked-pipe experiments evaluated the fracture behavior, pipe system response, and stability characteristics of five different materials. All cracked-pipe experiments were conducted at PWR conditions. Material characterization efforts provided tensile and fracture toughness properties of the different pipe materials at various strain rates and temperatures. Results from all pipe-system experiments and material characterization efforts are presented. Results of fracture mechanics analyses, dynamic finite element stress analyses, and stability analyses are presented and compared with experimental results.

NUREG/CR-6233 V04: INTERNATIONAL PIPING INTEGRITY RESEARCH PROGRAM (IPIRG) PROGRAM. Program Final Report. WILKOWSKI, G.M.; SCHMIDT, R.; SCOTT, P.; et al. Battelle Memorial Institute, Columbus Laboratories. June 1997. 320pp. 9707140072. BMI-2177. 93736:001.

This is the final report of the International Piping Integrity Research Group (IPIRG) Program. The IPIRG Program was an international group program managed by the U.S. Nuclear Regulatory Commission and funded by a consortium of organizations from nine nations: Canada, France, Italy, Japan, Sweden, Switzerland, Taiwan, the United Kingdom, and the United

States. The program objective was to develop data needed to verify engineering methods for assessing the integrity of circumferentially cracked nuclear power plant piping. The primary focus was an experimental task that investigated the behavior of circumferentially flawed piping systems subjected to high-rate loadings typical of seismic events. To accomplish these objectives a pipe system fabricated as an expansion loop with over 30 meters of 16-inch diameter pipe and five long radius elbows was constructed. Five dynamic, cyclic, flawed piping experiments were conducted using this facility. This report: (1) provides background information on leak-before-break and flaw evaluation procedures for piping, (2) summarizes technical results of the program, (3) gives a relatively detailed assessment of the results from the pipe fracture experiments and complementary analyses, and (4) summarizes advances in the state-of-the-art of pipe fracture technology resulting from the IPIRG program.

NUREG/CR-6295: REASSESSMENT OF SELECTED FACTORS AFFECTING SITING OF NUCLEAR POWER PLANTS. DAVIS, R.E.; HANSON, A.L.; MUBAYI, V.; et al. Brookhaven National Laboratory. February 1997. 117pp. 9703170247. BNL-NUREG-52442. 92130:197.

Brookhaven National Laboratory has performed a series of probabilistic consequence assessment calculations for nuclear reactor siting. This study takes into account recent insights into severe accident source terms and examines consequences in a risk based format consistent with the quantitative health objectives (QHOs) of the NRC's Safety Goal Policy. Simplified severe accident source terms developed in this study are based on the risk insights of NUREG-1150 and compared to those used in earlier studies, particularly the Sandia Siting Study. The results of the present study indicate that both the quantity of radioactivity released in a severe accident as well as the likelihood of a release are lower than those predicted in earlier studies. The accident risks using the simplified source terms are examined at a series of generic plant sites that vary in population distribution, meteorological characteristics, and exclusion boundary distances. Sensitivity calculations are performed to evaluate the effects of emergency protective action assumptions on the risk of prompt fatality and latent cancers fatality, and population relocation. The study finds that based on the new source terms, the prompt and latent fatality risks at all generic sites meet the QHOs of the NRC's Safety Goal Policy by margins ranging from one to more than three orders of magnitude.

NUREG/CR-6331 R01: ATMOSPHERIC RELATIVE CONCENTRATIONS IN BUILDING WAKES. RAMSDELL, J.V.; SIMONEN, C.A. Battelle Memorial Institute, Pacific Northwest National Laboratory. May 1997. 150pp. 9706120318. PNNL-12521. 93339:152.

This report documents the ARCON96 computer code developed for the U.S. Nuclear Regulatory Commission Office Of Nuclear Reactor Regulation for use in control room habitability assessments. It includes a user's guide to the code, a description of the technical basis for the code, and a programmer's guide to the code. The ARCON96 code uses hourly meteorological data and recently developed methods for estimating dispersion in the vicinity of buildings to calculate relative concentrations at control room air intakes that would be exceeded no more than five percent of the time. These concentrations are calculated for averaging periods ranging from one hour to 30 days in duration. ARCON96 is a revised version of ARCON95, which was developed for the NRC Office of Nuclear Regulatory Research. Changes in the code permit users to simulate releases from area sources as well as point sources. The method of averaging concentrations for periods longer than 2 hours has also been changed. The change in averaging procedures increases relative concentrations for these averaging periods. In general, the increase in concentrations is less than a factor of two. The increase is greatest for relatively short averaging periods, for example 0 to 8 hours and diminishes as the duration of the averaging period increases.

NUREG/CR-6361: CRITICALITY BENCHMARK GUIDE FOR LIGHT-WATER-REACTOR FUEL IN TRANSPORTATION AND STORAGE PACKAGES. LICHTENWALTER, BOWMAN, S.M.; DEHART, M.D.; et al. Oak Ridge National Laboratory. March 1997. 358pp. 9705120283. ORNL/TM-13211. 92829:001.

This report is designed as a guide for performing criticality benchmark calculations for light-water-reactor (LWR) fuel applications. The guide provides documentation of 180 criticality experiments with geometries, materials, and neutron interaction characteristics representative of transportation packages containing LWR fuel or uranium oxide pellets or powder. These experiments should benefit the U.S. Nuclear Regulatory Commission (NRC) staff and licensees in validation of computational methods used in LWR fuel storage and transportation concerns. The experiments are classified by key parameters such as enrichment, water/fuel volume, hydrogen-to-fissile ratio (H/X), and lattice pitch. Groups of experiments with common features such as separator plates, shielding walls, and soluble boron are also identified. In addition, a sample validation using these experiments and a statistical analysis of the results are provided. Recommendations for selecting suitable experiments and determination of calculational bias and uncertainty are presented as part of this benchmark guide.

NUREG/CR-6363: EFFECTS OF THERMAL AGING AND NEUTRON IRRADIATION ON THE MECHANICAL PROPERTIES OF THREE-WIRE STAINLESS STEEL WELD OVERLAY CLADDING. HAGGAG, F.M.; NANSTAD, R.K. Oak Ridge National Laboratory. May 1997. 39pp. 9705280200. ORNL/TM-13047. 93126:289.

Thermal aging of three-wire series-arc stainless steel weld overlay cladding at 288 degrees C for 1605 h resulted in an appreciable decrease (16%) in the Charpy V-notch (CVN) upper-shelf energy (USE), but the effect on the 41-J transition temperature shift was very small (3 degrees C). The combined effect of aging and neutron irradiation at 288 degrees C to a fluence of 5×10^{19} neutrons/cm² (> 1 MeV) was a 22% reduction in the USE and a 29 degrees C shift in the 41-J transition temperature. The effect of thermal aging on tensile properties was very small. However, the combined effect of irradiation and aging was an increase in the yield strength (6 to 34% at test temperatures from 288 to -125 degrees C) but no apparent change in ultimate tensile strength or total elongation. Neutron irradiation reduced the initiation fracture toughness (J_{Ic}) much more than did thermal aging alone. Irradiation slightly decreased the tearing modulus, but no reduction was caused by thermal aging alone. Other results from tensile, CVN, and fracture toughness specimens showed that the effects of thermal aging at 288 or 343 degrees C for 20,000 h each were very small and similar to those at 288 degrees C for 1605 h. The effects of long-term thermal exposure time (50,000 h and greater) at 288 degrees C will be investigated as the specimens become available in 1996 and beyond.

NUREG/CR-6370: BLOCKAGE 2.5 USER'S MANUAL. RAO, D.V.; BRIDEAU, J.; et al. Science & Engineering Associates, Inc. BERNAHL, W. Software Edge, Inc., December 1996. 129pp. 9702060212. SEA963104010A:3. 91657:126.

The BLOCKAGE 2.5 code described in this User's Manual was developed by the United States Nuclear Regulatory Commission (NRC) as a tool to evaluate licensee compliance with NRC Bulletin 96-03, "Potential Plugging of Emergency Core Cooling Suction Strainers by Debris in Boiling Water Reactors". As such, BLOCKAGE 2.5 provides a generalized framework into which a user can input plant-specific and insulation-specific data for performing analyses in accordance with Regulatory Guide 1.82, Rev. 2. This user's manual describes the capabilities of BLOCKAGE 2.5 along with a description of the graphics user's interface provided for data entry. Each input/output dialog is described in detail along with special considerations related to developing and executing BLOCKAGE. Also, several sample problems are provided such that user can easily modify them to suit

a particular plant of interest. The models used in BLOCKAGE 2.5 and their validation are presented in the accompanying NUREG/CR-6371. The BLOCKAGE models were designed to be parametric in nature, allowing the user flexibility to examine the impact of several modeling assumptions and to conduct sensitivity analyses. As a result, BLOCKAGE 2.5 results are known to be very sensitive to the user provided input. It is therefore strongly recommended that users become thoroughly familiar with BLOCKAGE models and their limitations as described in NUREG/CR-6224.

NUREG/CR-6371: BLOCKAGE 2.5 REFERENCE MANUAL. SHAFFER, C.J.; BRIDEAU, J.; et al. Science & Engineering Associates, Inc. BERNAHL, W. Software Edge, Inc., December 1996. 163pp. 9702060227. SEA 96-3104-A:4. 91654:118.

The BLOCKAGE 2.5 code was developed by the United States Nuclear Regulatory Commission (NRC) as a tool to evaluate licensee compliance regarding the design of suction strainers for emergency core cooling system (ECCS) pumps in boiling water reactors (BWR) as required by NRC Bulletin 96-03, "Potential Plugging of Emergency Core Cooling Suction Strainers by Debris in Boiling Water Reactors." Science and Engineering Associates, Inc. (SEA) and Software Edge, Inc. (SE) developed this PC-based code. The instructions to effectively use this code to evaluate the potential of debris to sufficiently block a pump suction strainer such that a pump could lose NPSH margin was documented in a User's Manual [NRC, NUREG/CR-6370]. The Reference Manual contains additional information that supports the use of BLOCKAGE 2.5. It contains descriptions of the analytical models contained in the code, programmer guides illustrating the structure of the code, and summaries of coding verification and model validation exercises that were performed to ensure that the analytical models were correctly coded and applicable to the evaluation of BWR pump suction strainers. The BLOCKAGE code was developed by SEA and programmed in FORTRAN as a code that can be executed from the DOS level on a PC. A graphical users interface (GUI) was then developed by SEA to make BLOCKAGE easier to use and to provide graphical output capability. The GUI was programmed in the C language. The user has the option of executing BLOCKAGE 2.5 with the GUI or from the DOS level and the Users Manual provides instruction for both methods of execution.

NUREG/CR-6372 V01: RECOMMENDATIONS FOR PROBABILISTIC SEISMIC HAZARD ANALYSIS: GUIDANCE ON UNCERTAINTY AND USE OF EXPERTS. Main Report. BUDNITZ, R.J.; APOSTOLAKIS, G.; BOORE, D.M.; et al. Lawrence Livermore National Laboratory. April 1997. 277pp. 9705280207. UCRL-ID-122160. 93137:001.

Probabilistic Seismic Hazard Analysis (PSHA) is a methodology that estimates the likelihood that various levels of earthquake-caused ground motion will be exceeded at a given location in a given future time period. Due to large uncertainties in all the geosciences data and in their modeling, multiple model interpretations are often possible. This leads to disagreement among experts, which in the past has led to disagreement on the selection of ground motion for design at a given site. The Senior Seismic Hazards Analysis Committee (SSHAC) reviewed past studies, including the Lawrence Livermore National Laboratory and the EPRI landmark PSHA studies of the 1980's and examined ways to improve on the present state-of-the-art. The Committee's most important conclusion is that differences in PSHA results are due to procedural rather than technical differences. Thus, in addition to providing a detailed documentation on state-of-the-art elements of a PSHA, this report provides a series of procedural recommendations. The role of experts is analyzed in detail. Two entities are formally defined - the Technical Integrator (TI) and the Technical Facilitator Integrator (FI) - to account for the various levels of complexity in the technical issues and different levels of efforts needed in a given study.

NUREG/CR-6372 V02: RECOMMENDATIONS FOR PROBABILISTIC SEISMIC HAZARD ANALYSIS: GUIDANCE ON UNCERTAINTY AND USE OF EXPERTS. Appendices. BUDNITZ, R.J.; APOSTOLAKIS, G.; BOORE, D.M.; et al. Lawrence Livermore National Laboratory. April 1997. 750pp. 9705280212. UCRL-ID-122160. 93127:001.

See NUREG/CR-6372, V01 abstract.

NUREG/CR-6379: AN IMPROVED CORRELATION PROCEDURE FOR SUBSIZE AND FULL-SIZE CHARPY IMPACT SPECIMEN DATA. SOKOLOV, M.A.; ALEXANDER, D.J. Oak Ridge National Laboratory. March 1997. 302pp. 9704170020. ORNL-6888. 92516:001.

To examine the potential for using subsize Charpy specimens to evaluate the material properties of vessel materials for life extension, a study was conducted on the behavior of subsize impact specimens of five different geometries. Effects of notch depth, angle, and radius, as well as overall specimen dimensions were determined. Correlations of the transition temperature determined by the different subsize specimens as compared to full-size specimens were evaluated. A new procedure for transforming data from subsize specimens was developed.

NUREG/CR-6389: IPIRG-2 TASK 1 - PIPE SYSTEM EXPERIMENTS WITH CIRCUMFERENTIAL CRACKS IN STRAIGHT-PIPE LOCATIONS. Final Report. September 1991 - November 1995. SCOTT, P.; OLSON, R.; MARSHALL, C.; et al. Battelle Memorial Institute, Columbus Laboratories. February 1997. 363pp. 9703170239. BMI-2187. 92129:001.

This report presents the results from Task 1 of the Second International Piping Integrity Research Group (IPIRG-2) program. The rationale for and objective of Task 1 was to build on the results of the first IPIRG program by evaluating: (1) the fracture behavior of circumferentially cracked pipe subjected to more complex load histories, such as simulated seismic load histories; (2) cracks at geometric discontinuities, such as elbow girth welds; (3) smaller circumferential surface cracks, more typical of those considered in in-service flaw evaluations, subjected to dynamic, cyclic load histories; and (4) circumferential through-wall-cracked pipe subjected to dynamic, cyclic load histories. As a result of these Task 1 efforts, it was shown that: (1) the load-carrying capacity of a cracked pipe subjected to a simulated seismic load history is no worse than that of a cracked pipe subjected to the single-frequency excitation evaluated in IPIRG-1; (2) cracks at elbow girth welds can be adequately analyzed using methods previously developed for cracks in straight pipe; and (3) analysis methods previously developed and verified for large circumferential surface cracks and circumferential through-wall cracks work equally well for smaller cracks, even when subjected to more complex load histories.

NUREG/CR-6391: DETONATION CELL SIZE MEASUREMENTS IN HIGH-TEMPERATURE HYDROGEN-AIR-STEAM MIXTURES AT THE BNL HIGH-TEMPERATURE COMBUSTION FACILITY. CICCARELLI, G.; GINSBERG, T.; BOCCIO, J.L.; et al. Brookhaven National Laboratory. November 1997. 84pp. 9712230301. BNL-NUREG-52482. A1501:253.

The High-Temperature Combustion Facility (HTCF) was designed and constructed with the objective of studying detonation phenomena in mixtures of hydrogen-air-steam at initially high temperatures. The central element of the HTCF is a 27-cm inner diameter and 21.3-m long cylindrical test vessel capable of being heated to 700K x 14K. A unique feature of the HTCF is the "diaphragmless" acetylene-oxygen gas driver which is used to initiate the detonation in the test gas. Cell size measurements in hydrogen-air-steam mixtures have shown that increasing the initial mixture temperature, in the range of 300K to 650K, while maintaining the initial pressure of 0.1 MPa decreases the cell size and thus makes the mixture more detonable. Increasing the steam dilution increases the cell size, irrespective of initial temperature. It is also observed that the desensitizing effect of steam diminished with increased initial tem-

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perature. A one-dimensional, steady-state Zel'dovich, von Neumann, Doring model, with full chemical kinetics, has been used to predict cell size for hydrogen-air-steam mixtures at different initial conditions.

NUREG/CR-6393: INTEGRATED SYSTEM VALIDATION: METHODOLOGY AND REVIEW CRITERIA. O'HARA, J.; STUBLER, W.; HIGGINS, J.; et al. Brookhaven National Laboratory. January 1997. 116pp. 9702060198. BNL-NUREG-52483. 91655:231.

The U.S. Nuclear Regulatory Commission reviews the human factors engineering (HFE) aspects of advanced nuclear power plant designs. In order to support the advanced reactor design certification reviews, the HFE Program Review Model was developed. The model describes the HFE program elements that are necessary and sufficient to develop an acceptable detailed design and provides the review criteria for their evaluation. One of the review elements is verification and validation. The purpose of this document is to discuss the detailed methodological considerations necessary for a review of an HFE integrated system validation. A conceptual approach, or paradigm, to integrated system validation is presented which identifies important validation principles and their relationships. The validation paradigm was used to identify the methodological aspects of the validation process that are needed to meet the general paradigm requirements. The methodology must support a logical and defensible inference to be made from validation tests to predicted integrated system performance under actual operating conditions. The validation paradigm is based upon four general forms of validity: system representation, performance representation, test design and statistical conclusion validity. Validating an integrated system is based on establishing that these four types of validity are satisfied. Such assessments are made by reviewing the methodology used to conduct validation tests. Methodological factors relevant to each of the aspects of validity are discussed.

NUREG/CR-6397: RADIATION SAFETY CONCERNS FOR PREGNANT OR BREAST-FEEDING PATIENTS. The Positions Of The NCRP And The ICRP. MEINHOLD, C.B. Brookhaven National Laboratory. January 1997. 23pp. 9702070213. BNL-NUREG-52484. 91666:316.

For many years, protecting the fetus has been a concern of the National Council on Radiation Protection and Measurements (NCRP) and the International Commission on Radiological Protection (ICRP). Early recommendations focused on the possibility of a wide variety of detrimental developmental effects while later recommendations focused on the potential for severe mental retardation and/or reduction in the intelligence quotient (I.Q.). The latest recommendations also note that the risk of cancer for the fetus is probably two to three times greater per Sv than in the adult. For all these reasons, the NCRP and the ICRP have provided guidance to physicians on taking all reasonable steps to ascertain whether any woman requiring a radiological or nuclear medicine procedure is pregnant or nursing a child. The NCRP and the ICRP also advise the clinician to postpone such procedures until after delivery or cessation of nursing, if possible.

NUREG/CR-6399: RESULTS OF CHARPY V-NOTCH IMPACT TESTING OF STRUCTURAL STEEL SPECIMENS IRRADIATED AT 30 DEGREES C TO 1×10^{16} NEUTRONS/CM² IN A COMMERCIAL REACTOR CAVITY. ISKANDER, S.K.; STOLLER, R.E. Oak Ridge National Laboratory. April 1997. 51pp. 9705120288. ORNL-6886. 92828:001.

A capsule containing Charpy V-notch (CVN) and mini-tensile specimens was irradiated at ~ 30 degrees C (~ 85 degrees F) in the cavity of a commercial nuclear power plant to a fluence, of 1×10^{16} neutrons/cm² (> 1 MeV). The capsule included six CVN impact specimens of archival High Flux Isotope Reactor A212 grade B ferritic steel and five CVN impact specimens of a well-studied A36 structural steel. This irradiation was part of the ongoing study of neutron-induced damage effects at the low temperature and flux experienced by reactor supports. The

plant operators shut down the plant before the planned exposure was reached. The exposure of these specimens produced no significant irradiation-induced embrittlement.

NUREG/CR-6400: HUMAN FACTORS ENGINEERING (HFE) INSIGHTS FOR ADVANCED REACTORS BASED UPON OPERATING EXPERIENCE. HIGGINS, J.; NASTA, K. Brookhaven National Laboratory. January 1997. 61pp. 9704100181. BNL-NUREG-52485. 92416:244.

The NRC Human Factors Engineering Program Review Model (HFE PRM, NUREG-0711) was developed to support a design process review for advanced reactor design certification under 10CFR52. The HFE PRM defines ten fundamental elements of a human factors engineering program. An Operating Experience Review (OER) is one of these elements. The main purpose of an OER is to identify potential safety issues from operating plant experience and ensure that they are addressed in a new design. Broad-based experience reviews have typically been performed in the past by reactor designers. For the HFE PRM, the intent is to have a more focussed OER that concentrates on HFE issues or experience that would be relevant to the human-system interface (HSI) design process for new advanced reactors. This document provides a detailed list of HFE-relevant operating experience pertinent to the HSI design process for advanced nuclear power plants. This document is intended to be used by NRC reviewers as part of the HFE PRM review process in determining the completeness of an OER performed by an applicant for advanced reactor design certification.

NUREG/CR-6404: AN EXPERIMENTAL SCALE-MODEL STUDY OF SEISMIC RESPONSE OF AN UNDERGROUND OPENING IN JOINTED ROCK MASS. KANA, D.D.; FOX, D.J.; HSIUNG, S.; et al. Center for Nuclear Waste Regulatory Analyses. February 1997. 200pp. 9704250163. CNWRA 95-012. 92625:095.

This report describes an experimental investigation conducted by the Center for Nuclear Waste Regulatory Analyses (CNWRA) to (i) obtain a better understanding of the seismic response of an underground opening in a highly-fractured and jointed rock mass and (ii) generate a data set that can be used to evaluate the capabilities (analytical methods) to calculate such response. This report describes the design and implementation of simulated seismic experiments and results for a 1/15 scale model of a jointed rock mass with a circular tunnel in the middle. The discussion on the design of the scale model includes a description of the associated similitude theory, physical design rationale, model material development, preliminary analytical evaluation, instrumentation design and calibration, and model assembly and pretest procedures. The thrust of this discussion is intended to provide the information necessary to understand the experimental setup and to provide the background necessary to understand the experimental results. The discussion on the experimental procedures and results includes the seismic input test procedures, test runs, and measured excitation and response time histories. The closure of the tunnel due to various levels of seismic activity is presented. A threshold level of seismic input amplitude was required before significant rock mass motion occurred. The experiment, though designed as a two-dimensional representation of a rock mass, behaved in a somewhat three-dimensional manner, which will have an effect on subsequent analytical model comparison.

NUREG/CR-6414: PIPING BENCHMARK PROBLEMS FOR THE WESTINGHOUSE AP600 STANDARDIZED PLANT. BEZLER, P.; DEGRASSI, G.; BRAVERMAN, J.; et al. Brookhaven National Laboratory. January 1997. 300pp. 9702250218. BNL-NUREG-52487. 91871:001.

To satisfy the need for verification of the computer programs and modeling techniques that will be used to perform the final piping analyses for the Westinghouse AP600 Standardized Plant, three benchmark problems were developed. The problems are representative piping systems subjected to representative dynamic loads with solutions developed using the methods

being proposed for analysis for the AP600 standard design. It will be required that the combined licensees demonstrate that their solutions to these problems are in agreement with the benchmark problem set.

NUREG/CR-6426 V01: DUCTILE FRACTURE TOUGHNESS OF MODIFIED A 302 GRADE B PLATE MATERIALS, DATA ANALYSIS. MCCABE, D.E.; MANNESCHMIDT, E.; SWAIN, R.L. Oak Ridge National Laboratory. January 1997. 86pp. 9702190023. ORNL-6892. 91802:192.

The objective of this work was to develop ductile fracture toughness data in the form of J-R curves for modified A 302 grade B plate materials typical of those used in fabricating reactor pressure vessels. A previous experimental study at Materials Engineering Associates, Lanham, Maryland, on one particular heat of A 302 grade B plate showed decreasing J-R curves with increased specimen thickness. This characteristic has not been observed in numerous tests made on the more recent production materials of A 533 grade B and A 508 class 2 pressure vessel steels. It was unknown if the departure from norm for the MEA material was a generic characteristic for all heats of A 302 grade B steels or just unique to that one particular plate.

NUREG/CR-6426 V02: DUCTILE FRACTURE TOUGHNESS OF MODIFIED A 302 GRADE B PLATE MATERIALS, DATA RECORDS. MCCABE, D.E.; MANNESCHMIDT, E.; SWAIN, R.L. Oak Ridge National Laboratory. February 1997. 600pp. 9703200279. ORNL-6892. 92194:001.

The objective of this work was to develop ductile fracture toughness data in the form of J-R curves for modified A 302 grade B plate materials typical of those used in fabricating reactor pressure vessels. A previous experimental study at Materials Engineering Associates (MEA) on one particular heat of A 302 grade B plate showed decreasing J-R curves with increased specimen thickness. This characteristic has not been observed in numerous tests made on the more recent production materials of A 533 grade B and A 508 class 2 pressure vessel steels. It was unknown if the departure from norm for the MEA material was a generic characteristic for all heats of A 302 grade B steels or just unique to that one particular plate. Seven heats of modified A 302 grade B steel and one heat of vintage A 533 grade B steel were provided to this project by the General Electric Company of San Jose, California. All plates were tested for chemical content, tensile properties, Charpy transition temperature curves, drop-weight nil-ductility transition (NDT) temperature, and J-R curves. Tensile tests were made in the three principal orientations and at four temperatures, ranging from room temperature to 550 degrees F (288 degrees C). Charpy V-notch transition temperature curves were obtained in longitudinal, transverse, and short transverse orientations. J-R curves were made using four specimen sizes (1/2T, 1T, 2T, and 4T). The fracture mechanics-based evaluation method covered three test orientations and three test temperatures [180, 400, and 550 degrees F (82, 204, and 288 degrees C)]. However, the coverage of these variables was contingent upon the amount of material provided. Drop-weight NDT temperature was determined for the T-L orientation only. None of the seven heats of modified A 302 grade B showed size effects of any consequence on the J-R curve behavior. Crack orientation effects were present, but none were severe enough to be reported as atypical. A test temperature increase from 180 to 550 degrees F (82 to 288 degrees C) produced the usual loss in J-R curve fracture toughness. Generic J-R curves and mathematical curve fits to the same were generated to represent each heat of material. Volume 1 deals with evaluation of data and discussion of technical findings. This volume (Volume 2) is a compilation of all data developed.

NUREG/CR-6433: CONTAINMENT PERFORMANCE OF PROTO-

TYPICAL REACTOR CONTAINMENTS SUBJECTED TO SEVERE ACCIDENT CONDITIONS. KLAMERUS, E.W.; BOHN, M.P. Sandia National Laboratories. WESLEY, D.A.; et al. EQE Engineering Consultants (formerly EQE Engineering, Inc.). December 1996. 125pp. 9702060245. SAND96-2445. 91657:001.

In SECY-90-016, the NRC proposed a safety goal of a conditional containment failure probability (CCFP) of 0.1 and the alternative acceptance criteria allowed for steel containments, which specifies that the stresses should not exceed ASME Level C allowables for severe accident pressures and temperatures. In this work, the need for an equivalent criterion for concrete containments was studied. Six surrogate containments were designed and analyzed in order to compare the margins between design pressure, pressure resulting in exceedance of Level C (or yield) stress limits, and ultimate pressure. For comparability, each containment has an identical internal volume and design pressure. Results from the analysis showed margins to yield are comparable and display a similar margin for both steel and concrete containments. In addition, the margin to failure, although slightly higher in the steel containments, were also comparable. Finally, a CCFP for code design was determined based on general membrane behavior and imposing an upper bound severe accident curve developed in the DCH studies. The resulting CCFP's were less than 0.02 (or 2%) for all the surrogate containments studied, showing that these containment designs all achieved the NRC safety goal.

NUREG/CR-6437: FLOW AND TRANSPORT AT THE LAS CRUCES TRENCH SITE: EXPERIMENT IIB. VINSON, J.; HILLS, R.G.; et al. New Mexico State Univ., Las Cruces, NM. WIERENGA, P.J. Arizona, Univ. of, Tucson, AZ. July 1997. 234pp. 9708210009. A0142:001.

Three water flow and solute transport experiments were performed as part of a comprehensive field trench study near Las Cruces, New Mexico to test deterministic and stochastic models of vadose zone flow and transport. This report presents partial results from the third experiment (experiment IIB). Experiments IIA and IB were conducted on the North side of the trench, on a plot 1.22 m wide by 12 m long, perpendicular to the trench. The area was drip irrigated during two time periods with water containing a variety of tracers. The water front was measured with tensiometers and neutron probes. Solute fronts were determined from soil solutions through suction samplers and from disturbed samples. Experiment IIB results show predominantly downward water movement through the layered unsaturated soil. Tritium plumes were only half as deep and half as wide as the water plumes at 310 days after the start of the experiment. Chromium, applied as Cr(VI), moved similar to tritium, but with a loss of mass due to reduction of Cr(VI) to Cr(III). Chloride and nitrate, initially present at high concentrations in the soil solution, were displaced by the irrigation water. The extensive data presented should serve well as a data base for model testing.

NUREG/CR-6446: FRACTURE TOUGHNESS EVALUATIONS OF TP304 STAINLESS STEEL PIPES. RUDLAND, D.L.; BRUST, F.W.; WILKOWSKI, G.M. Battelle Memorial Institute, Columbus Laboratories. February 1997. 116pp. 9703100252. BMI-2194. 92062:225.

In the IPIRG-1 program, the J-R curve calculated for a 16-inch nominal diameter, Schedule 100 TP304 stainless steel (DP2-A8) surface-cracked pipe experiment (Experiment 1.3-3) was considerably lower than the quasi-static, monotonic J-R curve calculated from a C(T) specimen (A8-12a). The results from several related investigations conducted to determine the cause of the observed toughness difference are: (1) Chemical analyses on sections of Pipe DP2-A8 from several surface-cracked pipe and material property specimen fracture surfaces indicate that there are two distinct heats of material within Pipe DP2-A8 that differ in chemical composition. (2) SEN(T) specimen experimental results indicate that the toughness of a surface-cracked specimen is highly dependent on the depth of the

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initial crack. In addition, the J-R curves from the SEN(T) specimens closely match the J-R curve from the surface-cracked pipe experiment. (3) C(T) experimental results suggest that there is a large difference in the quasi-static, monotonic toughness between the two heats of DP2-A8, as well as a toughness degradation in the lower toughness heat of material (DP2-A8II) when loaded with a dynamic, cyclic ($R = -0.3$) loading history.

NUREG/CR-6448 V02: EVALUATION OF NATIONAL SEISMOGRAPH NETWORK DETECTION CAPABILITIES. Final Report. MCLAUGHLIN, K.L.; BARKER, T.G.; BENNETT, T.J. Affiliation Not Assigned. October 1997. 52pp. 9711140027. A1106:251.

This final report presents detection thresholds, detection probabilities, and location error ellipse projections for the United States National Seismic Network (USNSN) with and without real-time cooperative stations in the eastern United States. Network simulation methods are used with spectral noise levels to simulate the processes of excitation, propagation, detection, and processing of seismic phases. The USNSN alone should be capable of detecting 4 or more P waves for shallow crustal earthquakes in nearly all of the eastern and central United States at the magnitude 3.8 level. When real-time cooperative stations are included, the network should be capable of detecting 4 or more P waves from events 0.2 to 0.3 magnitude units lower. The planned expansion of the USNSN and cooperative stations should improve detection levels by an additional 0.2 to 0.3 magnitudes units in many areas. Location uncertainties for the USNSN should be significantly improved by addition of real-time cooperative stations. Median error ellipses for magnitude 4.5 earthquakes in the eastern and central U.S. depend strongly upon location but should be less than 100 square km in the central U.S. and degrade to 200 square km or more off-shore and south and north of the international boundaries. Close cooperation with the Canadian National Network should substantially improve detection and location along the Canadian border.

NUREG/CR-6451: A SAFETY AND REGULATORY ASSESSMENT OF GENERIC BWR AND PWR PERMANENTLY SHUT-DOWN NUCLEAR POWER PLANTS. TRAVIS, R.J.; DAVIS, R.E.; GROVE, E.J.; et al. Brookhaven National Laboratory. August 1997. 57pp. 9708080190. BNL-NUREG-52498. 94731:089.

An evaluation of the nuclear power plant regulatory basis is performed, as it pertains to those plants that are permanently shutdown (PSD) and awaiting or undergoing decommissioning. Four spent fuel storage configurations are examined. Recommendations are provided for those operationally based regulations that could be partially or totally removed for PSD plants without impacting public health and safety.

NUREG/CR-6452: THE SECOND INTERNATIONAL PIPING INTEGRITY RESEARCH GROUP (IPIRG-2) PROGRAM. Final Report. HOPPER, A.; WILKOWSKI, G.M.; SCOTT, P.; et al. Battelle Memorial Institute, Columbus Laboratories. March 1997. 292pp. 9704080384. BMI-2195. 92387:001.

The IPIRG-2 program was an international group program managed by the U.S. NRC and funded by organizations from 15 nations. The emphasis of the IPIRG-2 program was the development of data to verify fracture analyses for cracked pipes and fittings subjected to dynamic/cyclic load histories typical of seismic events. The scope included: (1) the study of more complex dynamic/cyclic load histories, i.e., multi-frequency, variable amplitude, simulated seismic excitations, than those considered in the IPIRG-1 program, (2) crack sizes more typical of those considered in Leak-Before-Break (LBB) and in-service flaw evaluations, (3) through-wall-cracked pipe experiments which can be used to validate LBB-type fracture analyses, (4) cracks in and around pipe fittings, such as elbows, and (5) laboratory specimens and separate effect pipe experiments to provide better insight into the effects of dynamic and cyclic load histories. Also undertaken were an uncertainty analysis to identify the issues most important for LBB or in-service flaw evaluations, updating computer codes and databases, the development and conduct of a series of round-robin analyses, and analyst's group meet-

ings to provide a forum for nuclear piping experts from around the world to exchange information on the subject of pipe fracture technology.

NUREG/CR-6454: POOL CRITICAL ASSEMBLY PRESSURE VESSEL FACILITY BENCHMARK. REMEC, I.; KAM, F.B.K. Oak Ridge National Laboratory. July 1997. 52pp. 9708210013. ORNL/TM-13205. A0141:274.

The pool critical assembly (PCA) pressure vessel wall facility benchmark (PCA benchmark) is described and analyzed in this report. Analysis of the PCA benchmark can be used for partial fulfillment of the requirements for the qualification of the methodology for pressure vessel neutron fluence calculations, as required by the U.S. Nuclear Regulatory Commission regulatory guide DG-1053. Section 1 of this report describes the PCA benchmark and provides all data necessary for the benchmark analysis. The measured quantities, to be compared with the calculated values, are the equivalent fission fluxes. In Section 2 the analysis of the PCA benchmark is described. Calculations with the computer code DORT, based on the discrete-ordinates method, were performed for three ENDF/B-VI-based multigroup libraries: BUGLE-93, SAILOR-95, and BUGLE-96. An excellent agreement of the calculated (C) and measures (M) equivalent fission fluxes was obtained. The arithmetic average C/M for all the dosimeters (total of 31) was 0.93 ± 0.03 and 0.92 ± 0.03 for the SAILOR-95 and BUGLE-96 libraries, respectively. The average C/M ratio, obtained with the BUGLE-93 library, for the 28 measurements was 0.93 ± 0.03 (the neptunium measurements in the water and air regions were overpredicted and excluded from the average). No systematic decrease in the C/M ratios with increasing distance from the core was observed for any of the libraries used.

NUREG/CR-6456: REVIEW OF INDUSTRY EFFORTS TO MANAGE PRESSURIZED WATER REACTOR FEEDWATER NOZZLE, PIPING, AND FEEDRING CRACKING AND WALL THINNING. SHAH, V.N.; WARE, A.G.; PORTER, A.M. Idaho National Engineering & Environmental Laboratory. March 1997. 190pp. 9704170076. INEL-96/0089. 92531:091.

Review of industry efforts to manage thermal fatigue, flow-accelerated corrosion, and steam generator water hammer damage to Pressurized Water Reactor (PWR) feedwater nozzles, piping, and feedrings is presented in this report. The review includes an evaluation of design modifications, operating procedure changes, augmented inspection and monitoring programs, and mitigation, repair and replacement activities. Four specific actions were taken to perform the evaluation (a) review of field experience to identify trends of operating events; (b) review of the related technical literature; (c) visits to three PWR plants and a PWR vendor; and (d) solicitation of information from foreign utilities. Our assessment of field experience indicates the USNRC licensees have apparently taken sufficient action to minimize the feedwater nozzle cracking caused by thermal fatigue, wall thinning of J-tubes and feedwater piping, and steam generator water hammer in both top-feed and pre-heat steam generators. A major finding of this review is that the analysis, inspection, monitoring, mitigation, and replacement techniques have been developed for managing thermal fatigue and flow-accelerated corrosion damage to feedwater nozzles, piping, and feedrings. Adequate training and appropriate applications of these techniques would ensure effective management of this damage. Several PWR plant operators have been proactive in managing this damage.

NUREG/CR-6459: FIELD STUDIES AT THE APACHE LEAP RESEARCH SITE IN SUPPORT OF ALTERNATIVE CONCEPTUAL MODELS. BASSETT, R.L.; NEUMAN, S.P.; WIERENGA, P.J.; et al. Arizona, Univ. of, Tucson, AZ. August 1997. 200pp. 9708290222. A0232:073.

This is a final technical report for a project of the U.S. Nuclear Regulatory Commission (sponsored contract 04-090-051) with The University of Arizona. The contract was an optional ex-

tension for the period July 12, 1994 to May 31, 1995. The project manager is Thomas J. Nicholson, Office of Nuclear Regulatory Research. The objectives of this contract are to examine hypotheses and test alternative conceptual models concerning unsaturated flow and transport through fractured rock and to design and execute confirmatory field and laboratory experiments to test these hypothesis and conceptual models at the Apache Leap Research Site near Superior, Arizona. Each chapter in this progress report summarizes research related to a specific set of objectives and can be read and interpreted as a separate entity. The tasks include detection and characterization of historical rapid flow through fractured rock and the relationship to perched water systems using environmental isotopic tracers of (3)H and (14)C, fluid and rock derived (234)U/(238)U measurements, and geophysical data. The water balance in a small watershed at the ALRS demonstrates the methods of accounting for ET, and estimating the quantity of water available for infiltration through fracture networks. Grain density measurements are now possible for core-sized samples using a newly designed gas pycnometer. The distribution and magnitude of air permeability measurements have been done in a three-dimensional setting and subsequent geostatistical analysis is presented. Electronic data sets of the data presented here are available from the authors more detailed discussion and analyses are available in the referenced technical publications.

NUREG/CR-6463 R01: REVIEW GUIDELINES FOR SOFTWARE LANGUAGES FOR USE IN NUCLEAR POWER PLANT SAFETY SYSTEMS. Final Report. HECHT, M.; DECKER, D.; GRAFF, S.; et al. SoHaR, Inc. October 1997. 58pp. 9711140044. A1105:027.

Guidelines for the programming and auditing of software written in high-level languages for safety systems are presented. The guidelines are derived from a framework of issues significant to software safety which was gathered from relevant standards and research literature. Language-specific adaptations of these guidelines are provided for the following high-level languages: Ada, C/C++, Programmable Logic Controller (PLC) Ladder Logic, International Electrotechnical Commission (IEC) Standard 1131-3 Sequential Function Charts, Pascal, and PL/M. Appendices to the report include a tabular summary of the guidelines and additional information on selected languages.

NUREG/CR-6464: AN EVALUATION OF METHODOLOGY FOR SEISMIC QUALIFICATION OF EQUIPMENT, CABLE TRAYS, AND DUCTS IN ALWR PLANTS BY USE OF EXPERIENCE DATA. BANDYOPADHYAY, K.; KANA, D.D.; KENNEDY, R.P.; et al. Brookhaven National Laboratory. July 1997. 140pp. 9708040210. BNL-NUREG-52500. 93995:001.

Advanced Reactor Corporation (ARC) has developed a methodology for seismic qualification of equipment, cable trays, and ducts in Advanced Light Water Reactor plants. A Panel (members of which acted as individuals) supported by the Office of Nuclear Regulatory Research of the Nuclear Regulatory Commission has evaluated this methodology. The review approach and observations are included in this report. In general, the Panel supports the ARC methodology with some exceptions and provides recommendations for further improvements.

NUREG/CR-6469: EXPERIMENTS TO INVESTIGATE DIRECT CONTAINMENT HEATING PHENOMENA WITH SCALED MODELS OF THE CALVERT CLIFFS NUCLEAR POWER PLANT. BLANCHAT, T.K.; PILCH, M.M.; ALLEN, M.D. Sandia National Laboratories. February 1997. 195pp. 9703170250. SAND96-2289. 92130:001.

The Surtsey Test Facility at Sandia National Laboratories (SNL) is used to perform scaled experiments for the Nuclear Regulatory Commission (NRC) that simulate High Pressure Melt Ejection (HPME) accidents in a nuclear power plant (NPP). These experiments are designed to investigate the effects of direct containment heating (DCH) phenomena on the containment load. In previous experiments, high-temperature, chemically reactive (thermitic) melt was ejected by high-pressure steam

into a scale model of either the Zion or Surry NPP. The results from the Zion and Surry experiments were extrapolated to other Westinghouse plants. This report describes tests performed with Combustion Engineering plant geometries (in particular, Calvert Cliffs-like) and the impact of codispersed water as part of the overall DCH issue resolution. Integral effects tests were performed with a 1/10th scale model of the Calvert Cliffs NPP inside the Surtsey test vessel. The experiments investigated the effects of codispersion of water, steam, and molten core simulant materials on DCH loads under prototypic accident conditions and plant configurations. The results indicated that large amounts of coejected water reduced the DCH load by a small amount. Large amounts of debris were dispersed from the cavity to the upper dome (via the annular gap).

NUREG/CR-6474: PRELIMINARY PHENOMENA IDENTIFICATION AND RANKING TABLES (PIRT) FOR SBWR STARTUP STABILITY. ROHATGI, U.S.; CHENG, H.S.; KHAN, H.J.; et al. Brookhaven National Laboratory. March 1997. 81pp. 9703200285. BNL-NUREG-52504. 92196:001.

Phenomena Identification and Ranking Tables (PIRT) have been developed for a start-up transient for SBWR. The information used for PIRT came from RAMONA-4B and TRACG analyses of the transient and from related small scale tests. The transient was divided into four distinct phases, namely, Sub-Cooled Core Heat-up, Subcooled Chimney, Saturated Chimney, and Power Ascension. The assessment criterion selected was Minimum Critical Power Ratio. The SBWR system was divided into ten components. A total of 35 distinct phenomena among the components were identified. The Phase I has 28 ranked phenomena with 17 low, 6 medium, and 5 high ranking. The Phase II has 39 ranked phenomena with 18 low, 13 medium and 8 high ranking. The Phase III has 47 ranked phenomena with 22 low, 10 medium and 15 high ranking. The Phase IV has 46 ranked phenomena with 16 low, 12 medium and 18 high ranking.

NUREG/CR-6478: MOTOR-OPERATED VALVE (MOV) ACTUATOR MOTOR AND GEARBOX TESTING. DEWALL, K.G.; WATKINS, J.C.; BRAMWELL, D. Idaho National Engineering & Environmental Laboratory. July 1997. 54pp. 9708210034. INEL-96/0219. A0141:217.

Researchers at the Idaho National Engineering and Environmental Laboratory tested the performance of electric motors and actuator gearboxes typical of the equipment installed on motor-operated valves used in nuclear power plants. Using a test stand that simulates valve closure loads against flow and pressure, we tested five electric motors (four ac and one dc) and three gearboxes at conditions a motor might experience in a power plant, including such off-normal conditions as operation at high temperature and reduced voltage. We also monitored the efficiency of the actuator gearbox. All five motors operated at or above their rated starting torque during tests at normal voltages and temperatures. For all five motors, actual torque losses due to voltage degradation were greater than the losses calculated by methods typically used for predicting motor torque at degraded voltage conditions. For the dc motor the actual torque losses due to elevated operating temperatures were greater than the losses calculated by the typical predictive method. The actual efficiencies of the actuator gearboxes were generally lower than the running efficiencies published by the manufacturer and were generally nearer the published pull-out efficiencies. Operation of the gearbox at elevated temperature did not affect the operating efficiency.

NUREG/CR-6481 V01: REVIEW OF MODELS USED FOR DETERMINING CONSEQUENCES OF UF(6) RELEASE. Development Of Model Evaluation Criteria. NAIR, S.K.; CHAMBERS, D.B.; PARK, S.H.; et al. November 1997. 51pp. 9712230285. A1501:144.

The objective of this study is to examine the usefulness and effectiveness of currently existing models that simulate the re-

lease of UF(6) from UF(6)-handling facilities, subsequent reactions of UF(6) with atmospheric moisture, and the dispersion of UF(6) and reaction products in the atmosphere. The study evaluates screening-level and detailed public-domain models that were specifically developed for UF(6) and models that were originally developed for the treatment of dense gases but are applicable to UF(6) release, reaction, and dispersion. The model evaluation process is divided into three specific tasks: model-component evaluation, applicability evaluation, and user interface and Quality Assurance and Quality Control (QA/QC) evaluation. Within the model-component evaluation process, a model's treatments of source term, thermodynamics, and atmospheric dispersion are considered and comparisons of model predictions with observations are made. Within the applicability evaluation process, a model's applicability to Integrated Safety Analysis (ISA), Emergency Response Planning (ERP), and Post-Accident Analysis (PAA), and to site-specific considerations are assessed. Finally, within the user interface and QA/QC evaluation process, a model's user-friendliness, presence and clarity of documentation, ease of use, etc. are assessed along with its handling of QA/QC. This document presents the complete methodology used in the evaluation process.

NUREG/CR-6481 V02: REVIEW OF MODELS USED FOR DETERMINING CONSEQUENCES OF UF(6) RELEASE. Model Evaluation Report. NAIR, S.K.; CHAMBERS, D.B.; PARK, S.H.; et al. . November 1997. 212pp. 9712230298. A1498:139.

Three uranium hexafluoride- (UF(6)-) specific models--HGSYSTEM/UF(6) SAIC, and RTM-96; three dense-gas models--DEGADIS, SLAB, and the Chlorine Institute methodology; and one toxic chemical model--AFTOX-- are evaluated on their capabilities to simulate the chemical reactions, thermodynamics, and atmospheric dispersion of UF(6) released from accidents at nuclear fuel-cycle facilities, in support of Integrated Safety Analysis, Emergency Planning, and Post-Accident Analysis. The models are also evaluated for user-friendliness and for quality assurance and quality control features, to ensure the validity and credibility of the results from the models. Model performance evaluations are conducted for the three UF(6)- specific models, using field data on releases of UF(6) and other heavy gases. Predictions from the HGSYSTEM/UF(6) and SAIC models are within an order of magnitude of the field data, but the SAIC model overpredicts beyond an order of magnitude for a few UF(6)- specific data points. The RTM-96 model provides overpredictions, within a factor of 3, for all data points beyond 400 m from the source. For one data set, however, the RTM-96 model severely underpredicts the observations within 200 m of the source. Outputs of the models are most sensitive to the meteorological parameters at large distances close to the source. Specific recommendations have been made to improve the applicability and usefulness of the three models and for the choice of a specific model to support the intended analyses. Guidance is provided on the choice of input parameters for initial dilution, building wake effects, and distance to completion of UF(6) reaction with water.

NUREG/CR-6486: ASSESSMENT OF MODULAR CONSTRUCTION FOR SAFETY-RELATED STRUCTURES AT ADVANCED NUCLEAR POWER PLANTS. BRAVERMAN, J.; MORANTE, R.; HOFMAYER, C. Brookhaven National Laboratory. March 1997. 201pp. 9704170099. BNL-NUREG-52520. 92518:014.

Modular construction techniques have been successfully used in a number of industries, both domestically and internationally. Recently, the use of structural modules has been proposed for advanced nuclear power plants. The objective in utilizing modular construction is to reduce the construction schedule, reduce construction costs, and improve the quality of construction. This report documents the results of a program which evaluated the proposed use of modular construction for safety-related structures in advanced nuclear power plant designs. The program included review of current modular construction technology, development of licensing review criteria for modular construction, and initial validation of currently available analytical techniques

applied to concrete-filled steel structural modules. The program was conducted in three phases. The objective of the first phase was to identify the technical issues and the need for further study in order to support NRC licensing review activities. The two key findings were the need for supplementary review criteria to augment the Standard Review Plan and the need for verified design/analysis methodology for unique types of modules, such as the concrete-filled steel module. In the second phase of this program, Modular Construction Review Criteria were developed to provide guidance for licensing reviews. In the third phase, an analysis effort was conducted to determine if currently available finite element analysis techniques can be used to predict the response of concrete-filled steel modules.

NUREG/CR-6493: DOSES TO THE HAND DURING THE ADMINISTRATION OF RADIOLABELED ANTIBODIES CONTAINING Y-90, TC-99M, I-131, AND LU-177. BARBER, D.E. Minnesota, Univ. of, Minneapolis, MN. CARSTEN, A.L.; KAURIN, D.G.L.; et al. Brookhaven National Laboratory. February 1997. 60pp. 9703100224. BNL-NUREG-52510. 92035:235.

Exposure of the hands of medical personnel administering radiolabeled antibodies (RABS) was evaluated on the basis of (a) observing and photo-documenting administration techniques, and (b) experimental data on doses to thermoluminescent dosimeters (TLDs) on fingers of phantom hands holding syringes, and on syringes, with radionuclides in the syringes in each case. Dose rate coefficients to the skin, if in contact with the syringe wall, were 89, 1.9, 3.8, and 0.41 $\mu\text{Sv s}^{-1}$ averaged over 1 CM(2) at 7 mg CM(-2) per 37 MBq (1 mCi) for Y-90, Tc-99m, I-131, and Lu-177, respectively. When using Y-90 the importance of avoiding direct contact with syringes containing RABs and of using a beta-particle shield on the syringe was indicated. In using a syringe for injection, doses can best be approximated for the geometry studied by (a) wearing a finger dosimeter on the middle finger, toward the outside of the hand, on the hand operating the plunger, and (b) wearing finger dosimeters on the inner (palm) side of the finger on the hand that supports the syringe for energetic beta-particle emitters, such as Y-90 and F-188.

NUREG/CR-6497: DATA COLLECTION AND FIELD EXPERIMENTS AT THE APACHE LEAP RESEARCH SITE. May 1995 - 1996. BASSETT, R.L.; NEUMAN, S.P.; WIERENGA, P.J.; et al. Arizona, Univ. of, Tucson, AZ. August 1997. 144pp. 9709150105. A0363:188.

This report documents the research performed during the period May 1995-May 1996 for a project of the U.S. Nuclear Regulatory Commission (sponsored contract NRC-04-090-051) by the University of Arizona. The project manager for this research is Thomas J. Nicholson, Office of Nuclear Regulatory Research. The objectives of this research were to examine hypotheses and test alternative conceptual models concerning unsaturated flow and transport through fractured rock, and to design and execute confirmatory field and laboratory experiments to test these hypotheses and conceptual models at the Apache Leap Research Site near Superior, Arizona. Each chapter in this report summarizes research related to a specific set of objectives and can be read and interpreted as a separate entity. Topics include: crosshole pneumatic and gaseous tracer field and modeling experiments designed to help validate the applicability of continuum geostatistical and stochastic concepts, theories, models, and scaling relations relevant to unsaturated flow and transport; use of geochemistry and aquifer testing to evaluate fracture flow and perching mechanisms; investigations of uranium isotopes to evaluate leaching selectivity; and transport and modeling of both conservative and non-conservative tracers.

NUREG/CR-6504 V01: AN UPDATED NUCLEAR CRITICALITY SLIDE RULE. Technical Basis. BROADHEAD, B.L.; HOPPER, C.M.; CHILDS, R.L.; et al. Oak Ridge National Laboratory. April 1997. 95pp. 9705090043. ORNL/TM-13322. 92826:233.

In January 1974, a limited distribution report, entitled "A Slide Rule for Estimating Nuclear Criticality Information," was written by C.M. Hopper for the Oak Ridge Y-12 Plant as a tool for emergency response to nuclear criticality accidents. Because of several shortcomings of the original slide rule, work began recently to update the slide rule using modern computational tools. Volume 1 of this report describes the analyses performed in support of this updated slide-rule tool and includes a sample, nonfunctioning version of the new slide rule. Volume 2 contains the functional version of the slide rule. The new slide-rule tool provides capabilities for the continued updating of accident information during the evolution of emergency response, including victim exposure information; potential exposures to emergency reentry personnel; estimates of future radiation fields; and fission-yield estimates.

NUREG/CR-6505 V01: THE POTENTIAL FOR CRITICALITY FOLLOWING DISPOSAL OF URANIUM AT LOW-LEVEL WASTE FACILITIES. Uranium Blended With Soil. TORAN, L.E.; HOPPER, C.M.; NANEY, M.T.; et al. Oak Ridge National Laboratory. June 1997. 137pp. 9707180200. ORNL/TM-13323. 93805:187.

The purpose of this study was to evaluate whether or not fissile uranium in low-level-waste (LLW) facilities can be concentrated by hydrogeochemical processes to permit nuclear criticality. A team of experts in hydrology, geology, geochemistry, soil chemistry, and criticality safety was formed to develop achievable scenarios for hydrogeochemical increases in concentration of special nuclear material (SNM), and to use these scenarios to aid in evaluating the potential for nuclear criticality. The team's approach was to perform simultaneous hydrogeochemical and nuclear criticality studies to (1) identify some achievable scenarios for uranium migration and concentration increase at LLW disposal facilities, (2) model groundwater transport and subsequent concentration increase via sorption or precipitation of uranium, and (3) evaluate the potential for nuclear criticality resulting from potential increases in uranium concentration over disposal limits. The analysis of SNM was restricted to (235)U in the present scope of work. The outcome of the work indicates that criticality is possible given established regulatory limits on SNM disposal. However, a review based on actual disposal records of an existing site operation indicates that the potential for criticality is not a concern under current burial practices.

NUREG/CR-6506: EMBRITTLEMENT DATA BASE, VERSION 1. WANG, J.A. Oak Ridge National Laboratory. August 1997. 220pp. 9709120071. ORNL/TM-13327. A0413:068.

Version 1 of the Embrittlement Data Base (EDB) is a comprehensive collection of data resulting from merging Version 2 of the Power Reactor Embrittlement Data Base (PR-EDB) and Version 1 of the Test Reactor Embrittlement Data Base (TR-EDB). Fracture toughness data were also integrated into Version 1 of the EDB. For power reactor data, the current EDB lists 1,029 transition-temperature shift data points (321 from plates, 125 from forgings, 115 from correlation monitor materials, 246 from welds, and 222 from heat-affected-zone (HAZ) materials) from Charpy specimens that were irradiated in 271 capsules from 101 commercial power reactors. For test reactor data, information is available for 1,308 different irradiated sets (352 from plates, 186 from forgings, 303 from correlation monitor materials, 396 from welds, and 71 from HAZs) and 268 different irradiated plus annealed data sets (89 from plates, 4 from forgings, 11 from correlation monitor materials, and 164 from weld materials). The data files of EDB are given in dBASE format and can be accessed with any personal computer using the DOS or WINDOWS operating system. A utility program has been written to investigate radiation embrittlement using this data base.

NUREG/CR-6507: CRITICAL HEAT FLUX (CHF) PHENOMENON ON A DOWNWARD FACING CURVED SURFACE. CHEUNG, F.B.; HADDAD, K.H.; LIU, Y.C. Pennsylvania State Univ., University Park, PA. June 1997. 171pp. 9706200256. PSU/ME-97-7321. 93422:007.

This report describes a theoretical and experimental study of the boundary layer boiling and critical heat flux phenomena on a downward facing curved heating surface, including both hemispherical and toroidal surfaces. A subscale boundary layer boiling (SBLB) test facility was developed to measure the spatial variation of the critical heat flux and observe the underlying mechanisms. Transient quenching and steady-state boiling experiments were performed in the SBLB facility under both saturated and subcooled conditions to obtain a complete database on the critical heat flux. To complement the experimental effort, an advanced hydrodynamic CHF model was developed from the conservation laws along with sound physical arguments. The model provides a clear physical explanation for the spatial variation of the CHF observed in the SBLB experiments and for the weak dependence of the CHF data on the physical size of the vessel. Based upon the CHF model, a scaling law was established for estimating the local critical heat flux on the outer surface of a heated hemispherical vessel that is fully submerged in water. The scaling law, which compares favorably with all the available local CHF data obtained for various vessel sizes, can be used to predict the local CHF limits on large commercial-size vessels.

NUREG/CR-6508: COMPONENT UNAVAILABILITY VERSUS INSERVICE TEST (IST) INTERVAL: EVALUATIONS OF COMPONENT AGING EFFECTS WITH APPLICATIONS TO CHECK VALVES. VESELY, W.E.; POOLE, A.B. Oak Ridge National Laboratory. July 1997. 270pp. 9707280087. ORNL-6909. 93916:086.

Methods are presented for calculating component unavailabilities when Inservice Test (IST) intervals are changed and when component aging is explicitly included. The methods extend usual approaches for calculating unavailability and risk effects of changing IST intervals which utilize Probabilistic Risk Assessment (PRA) methods that do not explicitly include component aging. Different IST characteristics are handled including ISTs which are not followed by corrective maintenances which completely renew or partially renew the component. ISTs which are not followed by maintenance activities needed to renew the component are also handled. Any downtime associated with the IST, including the test downtime and the following maintenance downtime, is included in the unavailability evaluations. A range of component aging behaviors is studied including both linear and nonlinear aging behaviors. Based upon evaluations completed to date, pooled failure data on check valves show relatively small aging (e.g., less than 7% per year). However, data from some plant systems could be evidence for larger aging rates occurring in time periods less than 5 years. The methods are utilized in this report to carry out a range of sensitivity evaluations to evaluate aging effects for different possible applications. Based on the sensitivity evaluations, summary tables are constructed showing how optimal IST interval ranges for check valves can vary relative to different aging behaviors which might exist. The evaluations are also used to identify IST intervals for check valves which are robust to component aging effects. General insights on aging effects are also extracted. These sensitivity studies and extracted results provide useful information which can be supplemented or be updated with plant specific information. The models and results can also be input to PRAs to determine associated risk implications.

NUREG/CR-6511 V01: STEAM GENERATOR TUBE INTEGRITY PROGRAM. Semiannual Report, August 1995 - March 1996. DIERCKS, D.R.; BAKHTIARI, S.; CHOPRA, O.K.; et al. Argonne National Laboratory. April 1997. 114pp. 9705120295. ANL-96/17. 92828:117.

This report summarizes work performed by Argonne National Laboratory on the Steam Generator Tube Integrity Program

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from the inception of that program in August 1995 through March 1996. The program is divided into five tasks, namely (1) Assessment of Inspection Reliability, (2) Research on ISI (in-service-inspection) Technology, (3) Research on Degradation Modes and Integrity, (4) Development of Methodology and Technical Requirements for Current and Emerging Regulatory Issues, and (5) Program Management. Under Task 1, progress is reported on the preparation of and evaluation of Nondestructive evaluation (NDE) techniques for inspecting a mock-up steam generator for round-robin testing, the development of better ways to correlate burst pressure and leak rate with eddy current (EC) signals, the inspection of sleeved tubes, workshop and training activities, and the evaluation of emerging NDE technology. Under Task 2, results are reported on closed-form solutions and finite element electromagnetic modeling of EC probe response for various probe designs and flaw characteristics. Under Task 3, facilities are being designed and built for the production of cracked tubes under aggressive and near-prototypical conditions and for the testing of flawed and unflawed tubes under normal operating, accident, and severe accident conditions. In addition, crack behavior and stability are being modeled to provide guidance on test facility design, to develop an improved understanding of the expected rupture behavior of tubes with circumferential cracks, and to predict the behavior of flawed and unflawed tubes under severe accident conditions. Task 4 is concerned with the cracking and failure of tubes that have been repaired by sleeving, and with a review of literature on this subject.

NUREG/CR-6513 N01: NRC HIGH-LEVEL RADIOACTIVE WASTE MANAGEMENT PROGRAM ANNUAL PROGRESS REPORT: FISCAL YEAR 1996. SAGAR,B. Center for Nuclear Waste Regulatory Analyses. January 1997. 317pp. 9704080389. FACA. 92385:001.

This annual status report for fiscal year 1996 documents technical work performed on ten key technical issues (KTIs) that are most important to performance of the proposed geologic repository at Yucca Mountain. This report was prepared jointly by the staff of the Nuclear Regulatory Commission (NRC) Division of Waste Management and the Center for Nuclear Waste Regulatory Analyses. The programmatic aspects of restructuring the NRC repository program in terms of KTIs is discussed and a brief summary of work accomplished is provided in Chapter 1. The other ten chapters provide a comprehensive summary of the work in each KTI. Discussions on probability of future volcanic activity and its consequences, impacts of structural deformation and seismicity, the nature of the near-field environment and its effects on container life and source term, flow and transport including effects of thermal loading, aspects of repository design, estimates of system performance, and activities related to the U.S. Environmental Protection Agency standard are provided.

NUREG/CR-6514: ANALYSIS OF POTENTIAL SELF-GUARANTEE TESTS FOR DEMONSTRATING FINANCIAL ASSURANCE BY NON-PROFIT COLLEGES, UNIVERSITIES, AND HOSPITALS AND BY BUSINESS FIRMS THAT DO NOT ISSUE BONDS. BAILEY,P.; DEAN,C.; COLLIER,J.; et al. ICF, Inc. June 1997. 70pp. 9706200262. 93422:175.

This report describes potential financial tests which could be used by NRC as a basis for allowing certain financially strong nonprofit licensees, and also non-bond issuing licensees, to use self-guarantee as a mechanism for meeting NRC financial assurance requirements. The analysis focuses on three categories of licensees; colleges or universities, hospitals, and commercial firms that do not issue bonds. The report assesses the financial assurance risk of various financial tests, and also estimates the number of licensees which could qualify for self-guarantee under different financial test alternatives.

NUREG/CR-6515: BLT-EC (BREACH, LEACH, AND TRANSPORT-EQUILIBRIUM CHEMISTRY) DATA INPUT GUIDE.A Computer Model For Simulating Release And Coupled Geochemical Transport Of Contaminants From A Subsurface Disposal Facility. MACKINNON,R.J. Ecodynamics Research Associates, Inc., SULLIVAN,T.M.; KINSEY,R.R. Brookhaven National Laboratory. May 1997. 240pp. 9706180471. BNL-NUREG-52516. 93484:001.

The BLT-EC computer code has been developed, implemented, and tested. BLT-EC is a two-dimensional finite element computer code capable of simulating the time-dependent release and reactive transport of aqueous phase species in a subsurface soil system. BLT-EC contains models to simulate the processes (container degradation, waste-form performance, transport, chemical reactions, and radioactive production and decay) most relevant to estimating the release and transport of contaminants from a subsurface disposal system. Water flow is provided through tabular input or auxiliary files. Container degradation considers localized failure due to pitting corrosion and general failure due to uniform surface degradation processes. Waste-form performance considers release to be limited by one of four mechanisms: rinse with partitioning, diffusion, uniform surface degradation, and solubility. Chemical reactions accounted for include complexation, sorption, dissolution-precipitation, oxidation-reduction, and ion exchange. Radioactive production and decay in the waste form is simulated. Transport considers the processes of advection, dispersion, diffusion, chemical reaction, radioactive production and decay, and sources (waste form releases). To improve the usefulness of BLT-EC, a pre-processor, ECIN, which assists in the creation of chemistry input files, and a post-processor, BLT-EC, which provides a visual display of the data have been developed. BLT-EC also includes an extensive database of thermodynamic data that is also accessible to ECIN. This document reviews the models implemented in BLT-EC and serves as a guide to creating input files and applying BLT-EC.

NUREG/CR-6519: SCREENING REACTOR STEAM/WATER PIPING SYSTEMS FOR WATER HAMMER. GRIFFITH,P. Massachusetts Institute of Technology, Cambridge, MA. September 1997. 52pp. 9709120067. A0354:234.

A steam/water system possessing a certain combination of thermal, hydraulic and operational states, can, in certain geometries, lead to a steam bubble collapse induced water hammer. These states, operations, and geometries are identified. A procedure that can be used for identifying whether an unbuilt reactor system is prone to water hammer is proposed. For the most common water hammer, steam bubble collapse induced water hammer, six conditions must be met in order for one to occur. These are: 1) the pipe must be almost horizontal; 2) the sub-cooling must be greater than 20 degrees C; 3) the L/D must be greater than 24; 4) the velocity must be low enough so that the pipe does not run full, i.e., the Froude number must be less than one; 5) there should be void nearby; 6) the pressure must be high enough so that significant damage occurs, that is the pressure should be above 10 atmospheres. Recommendations on how to avoid this kind of water hammer in both the design and the operation of the reactor system are made.

NUREG/CR-6523 V01: PROBABILISTIC ACCIDENT CONSEQUENCE UNCERTAINTY ANALYSIS.Food Chain Uncertainty Assessment.Main Report. BROWN,J. United Kingdom. GOOSSENS,L.H.J.; KRAAN,B.C.P.; et al. Delft University of Technology. June 1997. 78pp. 9709020313. EUR 16771. A0234:001.

The development of two new probabilistic accident consequence codes, MACCS and COSYMA, was completed in 1990. These codes estimate the consequence from the accidental releases of radiological material from hypothesized accidents at nuclear installations. In 1991, the U.S. Nuclear Regulatory Commission and the Commission of the European Communities began cosponsoring a joint uncertainty analysis of the two

codes. The ultimate objective of this joint effort was to systematically develop credible and traceable uncertainty distributions for the respective code input variables. A formal expert judgment elicitation and evaluation process was identified as the best technology available for developing a library of uncertainty distributions for these consequence parameters. This report focuses on the results of the study to develop distribution for variables related to the MACCS and COSYMA food chain models. Both soil/plant transfer processes and radionuclide transport in animals were assessed.

NUREG/CR-6523 V02: PROBABILISTIC ACCIDENT CONSEQUENCE UNCERTAINTY ANALYSIS. Food Chain Uncertainty Assessment. Appendices. BROWN, J. United Kingdom. GOOSSENS, L.H.J.; KRAAN, B.C.P.; et al. Delft University of Technology. June 1997. 334pp. 9709020327. EUR 16771. A0233:001.

See NUREG/CR-6523, V01 abstract.

NUREG/CR-6525: SECPOP90: SECTOR POPULATION, LAND FRACTION, AND ECONOMIC ESTIMATION PROGRAM. HUMPHREYS, S.L. Sandia National Laboratories. ROLLSTIN, J.A. GRAM, Inc. RIDGELY, J.N. Division of Systems Technology (Post 941217). September 1997. 441pp. 9710070358. SAND93-4032. A0641:125.

In 1973 Mr. W. Athey of the Environmental Protection Agency wrote a computer program called SECPOP which calculated population estimates. Since that time, two things have changed which suggested the need for updating the original program--more recent population censuses and the widespread use of personal computers (PCs). The revised computer program uses the 1990 and 1992 Population Census information and runs on current PCs as "SECP90". SECPOP90 consists of two parts: site and regional. The site analysis provides population and economic data estimates for any location within the continental United States. Siting analysis is relatively fast running. The regional portion assesses site availability for different siting policy decisions; i.e., the impact of available sites given specific population density criteria within the continental United States. Regional analysis is slow. This report compares the SECPOP90 population estimates and the nuclear power reactor licensee-provided information. Although the source, and therefore, the accuracy of the licensee information is unknown, this comparison suggests SECPOP90 makes reasonable estimates.

NUREG/CR-6526 V01: PROBABILISTIC ACCIDENT CONSEQUENCE UNCERTAINTY ANALYSIS. Uncertainty Assessment For Deposited Material And External Doses. Main Report. GOOSSENS, L.H.; KRAAN, B.C.; et al. Netherlands, Govt. of. BOARDMAN, J. AEA Technology. December 1997. 66pp. 9801260178. EUR 16772. A1879:040.

The development of two new probabilistic accident consequence codes, MACCS and COSYMA, was developed in 1990. These codes estimate the consequence from the accidental releases of radiological material from hypothesized accidents at nuclear installations. In 1991, the U.S. Nuclear Regulatory Commission and the Commission of the European Communities began cosponsoring a joint uncertainty analysis of the two codes. The ultimate objective of this joint effort was to systematically develop credible and traceable uncertainty distributions for the respective code input variables. A formal expert judgment elicitation and evaluation process was identified as the best technology available for developing a library of uncertainty distributions for these consequence parameters. This report focuses on the results of the study to develop distribution for variables related to the MACCS and COSYMA deposited material and external dose models.

NUREG/CR-6526 V02: PROBABILISTIC ACCIDENT CONSEQUENCE UNCERTAINTY ANALYSIS. UNCERTAINTY ASSESSMENT FOR DEPOSITED MATERIAL AND EXTERNAL DOSES. Appendices. GOOSSENS, L.H.; KRAAN, B.C.; et al. Netherlands, Govt. of. BOARDMAN, J. AEA Technology. December 1997. 403pp. 9801260185. EUR 16772. A1878:001.

See NUREG/CR-6526, V01 abstract.

NUREG/CR-6527: FINAL RESULTS OF THE XR2-1 BWR METALLIC MELT RELOCATION EXPERIMENT. GAUNTT, R.O. Sandia National Laboratories. HUMPHRIES, L.L. Science Applications International Corp. (formerly Science Applications, Inc.). August 1997. 177pp. 9708210414. SAND97-1039. A0156:112.

This report documents the final results of the XR2-1 boiling water reactor (BWR) metallic melt relocation experiment, conducted at Sandia National Laboratories for the U.S. Nuclear Regulatory Commission. The objective of this experiment was to investigate the material relocation processes and relocation pathways in a dry BWR core following a severe nuclear reactor accident such as an unrecovered station blackout accident. The imposed test conditions (initial thermal state and the melt generation rates) simulated the conditions for the postulated accident scenario and the prototypic design of the lower core test section (in composition and in geometry) ensured that thermal masses and physical flow barriers were modeled adequately. The experiment has shown that, under dry core conditions, the metallic core materials that melt and drain from the upper core regions can drain from the core region entirely without formation of robust coherent blockages in the lower core. Temporary blockages that suspended pools of molten metal later melted, allowing the metals to continue draining downward. The test facility and instrumentation are described in detail. The test progression and results are presented and compared to MERIS code analyses.

NUREG/CR-6528: ENVIRONMENTAL ASSESSMENT PROPOSED LICENSE RENEWAL OF NUCLEAR METALS, INC. CONCORD, MASSACHUSETTS. MILLER, R.L.; EASTERLY, C.E.; LOMBARDI, D.A.; et al. Oak Ridge National Laboratory. February 1997. 88pp. 9703100266. 92020:152.

This Environmental Assessment was prepared to evaluate environmental issues associated with the renewal of NRC License Nos. SMB-179 and SUB-1452 for facilities operated by Nuclear Metals, Inc. (NMI) in Concord Massachusetts. License renewal is needed to permit the continuation of NMI operations involving depleted and natural uranium.

NUREG/CR-6529: VALIDATION OF TECTONIC MODELS FOR AN INTRAPLATE SEISMIC ZONE, CHARLESTON, SOUTH CAROLINA WITH GPS GEODETIC DATA. TALWANI, P.; KELLOGG, J.N.; TRENKAMP, R. South Carolina, Univ. of, Columbia, SC. February 1997. 54pp. 9703100260. 92018:299.

Although the average strain rate in intraplate settings is 2-3 orders of magnitude lower than at plate boundaries, there are pockets of high strain rates within intraplate regions. The results of a Global Positioning System survey near the location of current seismicity (and the inferred location of the destructive 1886 Charleston, South Carolina earthquake) suggest that there is anomalous strain build-up occurring there. By reoccupying 1930 triangulation and 1980 GPS sites with six Trimble SST dual frequency receivers, a strain rate of 0.4×10^{-7} yr⁻¹ was observed. At the 95% confidence level, this value is not significant; however, at a lower level of confidence (~85%) it is about two orders of magnitude greater than the background of 10^{-9} to 10^{-10} yr⁻¹. The direction of contraction inferred from the GPS survey 66 degrees $\pm$ 11 degrees is in excellent agreement with the direction of the maximum horizontal stress (N 60 degrees E) in the area, suggesting that the observed strain rate is also real.

NUREG/CR-6530: DELIBERATE IGNITION OF HYDROGEN-AIR-STEAM MIXTURES IN CONDENSING STEAM ENVIRONMENTS. BLANCHAT, T.K. Sandia National Laboratories. STAMPS, D.W. Evansville, Univ. of, Evansville, IN. May 1997. 93pp. 9706240048. SANL94-1676. 93489:266.

Large scale experiments were performed at the Surtsey Test Facility for the Nuclear Regulatory Commission to determine the effectiveness of thermal glow igniters to burn hydrogen in a rapidly condensing steam environment due to the presence of

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water sprays. The experiments were designed to determine if a detonation or an accelerated flame could occur in a hydrogen-air-steam mixture which was initially nonflammable due to steam dilution but was subsequently rendered flammable by rapid condensation of steam due to water sprays. The experiments were conducted under conditions scaled to be nearly prototypic of those expected in Advanced Light Water Reactors (such as the Combustion Engineering (CE) System 80+), with prototypic spray drop diameter, spray mass flux, steam condensation rates, hydrogen injection flow rates, and using the actual proposed plant igniters. The lack of any significant pressure increase during the majority of the burn and condensation events, signified that localized, benign hydrogen deflagration(s) occurred with no significant pressure load on the Surtsey containment vessel. This report describes these experiments, gives the experimental results, and provides interpretation of the results.

NUREG/CR-6531: EFFECTS OF RADIOACTIVE HOT PARTICLES ON PIG SKIN. KAURIN,D.G.L.; BAUM,J.W.; CARSTEN,A.L.; et al. Brookhaven National Laboratory. June 1997. 315pp. 9710060475. BNL-NUREG-52499. A0623:056.

The purpose of these studies was to determine the incidence and severity of lesions resulting from very localized deposition of dose to skin from small (< 0.5 mm) discrete radioactive particles as produced in the work environments of nuclear reactors. Hanford mini-pigs were exposed, both on and slightly off the skin, to localized replicate doses from 0.31 to 64 Gy (averaged over 1 CM(2) at 70 μ m depth unless noted otherwise) using Sc-46, Yb-175, Tm-170, and fissioned UC(2) isotopes having maximum beta-particle energies from about 0.3 to 3 MeV. Erythema and scabs (indicating ulceration) were scored for up to 71 days post-irradiation. The responses followed normal cumulative probability distributions, and therefore, no true threshold could be defined. Hence, 10 and 50% scab incidence rates were deduced using probit analyses. The lowest dose which produced 10% incidence was about 1 Gy for Yb-175 (0.5 MeV maximum energy) beta particle exposures, and about 3 to 9 Gy for other isotopes. The histopathology of lesions was determined at several doses. Single exposures to doses as large as 1,790 Gy were also given, and results were observed for up to 144 days post-exposure. Severity of detriment was estimated by analyzing the results in terms of lesion diameter, persistence, and infection. Over 1,100 sites were exposed. Only two exposed sites became infected after doses near 500 Gy; the lesions healed quickly on treatment.

NUREG/CR-6533: CODE MANUAL FOR CONTAIN 2.0: A COMPUTER CODE FOR NUCLEAR REACTOR CONTAINMENT ANALYSIS. MURATA,K.K.; WILLIAMS,D.C. Sandia National Laboratories. TILLS,J.; et al. Affiliation Not Assigned. December 1997. 955pp. 9801120086. SAND97-1735. A1731:001.

The CONTAIN 2.0 computer code is an integrated analysis tool used for predicting the physical, chemical, and radiological conditions inside a containment building following the release of material from the primary system in a light-water reactor (LWR) accident. It can also predict the source term to the environment. The purpose of this Code Manual is to provide full documentation of the features and models in CONTAIN 2.0. Besides complete descriptions of the models, this Code Manual provides a complete description of the input and output from the code. The code includes atmospheric models for steam/air thermodynamics, intercell flows, condensation/evaporation on structures and aerosols, aerosol behavior, and gas combustion. It also includes models for reactor cavity phenomena such as core-concrete interactions and coolant pool boiling. Heat conduction in structures, fission product decay and transport, radioactive heating, and the thermal-hydraulic and fission product decontamination effects of engineered safety features are also modeled. These models allow selected design basis and severe accidents to be analyzed, for both current and advanced LWR designs.

NUREG/CR-6534 V01: FRAPCON-3: MODIFICATIONS TO FUEL ROD MATERIAL PROPERTIES AND PERFORMANCE MODELS FOR HIGH-BURNUP APPLICATION. LANNING,D.D.; BEYER,C.E.; PAINTER,C.L. Battelle Memorial Institute, Pacific Northwest National Laboratory. December 1997. 131pp. 9801120078. PNNL-11513. A1744:001.

This volume describes the fuel rod material and performance models that were updated for the FRAPCON-3 steady-state fuel rod performance code. The property and performance models were changed to account for behavior at extended burnup levels up to 65 GWd/MTU. The property and performance models updated were the fission gas release, fuel thermal conductivity, fuel swelling, fuel relocation, radial power distribution, solid-solid contact gap conductance, cladding corrosion and hydriding, cladding mechanical properties, and cladding axial growth. Each updated property and model was compared to well characterized data up to high burnup levels. The installation of these properties and models in the FRAPCON-3 code along with input instructions are provided in Volume 2 of this report and Volume 3 provides a code assessment based on comparison to integral performance data. The updated FRAPCON-3 code is intended to replace the earlier codes FRAPCON-2 and GAPCON-THERMAL-2.

NUREG/CR-6535: DEVELOPMENT OF CONFORMAL RESPIRATOR MONITORING TECHNOLOGY. SHONKA,J.J.; WEISMANN,J.J.; LOGAN,R.J.; et al. Affiliation Not Assigned. April 1997. 28pp. 9705210294. 93061:317.

This report summarizes the results of a Small Business Innovative Research Phase II project to develop a modular, surface conforming respirator monitor to improve upon the manual survey techniques presently used by the nuclear industry. Research was performed with plastic scintillator and gas proportional modules in an effort to find the most conducive geometry for a surface conformal, position sensitive monitor. The respirator monitor prototype developed is a computer controlled, position-sensitive detection system employing 56 modular proportional counters mounted in molds conforming to the inner and outer surfaces of a commonly used respirator (Scott Model 801450-40). The molds are housed in separate enclosures and hinged to create a "waffle-iron" effect so that the closed monitor will simultaneously survey both surfaces of the respirator. The proportional counter prototype was also designed to incorporate Shonka Research Associates' previously developed charge-division electronics. This research provided valuable experience into pixellated position sensitive detection systems. The technology developed can be adapted to other monitoring applications where there is a need for deployment of many traditional radiation detectors.

NUREG/CR-6538: EVALUATION OF LOCA WITH DELAYED LOOP AND LOOP WITH DELAYED LOCA ACCIDENT SCENARIOS. MARTINEZ-GURIDI; SAMANTA,P.K.; CHU,T-L.; et al. Brookhaven National Laboratory. July 1997. 231pp. 9708060249. BNL-NUREG-52528. 94698:022.

Generic Safety Issue 171 (GSI-171), Engineered Safety Features (ESF) Failure from a Loss Of Offsite Power (LOOP) subsequent to a Loss Of Coolant Accident (LOCA), deals with an accident sequence in which a LOCA is followed by a LOOP. This issue was later broadened to include a LOOP followed by a LOCA. Plants are designed to handle a simultaneous LOCA and LOOP. In this report, we address the unique issues that are involved in LOCA with delayed LOOP (LOCA/LOOP) and LOOP with delayed LOCA (LOOP/LOCA) accident sequences, and determine that such sequences and the specific concerns raised as part of GSI-171 are not fully addressed in Individual Plant Examination (IPE) submittals. The determination is based on our review of selected IPE Submittals. LOOP/LOCA accidents are addressed more fully by IPEs than are LOCA/LOOP ones. LOCA/LOOP accidents are analyzed further in this report by developing event-tree/fault-tree models to quantify their contributions to core-damage frequency (CDF) in a pressurized water

reactor and a boiling water reactor (PWR and a BWR). Engineering evaluation and judgements are used during quantification to estimate the unique conditions that arise in a LOCA/LOOP accident. The results show that the CDF contribution of such an accident can be a dominant contributor to plant risk, although BWRs are less vulnerable than PWRs.

NUREG/CR-6539: EFFECTS OF FLUORIDE AND OTHER HALOGEN IONS ON THE EXTERNAL STRESS CORROSION CRACKING OF TYPE 304 AUSTENITIC STAINLESS STEEL. WHORLOW, K.M.; HUTTO, F.B. Affiliation Not Assigned. July 1997. 50pp. 9707240126. 93886:153.

The drip procedure from ASTM C 692-95a was used to research the effect of halogens and inhibitors on the External Stress Corrosion Cracking (ESCC) of Type 304 stainless steel as it applies to NRC RG 1.36. The solutions used in this research were prepared using pure chemical reagents to simulate the halogens and inhibitors found in insulation extraction solutions. The results indicated that sodium silicate compounds that were higher in sodium were more effective for preventing chloride-induced ESCC in type 304 austenitic stainless steel. Potassium silicate (all-silicate inhibitor) was not as effective as sodium silicate. Limited testing with sodium hydroxide (all-sodium inhibitor) indicated that it may be effective as an inhibitor. Fluoride, bromide, and iodide caused minimal ESCC which could be effectively inhibited by sodium silicate. The addition of fluoride to the chloride/sodium silicate systems at the threshold of ESCC appeared to have no synergistic effect on ESCC. The mass ratio of sodium + silicate (mg/kg) to chloride (mg/kg) at the lower end of the NRC RG 1.36 Acceptability Curve was not sufficient to prevent ESCC using the methods of this research.

NUREG/CR-6541 R02: PHENOMENA IDENTIFICATION AND RANKING TABLES FOR WESTINGHOUSE AP600 SMALL BREAK LOSS-OF-COOLANT ACCIDENT, MAIN STEAM LINE BREAK, AND STEAM GENERATOR TUBE RUPTURE SCENARIOS. WILSON, G.E.; FLETCHER, C.D.; DAVIS, C.B.; et al. Idaho National Engineering & Environmental Laboratory. June 1997. 260pp. 9709030400. INEL-94/0061. A0235:298.

This report documents the results of Phenomena Identification and Ranking Table (PIRT) efforts for the Westinghouse AP600 reactor. The purpose of this PIRT is to identify important phenomena so that they may be addressed in both the experimental programs and the RELAP5/MOD3 systems analysis computer code. The responses of AP600 during small break loss-of-coolant accident, main steam line break, and steam generator tube rupture accident scenarios were evaluated by a committee of thermal-hydraulic experts. Committee membership included Idaho National Engineering and Environmental Laboratory staff and recognized thermal-hydraulic experts from outside of the laboratory. Each of the accident scenarios was subdivided into separate, sequential periods or phases. Within each phase, the plant behavior is controlled by, at most, a few thermal-hydraulic processes. The committee identified the phenomena influencing those processes, and ranked the influences as being of high, medium, low, or insignificant importance. The primary product of this effort is a series of tables, one for each phase of each accident scenario, describing the thermal-hydraulic phenomena judged by the committee to be important, and the relative ranking of that importance. The rationales for the phenomena selected and their rankings are provided.

NUREG/CR-6543: EFFECTS OF SMOKE ON FUNCTIONAL CIRCUITS. TANAKA, T.J. Sandia National Laboratories. October 1997. 57pp. 9711210006. SAND97-2544. A1181:216.

Nuclear power plants are converting to digital instrumentation and control systems; however, the effects of abnormal environments such as fire and smoke on such systems are not known. There are no standard tests for smoke, but previous smoke exposure tests at Sandia National Laboratories have shown that digital communications can be temporarily interrupted during a smoke exposure. Another concern is the long-term corrosion of metals exposed to the acidic gases produced by a cable fire.

This report documents measurements of basic functional circuits during and up to 1 day after exposure to smoke created by burning cable insulation. Printed wiring boards were exposed to the smoke in an enclosed chamber for 1 hour. For high-resistance circuits, the smoke lowered the resistance of the surface of the board and caused the circuits to short during the exposure. These circuits recovered after the smoke was vented. For low-resistance circuits, the smoke caused their resistance to increase slightly. A polyurethane conformal coating substantially reduced the effects of smoke. A high-speed digital circuit was unaffected. A second experiment on different logic chip technologies showed that the critical shunt resistance that would cause failure was dependent on the chip technology and that the components used in the smoke exposures were some of the most smoke tolerant. The smoke densities in these tests were high enough to cause changes in high impedance (resistance) circuits during exposure, but did not affect most of the other circuits. Conformal coatings and the characteristics of chip technologies should be considered when designing digital circuitry for nuclear power plant safety systems, which must be highly reliable under a variety of operating and accident conditions.

NUREG/CR-6547: DOSFAC2 USER'S GUIDE. YOUNG, M.L. Sandia National Laboratories. CHANIN, D.I. Technadyne Engineering Consultants, Inc. December 1997. 55pp. 9801120074. SAND97-2776. A1733:276.

This document is a user's guide for the DOSFAC2 Code. DOSFAC2 generates a file of dose-to-source conversion factors for the MACCS2 code. DOSFAC2 is a revised and updated version of the DOSFAC code that was distributed with MACCS version 1.5.11 of the MACCS code. DOSFAC did not generate ICRP 60 effective (E) dose conversion factors (DCFs) or accept user input data. DOSFAC calculations were based on parameter values hardwired into the code. DOSFAC2 accepts user input data through a user input file and can generate ICRP 60 E DCFs. The parameter values for which DOSFAC2 accepts user-input values are: (1) the values of relative biological effectiveness associated with high-LET radiations, (2) the list of organs for which acute DCFs are to be calculated, (3) the activity median aerodynamic diameter, (4) the acute dose reduction factors, and (5) the inhalation clearance class for each radionuclide.

NUREG/CR-6557: DEVELOPMENT OF THE MAGNESCOPE AS AN INSTRUMENT FOR IN SITU EVALUATION OF STEEL COMPONENTS OF NUCLEAR SYSTEMS. JILES, D.C.; BI, Y.; BINDER, S.B. Iowa State Univ., Ames, IA. August 1997. 64pp. 9708290226. A0232:284.

Fatigue damage causes continuous, cumulative microstructural changes in materials and the magnetic properties of steels are sensitive to these microstructural changes. This work therefore focused on the relationships between fatigue damage and the measured magnetic properties of different steels under a variety of fatigue conditions. The project also investigated the feasibility and applicability of magnetic inspection techniques for non-destructive evaluation of fatigue damage. From the results of a series of fatigue tests, conducted on different steels under both low-cycle and high-cycle fatigue conditions, the magnetic properties, such as coercivity, remanence and Barkhausen effect, were found to change systematically with fatigue damage. The magnetic properties showed significant changes, especially during early stage of the fatigue and also at the end of fatigue lifetime. An approximately linear relationship between the mechanical modulus and magnetic remanence was observed and was explained by a model developed in this study to describe the dynamic changes in the magnetic and mechanical properties. The results of this research demonstrated that magnetic measurements are suitable for non-destructive evaluation of fatigue damage in steels such as A533B steel and Cr-Mo steels. These magnetic measurement techniques have been incorporated into instrumentation for in-situ evaluation of steel structures and components.

30 Main Citations and Abstracts

NUREG/CR-6558: NRC ANTITRUST LICENSING ACTIONS, 1978-1996. MAYER, S.J.; SIMPSON, J.J. Oak Ridge National Laboratory. September 1997. 141pp. 9710070363. ORNL/TM-13452. A0642:273.

NUREG-0447, "Antitrust Review of Nuclear Power Plants," was published in May 1978 and includes a compilation and discussion of U.S. Nuclear Regulatory Commission (NRC) proceedings and activity involving the NRC's competitive review program through February 1978. NUREG-0447 is an update of an earlier discussion of the NRC's antitrust review of nuclear power plants, NR-AIG-001, "The US Nuclear Regulatory Commission's Antitrust Review of Nuclear Power Plants: The Conditioning of Licenses," which reviewed the Commission's antitrust review function from its inception in December 1970 through April 1976. This report summarizes the support provided to NRC staff in updating the compilation of the NRC's antitrust licensing review activities for commercial nuclear power plants that have occurred since February 1978.

NUREG/CR-6563: LG EXCITATION, ATTENUATION, AND SOURCE SPECTRAL SCALING IN CENTRAL AND EASTERN NORTH AMERICA. MITCHELL, B.J.; XIE, J.; BAQER, S. St. Louis Univ., St. Louis, MO. October 1997. 53pp. 9712230294. A1501:199.

Seismic moments and corner frequencies were obtained for many earthquakes in the central and eastern United States, and for a few events in the western United States, using the Lg phase and a recently developed inversion algorithm. Lg Q values along paths to individual stations were obtained together with source parameters. For moments between 0.15 and 400 x 10¹⁵ Nm corner frequencies vary between about 4 and 0.2 Hz while body-wave magnitude varies between about 3.5 and 5.8. Lg Q values decrease from east to west. Maximum and minimum values are 898 and 160, respectively. Lg coda Q values were obtained with excellent coverage in the eastern and western portions of the country and somewhat poorer coverage in the central portion. Lg coda Q is highest (700-750) in portions of New York and Pennsylvania and lower (>200) in California. Lg coda Q is lower (250-450) everywhere west of the Rocky Mountains than in the rest of the country (450-750). For an earthquake of a given magnitude, Lg and its coda will propagate much more efficiently, and cause damage over a wider area, in the eastern and central United States than in the western United States.

NUREG/CR-6565: UNCERTAINTY ANALYSES OF INFILTRATION AND SUBSURFACE FLOW AND TRANSPORT FOR SDMP SITES. MEYER, P.D.; ROCKHOLD, M.L.; GEE, G.W. Battelle Memorial Institute, Pacific Northwest National Laboratory. September 1997. 151pp. 9711030078. PNNL-11705. A0990:100.

Traits common to many SDMP sites include limited data characterizing the subsurface, the presence of long-lived radionuclides necessitating a long-term analysis (1000 years or more), and potential exposure through multiple pathways. As a consequence of these traits, the uncertainty in predicted exposures can be significant. Several tools for improving uncertainty analyses of exposure estimates through the groundwater pathway are discussed in this report. Generic probability distributions for unsaturated and saturated zone soil hydraulic parameters are presented. These distributions can be used with available dose assessment codes to estimate exposure uncertainty in screening-level and preliminary analyses where site-specific data is limited. The use of the generic distributions is illustrated in a method for the estimation of net infiltration uncertainty. The method uses a relatively simple water budget calculation contained in an existing multiple pathway dose assessment code. A comparison between the distribution of predicted annual net infiltration and the observed lysimeter drainage (mean and standard error) showed an agreeable match. At many SDMP sites there may be some site-specific soil hydraulic property data available. A method is presented to combine the generic distributions with site-specific water retention data using a Bayesian

analysis. The resulting updated soil hydraulic parameter distributions can be used to obtain an updated estimate of the probability distribution of dose. The method is illustrated using an hypothetical example decommissioning site.

NUREG/CR-6566: DESCRIPTION OF MULTIMEDIA ENVIRONMENTAL POLLUTANT ASSESSMENT SYSTEM (MEPAS) VERSION 3.2 MODIFICATION FOR THE NUCLEAR REGULATORY COMMISSION. BUCK, J.W.; STRENGE, D.L.; HOOPES, B.L.; et al. Battelle Memorial Institute, Pacific Northwest National Laboratory. November 1997. 98pp. 9712110135. PNL-11676. A1387:057.

The Multimedia Environmental Pollutant Assessment System (MEPAS) is a software tool developed by Pacific Northwest National Laboratory (PNNL) for the U.S. Department of Energy (DOE) to allow DOE to conduct human health risk analyses nation-wide. This report describes modifications to the MEPAS to meet the requirements of the U.S. Nuclear Regulatory Commission (NRC) staff in their analyses of Site Decommissioning Management Plan sites. In general, these modifications provide the MEPAS, Version 3.2, with the capability of calculating and reporting annual dose/risk information. Modifications were made to the exposure pathway and health impact modules and the water and atmospheric transport modules. Several example cases used to test the MEPAS, Version 3.2, are also presented. The MEPAS, Version 3.2, also contains a new source-term release component that includes models for estimating contaminant loss from three different types of source zones (contaminated aquifer, contaminated pond/surface impoundment, and contaminated vadose zone) due to decay/degradation, leaching, wind suspension, water erosion, overland flow, and/or volatilization. When multiple loss routes are assumed to occur simultaneously, the models account for their interaction and calculate an appropriate pollutant mass budget to each loss route over time.

NUREG/CR-6581: CONSIDERATIONS IN THE APPLICATION OF THE ELECTRONIC DOSIMETER TO DOSE OF RECORD. SWINTH, K.L. December 1997. 70pp. 9801140351. A1799:012.

This report describes considerations for application of the electronic dosimeter (ED) as a measurement device for the dose of record (primary dosimetry). EDs are widely used for secondary dosimetry and advances in their reliability and capabilities have resulted in interest in their use to meet the needs of both primary and secondary dosimetry. However, the ED is an active device and more complex than the thermoluminescent and film dosimeters now in use for primary dosimetry. The user must evaluate the ED in terms of reliability, serviceability and radiations detected its intended application(s). If an ED is selected for primary dosimetry, the user must establish methods both for controlling the performance of the ED to ensure long term reliability of the measurements and for their proper use as a primary dosimeter. Regulatory groups may also want to develop methods to ensure adequate performance of the ED for dose of record. The purpose of the report is to provide an overview of considerations in the use of the ED for primary dosimetry. Considerations include recognizing current limitations, type testing of EDs, testing by the user, approval performance testing, calibration, and procedures to integrate the dosimeter into the users program.

NUREG/CR-6586: HORIZONTAL VELOCITIES IN THE CENTRAL AND EASTERN UNITED STATES FROM GPS SURVEYS DURING THE 1987-1996 INTERVAL. SNAY, F.A.; STRANGE, W.E. Commerce, Dept. of, National Oceanic & Atmospheric Administration. December 1997. 37pp. 9801120071. A1738:266.

The National Geodetic Survey and the Nuclear Regulatory Commission jointly organized GPS surveys in 1987, 1990, 1993, and 1996 to search for crustal deformation in the United States east of longitude 108 degrees W. We have analyzed the data of these four surveys in combination with VLBI data from the

1979-1995 interval. Horizontal velocities for 64 GPS and 12 VLBI sites were computed relative to a reference frame for which the interior of North America is fixed on average. None of the velocities exceeds 6 mm/yr in magnitude. Moreover, the derived velocity at each GPS site is statistically zero at the 95% confidence level except for the sites BOLTON in Ohio and BEARTOWN in Pennsylvania. However, as statistical theory would allow 5% of the 64 GPS sites to fail our zero-velocity hypothesis, the velocities for BOLTON and BEARTOWN may not

reflect actual motion relative to the North American plate. We also computed horizontal strain rates for the cells formed by a 1 degree by 1 degree grid spanning the central and eastern U.S. Shearing rates are everywhere less than 60 nanoradians/yr, and no shearing rate differs statistically from zero at the 95% confidence level except for a grid cell near BEARTOWN whose rate is 57 ± 26 nanoradians/yr. Areal dilatation rates are everywhere less than 40 nanostrains/yr, and no dilatation rate differs statistically from zero at the 95% confidence level.

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This index lists, in alphabetical order, the performing organization-issued report codes for the NRC contractor and international agreement reports in this compilation. Each code is cross-referenced to the NUREG number for the report and to the 10-digit NRC Document Control System accession number.

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BAKHTIARI,S.

NUREG/CR-6511 V01: STEAM GENERATOR TUBE INTEGRITY PROGRAM.Semiannual Report, August 1995 - March 1996.

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NUREG/CR-6464: AN EVALUATION OF METHODOLOGY FOR SEISMIC QUALIFICATION OF EQUIPMENT,CABLE TRAYS, AND DUCTS IN ALWR PLANTS BY USE OF EXPERIENCE DATA.

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NUREG/CR-6459: FIELD STUDIES AT THE APACHE LEAP RESEARCH SITE IN SUPPORT OF ALTERNATIVE CONCEPTUAL MODELS. NUREG/CR-6497: DATA COLLECTION AND FIELD EXPERIMENTS AT THE APACHE LEAP RESEARCH SITE.May 1995 - 1996.

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NUREG/CR-6493: DOSES TO THE HAND DURING THE ADMINISTRATION OF RADIOLABELED ANTIBODIES CONTAINING Y-90,TC-99M,I-131, AND LU-177.

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NUREG/CR-6474 V23: PRECURSORS TO POTENTIAL SEVERE CORE DAMAGE ACCIDENTS: 1995. A Status Report.

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NUREG-1516: MANAGEMENT OF RADIOACTIVE MATERIAL SAFETY PROGRAMS AT MEDICAL FACILITIES.Final Report.

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- CAMPER, L.W.**
NUREG-1516: MANAGEMENT OF RADIOACTIVE MATERIAL SAFETY PROGRAMS AT MEDICAL FACILITIES. Final Report.
NUREG-1562 DRFT FC: STANDARD REVIEW PLAN FOR APPLICATIONS FOR LICENSES TO DISTRIBUTE BYPRODUCT MATERIAL TO PERSONS EXEMPT FROM THE REQUIREMENTS FOR AN NRC LICENSE. 10CFR Parts 30.14, 30.15, 30.16, 30.18, 30.19 & 30.20.
- CARRICO, J.B.**
NUREG-1556 V2 DRF FC: CONSOLIDATED GUIDANCE ABOUT MATERIALS LICENSES. Program Specific Guidance About Industrial Radiography Licenses. Draft Report For Use And Comment.
- CARSTEN, A.L.**
NUREG/CR-6493: DOSES TO THE HAND DURING THE ADMINISTRATION OF RADIOLABELED ANTIBODIES CONTAINING Y-90, TC-99M, I-131, AND LU-177.
NUREG/CR-6531: EFFECTS OF RADIOACTIVE HOT PARTICLES ON PIG SKIN.
- CASTLETON, K.J.**
NUREG/CR-6566: DESCRIPTION OF MULTIMEDIA ENVIRONMENTAL POLLUTANT ASSESSMENT SYSTEM (MEPAS) VERSION 3.2 MODIFICATION FOR THE NUCLEAR REGULATORY COMMISSION.
- CHAMBERS, D.B.**
NUREG/CR-6481 V01: REVIEW OF MODELS USED FOR DETERMINING CONSEQUENCES OF UF(6) RELEASE. Development Of Model Evaluation Criteria.
NUREG/CR-6481 V02: REVIEW OF MODELS USED FOR DETERMINING CONSEQUENCES OF UF(6) RELEASE. Model Evaluation Report.
- CHANIN, D.I.**
NUREG/CR-6547: DOSFAC2 USER'S GUIDE.
- CHEN, G.**
NUREG/CR-6497: DATA COLLECTION AND FIELD EXPERIMENTS AT THE APACHE LEAP RESEARCH SITE. May 1995 - 1996.

CHENG,H.S.

NUREG/CR-6474: PRELIMINARY PHENOMENA IDENTIFICATION AND RANKING TABLES (PIRT) FOR SBWR STARTUP STABILITY.

CHEUNG,F.B.

NUREG/CR-6507: CRITICAL HEAT FLUX (CHF) PHENOMENON ON A DOWNWARD FACING CURVED SURFACE.

CHILDS,R.L.

NUREG/CR-6504 V01: AN UPDATED NUCLEAR CRITICALITY SLIDE RULE.Technical Basis.

CHOPRA,O.K.

NUREG/CR-4667 V22: ENVIRONMENTALLY ASSISTED CRACKING IN LIGHT WATER REACTORS. Semiannual Report,January 1996 - June 1996.

NUREG/CR-4667 V23: ENVIRONMENTALLY ASSISTED CRACKING IN LIGHT WATER REACTORS. Semiannual Report,July-December 1996.
NUREG/CR-6511 V01: STEAM GENERATOR TUBE INTEGRITY PROGRAM.Semiannual Report, August 1995 - March 1996.

CHOWDHURY,A.H.

NUREG/CR-6404: AN EXPERIMENTAL SCALE-MODEL STUDY OF SEISMIC RESPONSE OF AN UNDERGROUND OPENING IN JOINTED ROCK MASS.

CHU,T.-L.

NUREG/CR-6538: EVALUATION OF LOCA WITH DELAYED LOOP AND LOOP WITH DELAYED LOCA ACCIDENT SCENARIOS.

CHUNG,H.M.

NUREG/CR-4667 V22: ENVIRONMENTALLY ASSISTED CRACKING IN LIGHT WATER REACTORS. Semiannual Report,January 1996 - June 1996.

NUREG/CR-4667 V23: ENVIRONMENTALLY ASSISTED CRACKING IN LIGHT WATER REACTORS. Semiannual Report,July-December 1996.

CICCARELLI,G.

NUREG/CR-6391: DETONATION CELL SIZE MEASUREMENTS IN HIGH-TEMPERATURE HYDROGEN-AIR-STEAM MIXTURES AT THE BNL HIGH-TEMPERATURE COMBUSTION FACILITY.

CLETCHER,J.W.

NUREG/CR-4674 V23: PRECURSORS TO POTENTIAL SEVERE CORE DAMAGE ACCIDENTS: 1995. A Status Report.

CLUFF,L.S.

NUREG/CR-6372 V01: RECOMMENDATIONS FOR PROBABILISTIC SEISMIC HAZARD ANALYSIS: GUIDANCE ON UNCERTAINTY AND USE OF EXPERTS.Main Report.

NUREG/CR-6372 V02: RECOMMENDATIONS FOR PROBABILISTIC SEISMIC HAZARD ANALYSIS: GUIDANCE ON UNCERTAINTY AND USE OF EXPERTS.Appendices.

COLLIER,J.

NUREG/CR-6514: ANALYSIS OF POTENTIAL SELF-GUARANTEE TESTS FOR DEMONSTRATING FINANCIAL ASSURANCE BY NON-PROFIT COLLEGES, UNIVERSITIES, AND HOSPITALS AND BY BUSINESS FIRMS THAT DO NOT ISSUE BONDS.

COLLINS,D.J.

NUREG-1556 V01: CONSOLIDATED GUIDANCE ABOUT MATERIALS LICENSES.Program-Specific Guidance About Portable Gauge Licenses.Final Report.

NUREG-1556 V2 DRF FC: CONSOLIDATED GUIDANCE ABOUT MATERIALS LICENSES.Program Specific Guidance About Industrial Radiography Licenses. Draft Report For Use And Comment.

NUREG-1556 V5 DRF FC: CONSOLIDATED GUIDANCE ABOUT MATERIALS LICENSES.Program-Specific Guidance About Self-Shielded Irradiator Licenses. Draft Report For Comment.

COLTEN-BRADLEY

NUREG/CR-6505 V01: THE POTENTIAL FOR CRITICALITY FOLLOWING DISPOSAL OF URANIUM AT LOW-LEVEL WASTE FACILITIES.Uranium Blended With Soil.

COMPTON,E.

NUREG-1556 V3 DRF FC: CONSOLIDATED GUIDANCE ABOUT MATERIALS LICENSES.Applications for Sealed Source And Device Evaluation And Registration. Draft Report For Comment.

CONNELLY,S.R.

NUREG-1542 V02: ACCOUNTABILITY REPORT FISCAL YEAR 1996.

COOKE,R.M.

NUREG/CR-6523 V01: PROBABILISTIC ACCIDENT CONSEQUENCE UNCERTAINTY ANALYSIS.Food Chain Uncertainty Assessment.Main Report.

NUREG/CR-6523 V02: PROBABILISTIC ACCIDENT CONSEQUENCE UNCERTAINTY ANALYSIS. Food Chain Uncertainty Assessment.Appendices.

NUREG/CR-6526 V01: PROBABILISTIC ACCIDENT CONSEQUENCE UNCERTAINTY ANALYSIS. Uncertainty Assessment For Deposited Material And External Doses.Main Report.

NUREG/CR-6526 V02: PROBABILISTIC ACCIDENT CONSEQUENCE UNCERTAINTY ANALYSIS. UNCERTAINTY ASSESSMENT FOR DEPOSITED MATERIAL AND EXTERNAL DOSES.Appendices.

COPINGER,D.A.

NUREG/CR-4674 V23: PRECURSORS TO POTENTIAL SEVERE CORE DAMAGE ACCIDENTS: 1995. A Status Report.

COPPERSMITH,K.

NUREG/CR-6372 V01: RECOMMENDATIONS FOR PROBABILISTIC SEISMIC HAZARD ANALYSIS: GUIDANCE ON UNCERTAINTY AND USE OF EXPERTS.Main Report.

NUREG/CR-6372 V02: RECOMMENDATIONS FOR PROBABILISTIC SEISMIC HAZARD ANALYSIS: GUIDANCE ON UNCERTAINTY AND USE OF EXPERTS.Appendices.

CORNELL,C.A.

NUREG/CR-6372 V01: RECOMMENDATIONS FOR PROBABILISTIC SEISMIC HAZARD ANALYSIS: GUIDANCE ON UNCERTAINTY AND USE OF EXPERTS.Main Report.

NUREG/CR-6372 V02: RECOMMENDATIONS FOR PROBABILISTIC SEISMIC HAZARD ANALYSIS: GUIDANCE ON UNCERTAINTY AND USE OF EXPERTS.Appendices.

CORWIN,W.R.

NUREG/CR-5591 V07 N1: HEAVY-SECTION STEEL IRRADIATION PROGRAM.Semiannual Progress Report For October 1995 Through March 1996.

NUREG/CR-5591 V07 N2: HEAVY-SECTION STEEL IRRADIATION PROGRAM.Semiannual Progress Report For April Through September 1996.

COUTTS,P.T.

NUREG/CR-6481 V02: REVIEW OF MODELS USED FOR DETERMINING CONSEQUENCES OF UF(6) RELEASE.Model Evaluation Report.

DANZIGER,L.M.

NUREG-1603 DRFT: INDIVIDUAL PLANT EXAMINATION DATABASE.User's Guide.

DASAPPA,V.

NUREG/CR-6514: ANALYSIS OF POTENTIAL SELF-GUARANTEE TESTS FOR DEMONSTRATING FINANCIAL ASSURANCE BY NON-PROFIT COLLEGES, UNIVERSITIES, AND HOSPITALS AND BY BUSINESS FIRMS THAT DO NOT ISSUE BONDS.

DAVIDSON,G.R.

NUREG/CR-6459: FIELD STUDIES AT THE APACHE LEAP RESEARCH SITE IN SUPPORT OF ALTERNATIVE CONCEPTUAL MODELS.

NUREG/CR-6497: DATA COLLECTION AND FIELD EXPERIMENTS AT THE APACHE LEAP RESEARCH SITE.May 1995 - 1996.

DAVIS,C.B.

NUREG/CR-6541 R02: PHENOMENA IDENTIFICATION AND RANKING TABLES FOR WESTINGHOUSE AP600 SMALL BREAK LOSS-OF-COOLANT ACCIDENT, MAIN STEAM LINE BREAK, AND STEAM GENERATOR TUBE RUPTURE SCENARIOS.

DAVIS,F.J.

NUREG/CR-6533: CODE MANUAL FOR CONTAIN 2.0: A COMPUTER CODE FOR NUCLEAR REACTOR CONTAINMENT ANALYSIS.

DAVIS,M.J.

NUREG-1574: STANDARD REVIEW PLAN ON ANTITRUST REVIEWS.Final Report.

NUREG-1574 DRFT FC: STANDARD REVIEW PLAN ON ANTITRUST.Draft Report For Comment.

DAVIS,R.E.

NUREG/CR-6295: REASSESSMENT OF SELECTED FACTORS AFFECTING SITING OF NUCLEAR POWER PLANTS.

NUREG/CR-6451: A SAFETY AND REGULATORY ASSESSMENT OF GENERIC BWR AND PWR PERMANENTLY SHUTDOWN NUCLEAR POWER PLANTS.

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DEAN,C.

NUREG/CR-6514: ANALYSIS OF POTENTIAL SELF-GUARANTEE TESTS FOR DEMONSTRATING FINANCIAL ASSURANCE BY NON-PROFIT COLLEGES, UNIVERSITIES, AND HOSPITALS AND BY BUSINESS FIRMS THAT DO NOT ISSUE BONDS.

DEBORD,D.M.

NUREG/CR-6535: DEVELOPMENT OF CONFORMAL RESPIRATOR MONITORING TECHNOLOGY.

DECKER,D.

NUREG/CR-6463 R01: REVIEW GUIDELINES FOR SOFTWARE LANGUAGES FOR USE IN NUCLEAR POWER PLANT SAFETY SYSTEMS.Final Report.

DEGRASSI,G.

NUREG/CR-6414: PIPING BENCHMARK PROBLEMS FOR THE WESTINGHOUSE AP600 STANDARDIZED PLANT.

DEHART,M.D.

NUREG/CR-6361: CRITICALITY BENCHMARK GUIDE FOR LIGHT-WATER-REACTOR FUEL IN TRANSPORTATION AND STORAGE PACKAGES.

DEWALL,K.G.

NUREG/CR-6478: MOTOR-OPERATED VALVE (MOV) ACTUATOR MOTOR AND GEARBOX TESTING.

DIERCKS,D.R.

NUREG/CP-0154: PROCEEDINGS OF THE CNRA/CSNI WORKSHOP ON STEAM GENERATOR TUBE INTEGRITY IN NUCLEAR POWER PLANTS.
NUREG/CR-6511 V01: STEAM GENERATOR TUBE INTEGRITY PROGRAM.Semiannual Report, August 1995 - March 1996.

DINSMORE,G.

NUREG/CR-6463 R01: REVIEW GUIDELINES FOR SOFTWARE LANGUAGES FOR USE IN NUCLEAR POWER PLANT SAFETY SYSTEMS.Final Report.

DOCTOR,S.R.

NUREG/CR-6181 R01: A PILOT APPLICATION OF RISK-INFORMED METHODS TO ESTABLISH INSERVICE INSPECTION PRIORITIES FOR NUCLEAR COMPONENTS AT SURRY UNIT 1 NUCLEAR POWER STATION.

DOLAN,B.W.

NUREG/CR-4674 V23: PRECURSORS TO POTENTIAL SEVERE CORE DAMAGE ACCIDENTS: 1995. A Status Report.
NUREG/CR-4674 V24: PRECURSORS TO POTENTIAL SEVERE CORE DAMAGE ACCIDENTS: 1982-83.A Status Report.

DONG,P.

NUREG/CR-4667 V23: ENVIRONMENTALLY ASSISTED CRACKING IN LIGHT WATER REACTORS. Semiannual Report,July-December 1996.

DYER,H.R.

NUREG/CR-5661: RECOMMENDATIONS FOR PREPARING THE CRITICALITY SAFETY EVALUATION OF TRANSPORTATION PACKAGES.

EASTERLY,C.E.

NUREG/CR-6528: ENVIRONMENTAL ASSESSMENT PROPOSED LICENSE RENEWAL OF NUCLEAR METALS,INC. CONCORD, MASSACHUSETTS.

ELLIOT,B.J.

NUREG-1612: STATUS REPORT: REACTOR VESSEL INTEGRITY DATABASE.

FADDEN,M.A.

NUREG-0525 V02 R05: SAFEGUARDS SUMMARY EVENT LIST (SSEL).January 1,1990 Through December 31,1996.

FAIDY,C.

NUREG/CP-0155: PROCEEDINGS OF THE SEMINAR ON LEAK BEFORE BREAK IN REACTOR PIPING AND VESSELS.

FAIRBANKS,C.J.

NUREG-1612: STATUS REPORT: REACTOR VESSEL INTEGRITY DATABASE.

FINFROCK,C.

NUREG/CR-6391: DETONATION CELL SIZE MEASUREMENTS IN HIGH-TEMPERATURE HYDROGEN-AIR-STEAM MIXTURES AT THE BNL HIGH-TEMPERATURE COMBUSTION FACILITY.

FIRST,M.W.

NUREG/CP-0153: PROCEEDINGS OF THE 24TH DOE/NRC NUCLEAR AIR CLEANING AND TREATMENT CONFERENCE.Held In Portland, Oregon, July 15-18, 1996.

FLETCHER,C.D.

NUREG/CR-6541 R02: PHENOMENA IDENTIFICATION AND RANKING TABLES FOR WESTINGHOUSE AP600 SMALL BREAK LOSS-OF-COOLANT ACCIDENT, MAIN STEAM LINE BREAK, AND STEAM GENERATOR TUBE RUPTURE SCENARIOS.

FLIEGEL,M.

NUREG-1532: FINAL TECHNICAL EVALUATION REPORT FOR THE PROPOSED REVISED RECLAMATION PLAN FOR THE ATLAS CORPORATION MOAB MILL.Source Material License No. SUA-917.Docket No. 40-3453.(Atlas Corporation)

FORESTER,J.A.

NUREG/CR-4674 V24: PRECURSORS TO POTENTIAL SEVERE CORE DAMAGE ACCIDENTS: 1982-83.A Status Report.

FOX,D.J.

NUREG/CR-6404: AN EXPERIMENTAL SCALE-MODEL STUDY OF SEISMIC RESPONSE OF AN UNDERGROUND OPENING IN JOINTED ROCK MASS.

FRANCINI,R.

NUREG/CR-6233 V02: STABILITY OF CRACKED PIPE UNDER SEISMIC/DYNAMIC DISPLACEMENT-CONTROLLED STRESSES.Subtask 1.2 Final Report.
NUREG/CR-6389: IPIRG-2 TASK 1 - PIPE SYSTEM EXPERIMENTS WITH CIRCUMFERENTIAL CRACKS IN STRAIGHT-PIPE LOCATIONS.Final Report.September 1991 - November 1995.

FUHRMANN,M.

NUREG/CR-5229 V09: FIELD LYSIMETER INVESTIGATIONS: LOW-LEVEL WASTE DATA BASE DEVELOPMENT PROGRAM FOR FISCAL YEAR 1996.Annual Report.

FULLER,M.

NUREG-1516: MANAGEMENT OF RADIOACTIVE MATERIAL SAFETY PROGRAMS AT MEDICAL FACILITIES.Final Report.

GARVER,M.

NUREG-1350 V09: NUCLEAR REGULATORY COMMISSION INFORMATION DIGEST.1997 Edition.

GASSER,R.D.

NUREG/CR-6167: LATE-PHASE MELT PROGRESSION EXPERIMENT MP-2.Results And Analysis.

GAUNTT,R.O.

NUREG/CR-6167: LATE-PHASE MELT PROGRESSION EXPERIMENT MP-2.Results And Analysis.
NUREG/CR-6527: FINAL RESULTS OF THE XR2-1 BWR METALLIC MELT RELOCATION EXPERIMENT.

GAVENDA,D.J.

NUREG/CR-4667 V22: ENVIRONMENTALLY ASSISTED CRACKING IN LIGHT WATER REACTORS. Semiannual Report,January 1996 - June 1996.
NUREG/CR-4667 V23: ENVIRONMENTALLY ASSISTED CRACKING IN LIGHT WATER REACTORS. Semiannual Report,July-December 1996.

GEDDIS,A.M.

NUREG/CR-6459: FIELD STUDIES AT THE APACHE LEAP RESEARCH SITE IN SUPPORT OF ALTERNATIVE CONCEPTUAL MODELS.

GEE,G.W.

NUREG/CR-6565: UNCERTAINTY ANALYSES OF INFILTRATION AND SUBSURFACE FLOW AND TRANSPORT FOR SDMP SITES.

GELSTON,G.M.

NUREG/CR-6566: DESCRIPTION OF MULTIMEDIA ENVIRONMENTAL POLLUTANT ASSESSMENT SYSTEM (MEPAS) VERSION 3.2 MODIFICATION FOR THE NUCLEAR REGULATORY COMMISSION.

GERLACH,L.

NUREG/CR-6391: DETONATION CELL SIZE MEASUREMENTS IN HIGH-TEMPERATURE HYDROGEN-AIR-STEAM MIXTURES AT THE BNL HIGH-TEMPERATURE COMBUSTION FACILITY.

- GHADIALI,N.**
NUREG/CR-6452: THE SECOND INTERNATIONAL PIPING INTEGRITY RESEARCH GROUP (PIRG-2) PROGRAM.Final Report.
- GIDO,R.G.**
NUREG/CR-6533: CODE MANUAL FOR CONTAIN 2.0: A COMPUTER CODE FOR NUCLEAR REACTOR CONTAINMENT ANALYSIS.
- GILLES,PH.**
NUREG/CP-0155: PROCEEDINGS OF THE SEMINAR ON LEAK BEFORE BREAK IN REACTOR PIPING AND VESSELS.
- GINSBERG,T.**
NUREG/CR-6391: DETONATION CELL SIZE MEASUREMENTS IN HIGH-TEMPERATURE HYDROGEN-AIR-STEAM MIXTURES AT THE BNL HIGH-TEMPERATURE COMBUSTION FACILITY.
- GOLDBERG,W.**
NUREG/CR-6514: ANALYSIS OF POTENTIAL SELF-GUARANTEE TESTS FOR DEMONSTRATING FINANCIAL ASSURANCE BY NON-PROFIT COLLEGES, UNIVERSITIES, AND HOSPITALS AND BY BUSINESS FIRMS THAT DO NOT ISSUE BONDS.
- GOOSSENS,L.H.**
NUREG/CR-6526 V01: PROBABILISTIC ACCIDENT CONSEQUENCE UNCERTAINTY ANALYSIS. Uncertainty Assessment For Deposited Material And External Doses.Main Report.
NUREG/CR-6526 V02: PROBABILISTIC ACCIDENT CONSEQUENCE UNCERTAINTY ANALYSIS. UNCERTAINTY ASSESSMENT FOR DEPOSITED MATERIAL AND EXTERNAL DOSES.Appendices.
- GOOSSENS,L.H.J.**
NUREG/CR-6523 V01: PROBABILISTIC ACCIDENT CONSEQUENCE UNCERTAINTY ANALYSIS.Food Chain Uncertainty Assessment.Main Report.
NUREG/CR-6523 V02: PROBABILISTIC ACCIDENT CONSEQUENCE UNCERTAINTY ANALYSIS. Food Chain Uncertainty Assessment.Appendices.
- GORE,B.F.**
NUREG/CR-6181 R01: A PILOT APPLICATION OF RISK-INFORMED METHODS TO ESTABLISH INSERVICE INSPECTION PRIORITIES FOR NUCLEAR COMPONENTS AT SURRY UNIT 1 NUCLEAR POWER STATION.
- GRAFF,S.**
NUREG/CR-6463 R01: REVIEW GUIDELINES FOR SOFTWARE LANGUAGES FOR USE IN NUCLEAR POWER PLANT SAFETY SYSTEMS.Final Report.
- GREEN,W.**
NUREG/CR-6463 R01: REVIEW GUIDELINES FOR SOFTWARE LANGUAGES FOR USE IN NUCLEAR POWER PLANT SAFETY SYSTEMS.Final Report.
- GREENE,S.**
NUREG-1562 DRFT FC: STANDARD REVIEW PLAN FOR APPLICATIONS FOR LICENSES TO DISTRIBUTE BYPRODUCT MATERIAL TO PERSONS EXEMPT FROM THE REQUIREMENTS FOR AN NRC LICENSE.10CFR Parts 30.14,30.15, 30.16,30.18,30.19 & 30.20.
- GRIFFITH,P.**
NUREG/CR-6519: SCREENING REACTOR STEAM/WATER PIPING SYSTEMS FOR WATER HAMMER.
- GRIFFITH,R.O.**
NUREG/CR-6533: CODE MANUAL FOR CONTAIN 2.0: A COMPUTER CODE FOR NUCLEAR REACTOR CONTAINMENT ANALYSIS.
- GROVE,E.J.**
NUREG/CR-6451: A SAFETY AND REGULATORY ASSESSMENT OF GENERIC BWR AND PWR PERMANENTLY SHUTDOWN NUCLEAR POWER PLANTS.
- GRUBER,E.E.**
NUREG/CR-4667 V22: ENVIRONMENTALLY ASSISTED CRACKING IN LIGHT WATER REACTORS. Semiannual Report,January 1996 - June 1996.
NUREG/CR-4667 V23: ENVIRONMENTALLY ASSISTED CRACKING IN LIGHT WATER REACTORS. Semiannual Report,July-December 1996.
- GUZIEL,K.A.**
NUREG/CR-4012 V04: REPLACEMENT ENERGY COSTS FOR NUCLEAR ELECTRICITY-GENERATING UNITS IN THE UNITED STATES: 1997-2001.
- GUZMAN,A.G.**
NUREG/CR-6459: FIELD STUDIES AT THE APACHE LEAP RESEARCH SITE IN SUPPORT OF ALTERNATIVE CONCEPTUAL MODELS.
- HADDAD,K.H.**
NUREG/CR-6507: CRITICAL HEAT FLUX (CHF) PHENOMENON ON A DOWNWARD FACING CURVED SURFACE.
- HAGEMEYER,D.**
NUREG-0713 V17: OCCUPATIONAL RADIATION EXPOSURE AT COMMERCIAL NUCLEAR POWER REACTORS AND OTHER FACILITIES,1995.Twenty-Eighth Annual Report.
- HAGGAG,F.M.**
NUREG/CR-6363: EFFECTS OF THERMAL AGING AND NEUTRON IRRADIATION ON THE MECHANICAL PROPERTIES OF THREE-WIRE STAINLESS STEEL WELD OVERLAY CLADDING.
- HAMMONDS,J.S.**
NUREG/CR-6481 V02: REVIEW OF MODELS USED FOR DETERMINING CONSEQUENCES OF UF(6) RELEASE.Model Evaluation Report.
- HANSON,A.L.**
NUREG/CR-6295: REASSESSMENT OF SELECTED FACTORS AFFECTING SITING OF NUCLEAR POWER PLANTS.
- HARDIN,E.L.**
NUREG/CR-6459: FIELD STUDIES AT THE APACHE LEAP RESEARCH SITE IN SUPPORT OF ALTERNATIVE CONCEPTUAL MODELS.
NUREG/CR-6497: DATA COLLECTION AND FIELD EXPERIMENTS AT THE APACHE LEAP RESEARCH SITE.May 1995 - 1996.
- HARPER,F.T.**
NUREG/CR-6523 V01: PROBABILISTIC ACCIDENT CONSEQUENCE UNCERTAINTY ANALYSIS.Food Chain Uncertainty Assessment.Main Report.
NUREG/CR-6523 V02: PROBABILISTIC ACCIDENT CONSEQUENCE UNCERTAINTY ANALYSIS. Food Chain Uncertainty Assessment.Appendices.
NUREG/CR-6526 V01: PROBABILISTIC ACCIDENT CONSEQUENCE UNCERTAINTY ANALYSIS. Uncertainty Assessment For Deposited Material And External Doses.Main Report.
NUREG/CR-6526 V02: PROBABILISTIC ACCIDENT CONSEQUENCE UNCERTAINTY ANALYSIS. UNCERTAINTY ASSESSMENT FOR DEPOSITED MATERIAL AND EXTERNAL DOSES.Appendices.
- HASKIN,F.E.**
NUREG/CR-6042 R01: PERSPECTIVES ON REACTOR SAFETY.
NUREG/CR-6523 V01: PROBABILISTIC ACCIDENT CONSEQUENCE UNCERTAINTY ANALYSIS.Food Chain Uncertainty Assessment.Main Report.
NUREG/CR-6523 V02: PROBABILISTIC ACCIDENT CONSEQUENCE UNCERTAINTY ANALYSIS. Food Chain Uncertainty Assessment.Appendices.
- HECHT,M.**
NUREG/CR-6463 R01: REVIEW GUIDELINES FOR SOFTWARE LANGUAGES FOR USE IN NUCLEAR POWER PLANT SAFETY SYSTEMS.Final Report.
- HENDERSON,P.J.**
NUREG-1516: MANAGEMENT OF RADIOACTIVE MATERIAL SAFETY PROGRAMS AT MEDICAL FACILITIES.Final Report.
NUREG-1556 V4 DRF FC: CONSOLIDATED GUIDANCE ABOUT MATERIALS LICENSES.Program Specific Guidance About Fixed Gauge Licenses.Draft Report For Comment.
- HIGGINS,J.**
NUREG/CR-6393: INTEGRATED SYSTEM VALIDATION: METHODOLOGY AND REVIEW CRITERIA.
NUREG/CR-6400: HUMAN FACTORS ENGINEERING (HFE) INSIGHTS FOR ADVANCED REACTORS BASED UPON OPERATING EXPERIENCE.
- HILLS,R.G.**
NUREG/CR-6437: FLOW AND TRANSPORT AT THE LAS CRUCES TRENCH SITE: EXPERIMENT IIB.
- HODGE,S.A.**
NUREG/CR-6042 R01: PERSPECTIVES ON REACTOR SAFETY.

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HOFFMAN,F.O.

NUREG/CR-6481 V01: REVIEW OF MODELS USED FOR DETERMINING CONSEQUENCES OF UF(6) RELEASE.Development Of Model Evaluation Criteria.

NUREG/CR-6481 V02: REVIEW OF MODELS USED FOR DETERMINING CONSEQUENCES OF UF(6) RELEASE.Model Evaluation Report.

HOFMAYER,C.

NUREG/CR-6486: ASSESSMENT OF MODULAR CONSTRUCTION FOR SAFETY-RELATED STRUCTURES AT ADVANCED NUCLEAR POWER PLANTS.

HOOPES,B.L.

NUREG/CR-6566: DESCRIPTION OF MULTIMEDIA ENVIRONMENTAL POLLUTANT ASSESSMENT SYSTEM (MEPAS) VERSION 3.2 MODIFICATION FOR THE NUCLEAR REGULATORY COMMISSION.

HOPPER,A.

NUREG/CR-6389: IPIRG-2 TASK 1 - PIPE SYSTEM EXPERIMENTS WITH CIRCUMFERENTIAL CRACKS IN STRAIGHT-PIPE LOCATIONS.Final Report.September 1991 - November 1995.

NUREG/CR-6452: THE SECOND INTERNATIONAL PIPING INTEGRITY RESEARCH GROUP (IPIRG-2) PROGRAM.Final Report.

HOPPER,C.M.

NUREG/CR-6361: CRITICALITY BENCHMARK GUIDE FOR LIGHT-WATER-REACTOR FUEL IN TRANSPORTATION AND STORAGE PACKAGES.

NUREG/CR-6504 V01: AN UPDATED NUCLEAR CRITICALITY SLIDE RULE.Technical Basis.

NUREG/CR-6505 V01: THE POTENTIAL FOR CRITICALITY FOLLOWING DISPOSAL OF URANIUM AT LOW-LEVEL WASTE FACILITIES.Uranium Blended With Soil.

HORA,S.C.

NUREG/CR-6523 V01: PROBABILISTIC ACCIDENT CONSEQUENCE UNCERTAINTY ANALYSIS.Food Chain Uncertainty Assessment.Main Report.

NUREG/CR-6523 V02: PROBABILISTIC ACCIDENT CONSEQUENCE UNCERTAINTY ANALYSIS. Food Chain Uncertainty Assessment.Appendices.

NUREG/CR-6526 V01: PROBABILISTIC ACCIDENT CONSEQUENCE UNCERTAINTY ANALYSIS. Uncertainty Assessment For Deposited Material And External Doses.Main Report.

NUREG/CR-6526 V02: PROBABILISTIC ACCIDENT CONSEQUENCE UNCERTAINTY ANALYSIS. UNCERTAINTY ASSESSMENT FOR DEPOSITED MATERIAL AND EXTERNAL DOSES.Appendices.

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HUGHES,T.H.

NUREG/CR-4667 V22: ENVIRONMENTALLY ASSISTED CRACKING IN LIGHT WATER REACTORS. Semiannual Report,January 1996 - June 1996.

NUREG/CR-4667 V23: ENVIRONMENTALLY ASSISTED CRACKING IN LIGHT WATER REACTORS. Semiannual Report,July-December 1996.

HUMPHREYS,S.L.

NUREG/CR-6525: SECPOP90: SECTOR POPULATION, LAND FRAGMENTION, AND ECONOMIC ESTIMATION PROGRAM.

HUMPHRIES,L.L.

NUREG/CR-6167: LATE-PHASE MELT PROGRESSION EXPERIMENT MP-2.Results And Analysis.

NUREG/CR-6527: FINAL RESULTS OF THE XR2-1 BWR METALLIC MELT RELOCATION EXPERIMENT.

HUTTO,F.B.

NUREG/CR-6539: EFFECTS OF FLUORIDE AND OTHER HALOGEN IONS ON THE EXTERNAL STRESS CORROSION CRACKING OF TYPE 304 AUSTENITIC STAINLESS STEEL.

IBARRA,J.G.

NUREG-1275 V12: OPERATING EXPERIENCE FEEDBACK REPORT.Assessment Of Spent Fuel Cooling.

IBRAHIM,A.

NUREG-1532: FINAL TECHNICAL EVALUATION REPORT FOR THE PROPOSED REVISED RECLAMATION PLAN FOR THE ATLAS CORPORATION MOAB MILL.Source Material License No. SUA-917.Docket No. 40-3453.(Atlas Corporation)

ILLMAN,W.A.

NUREG/CR-6497: DATA COLLECTION AND FIELD EXPERIMENTS AT THE APACHE LEAP RESEARCH SITE.May 1995 - 1996.

ISKANDER,S.K.

NUREG/CR-6399: RESULTS OF CHARPY V-NOTCH IMPACT TESTING OF STRUCTURAL STEEL SPECIMENS IRRADIATED AT 30 DEGREES C TO 1×10^{16} NEUTRONS/CM(2) IN A COMMERCIAL REACTOR CAVITY.

JASTROW,J.D.

NUREG/CR-5229 V09: FIELD LYSIMETER INVESTIGATIONS: LOW-LEVEL WASTE DATA BASE DEVELOPMENT PROGRAM FOR FISCAL YEAR 1996.Annual Report.

JENSEN,J.J.

NUREG/CR-4674 V24: PRECURSORS TO POTENTIAL SEVERE CORE DAMAGE ACCIDENTS: 1982-83.A Status Report.

JILES,D.C.

NUREG/CR-6557: DEVELOPMENT OF THE MAGNESCOPE AS AN INSTRUMENT FOR IN SITU EVALUATION OF STEEL COMPONENTS OF NUCLEAR SYSTEMS.

JOHNSON,T.

NUREG-1532: FINAL TECHNICAL EVALUATION REPORT FOR THE PROPOSED REVISED RECLAMATION PLAN FOR THE ATLAS CORPORATION MOAB MILL.Source Material License No. SUA-917.Docket No. 40-3453.(Atlas Corporation)

JONES,J.

NUREG-1516: MANAGEMENT OF RADIOACTIVE MATERIAL SAFETY PROGRAMS AT MEDICAL FACILITIES.Final Report.

JONES,J.A.

NUREG/CR-6523 V01: PROBABILISTIC ACCIDENT CONSEQUENCE UNCERTAINTY ANALYSIS.Food Chain Uncertainty Assessment.Main Report.

NUREG/CR-6523 V02: PROBABILISTIC ACCIDENT CONSEQUENCE UNCERTAINTY ANALYSIS. Food Chain Uncertainty Assessment.Appendices.

NUREG/CR-6526 V01: PROBABILISTIC ACCIDENT CONSEQUENCE UNCERTAINTY ANALYSIS. Uncertainty Assessment For Deposited Material And External Doses.Main Report.

NUREG/CR-6526 V02: PROBABILISTIC ACCIDENT CONSEQUENCE UNCERTAINTY ANALYSIS. UNCERTAINTY ASSESSMENT FOR DEPOSITED MATERIAL AND EXTERNAL DOSES.Appendices.

JONES,S.C.

NUREG/CR-6037: MEASUREMENT OF RESIDUAL RADIOACTIVE SURFACE CONTAMINATION BY 2-D LASER HEATED TLD.

JONES,W.R.

NUREG-1275 V12: OPERATING EXPERIENCE FEEDBACK REPORT.Assessment Of Spent Fuel Cooling.

JUSTUS,P.

NUREG-1532: FINAL TECHNICAL EVALUATION REPORT FOR THE PROPOSED REVISED RECLAMATION PLAN FOR THE ATLAS CORPORATION MOAB MILL.Source Material License No. SUA-917.Docket No. 40-3453.(Atlas Corporation)

KAM,F.B.K.

NUREG/CR-6454: POOL CRITICAL ASSEMBLY PRESSURE VESSEL FACILITY BENCHMARK.

KANA,D.D.

NUREG/CR-6404: AN EXPERIMENTAL SCALE-MODEL STUDY OF SEISMIC RESPONSE OF AN UNDERGROUND OPENING IN JOINTED ROCK MASS.

NUREG/CR-6464: AN EVALUATION OF METHODOLOGY FOR SEISMIC QUALIFICATION OF EQUIPMENT,CABLE TRAYS, AND DUCTS IN ALWR PLANTS BY USE OF EXPERIENCE DATA.

KARWOSKI,K.J.

NUREG-1604: CIRCUMFERENTIAL CRACKING OF STEAM GENERATOR TUBES.

KASSNER,T.F.

NUREG/CR-4667 V22: ENVIRONMENTALLY ASSISTED CRACKING IN LIGHT WATER REACTORS. Semiannual Report,January 1996 - June 1996.

NUREG/CR-4667 V23: ENVIRONMENTALLY ASSISTED CRACKING IN LIGHT WATER REACTORS. Semiannual Report,July-December 1996.

KASZA,K.E.

NUREG/CR-6511 V01: STEAM GENERATOR TUBE INTEGRITY PROGRAM.Semiannual Report, August 1995 - March 1996.

KAURIN,D.G.L.

NUREG/CR-6493: DOSES TO THE HAND DURING THE ADMINISTRATION OF RADIOLABELED ANTIBODIES CONTAINING Y-90,TC-99M,I-131, AND LU-177.
NUREG/CR-6531: EFFECTS OF RADIOACTIVE HOT PARTICLES ON PIG SKIN.

KELLOGG,J.N.

NUREG/CR-6529: VALIDATION OF TECTONIC MODELS FOR AN INTRAPLATE SEISMIC ZONE,CHARLESTON,SOUTH CAROLINA WITH GPS GEODETIC DATA.

KENNEDY,R.P.

NUREG/CR-6464: AN EVALUATION OF METHODOLOGY FOR SEISMIC QUALIFICATION OF EQUIPMENT,CABLE TRAYS, AND DUCTS IN ALWR PLANTS BY USE OF EXPERIENCE DATA.

KHAN,H.J.

NUREG/CR-6474: PRELIMINARY PHENOMENA IDENTIFICATION AND RANKING TABLES (PIRT) FOR SBWR STARTUP STABILITY.

KHAN,T.A.

NUREG/CR-4409 V06: DATA BASE ON DOSE REDUCTION PROJECTS FOR NUCLEAR POWER PLANTS.

KILINSKI,T.

NUREG/CR-6452: THE SECOND INTERNATIONAL PIPING INTEGRITY RESEARCH GROUP (IPIRG-2) PROGRAM.Final Report.

KINSEY,R.R.

NUREG/CR-6515: BLT-EC (BREACH, LEACH, AND TRANSPORT-EQUILIBRIUM CHEMISTRY) DATA INPUT GUIDE.A Computer Model For Simulating Release And Coupled Geochemical Transport Of Contaminants From A Subsurface Disposal Facility.

KIRKWOOD,A.S.

NUREG-1556 V4 DRF FC: CONSOLIDATED GUIDANCE ABOUT MATERIALS LICENSES.Program Specific Guidance About Fixed Gauge Licenses.Draft Report For Comment.

KLAMERUS,E.W.

NUREG/CR-6433: CONTAINMENT PERFORMANCE OF PROTOTYPICAL REACTOR CONTAINMENTS SUBJECTED TO SEVERE ACCIDENT CONDITIONS.

KOCH,S.

NUREG/CR-6463 R01: REVIEW GUIDELINES FOR SOFTWARE LANGUAGES FOR USE IN NUCLEAR POWER PLANT SAFETY SYSTEMS.Final Report.

KRAAN,B.C.

NUREG/CR-6526 V01: PROBABILISTIC ACCIDENT CONSEQUENCE UNCERTAINTY ANALYSIS. Uncertainty Assessment For Deposited Material And External Doses.Main Report.
NUREG/CR-6526 V02: PROBABILISTIC ACCIDENT CONSEQUENCE UNCERTAINTY ANALYSIS. UNCERTAINTY ASSESSMENT FOR DEPOSITED MATERIAL AND EXTERNAL DOSES.Appendices.

KRAAN,B.C.P.

NUREG/CR-6523 V01: PROBABILISTIC ACCIDENT CONSEQUENCE UNCERTAINTY ANALYSIS.Food Chain Uncertainty Assessment.Main Report.
NUREG/CR-6523 V02: PROBABILISTIC ACCIDENT CONSEQUENCE UNCERTAINTY ANALYSIS. Food Chain Uncertainty Assessment.Appendices.

KRAMER,G.

NUREG/CR-6233 V02: STABILITY OF CRACKED PIPE UNDER SEISMIC/DYNAMIC DISPLACEMENT-CONTROLLED STRESSES.Subtask 1.2 Final Report.
NUREG/CR-6233 V04: INTERNATIONAL PIPING INTEGRITY RESEARCH PROGRAM (IPIRG) PROGRAM.Program Final Report.

KRISHNASWAMY,C.

NUREG/CR-6433: CONTAINMENT PERFORMANCE OF PROTOTYPICAL REACTOR CONTAINMENTS SUBJECTED TO SEVERE ACCIDENT CONDITIONS.

KUO,P.T.

NUREG-1611: AGING MANAGEMENT OF NUCLEAR POWER PLANT CONTAINMENTS FOR LICENSE RENEWAL.

KUPPERMAN,D.S.

NUREG/CR-6511 V01: STEAM GENERATOR TUBE INTEGRITY PROGRAM.Semiannual Report, August 1995 - March 1996.

LAMBE,W.M.

NUREG-1574: STANDARD REVIEW PLAN ON ANTITRUST REVIEWS.Final Report.
NUREG-1574 DRFT FC: STANDARD REVIEW PLAN ON ANTITRUST.Draft Report For Comment.

LANIK,G.F.

NUREG-1275 V12: OPERATING EXPERIENCE FEEDBACK REPORT.Assessment Of Spent Fuel Cooling.

LANNING,D.D.

NUREG/CR-6534 V01: FRAPCON-3: MODIFICATIONS TO FUEL ROD MATERIAL PROPERTIES AND PERFORMANCE MODELS FOR HIGH-BURNUP APPLICATION.

LAYTON,M.

NUREG-1532: FINAL TECHNICAL EVALUATION REPORT FOR THE PROPOSED REVISED RECLAMATION PLAN FOR THE ATLAS CORPORATION MOAB MILL.Source Material License No. SUA-917.Docket No. 40-3453.(Atlas Corporation)

LEE,A.D.

NUREG-1612: STATUS REPORT: REACTOR VESSEL INTEGRITY DATABASE.

LEE,S.S.

NUREG-1611: AGING MANAGEMENT OF NUCLEAR POWER PLANT CONTAINMENTS FOR LICENSE RENEWAL.

LEHNER,J.R.

NUREG-1603 DRFT: INDIVIDUAL PLANT EXAMINATION DATABASE.User's Guide.

LEWIS,C.J.

NUREG/CR-6481 V02: REVIEW OF MODELS USED FOR DETERMINING CONSEQUENCES OF UF(6) RELEASE.Model Evaluation Report.

LEWIS,S.H.

NUREG-1556 V01: CONSOLIDATED GUIDANCE ABOUT MATERIALS LICENSES.Program-Specific Guidance About Portable Gauge Licenses.Final Report.
NUREG-1556 V4 DRF FC: CONSOLIDATED GUIDANCE ABOUT MATERIALS LICENSES.Program Specific Guidance About Fixed Gauge Licenses.Draft Report For Comment.

LICHTENWALTER

NUREG/CR-6361: CRITICALITY BENCHMARK GUIDE FOR LIGHT-WATER-REACTOR FUEL IN TRANSPORTATION AND STORAGE PACKAGES.

LIN,C.C.

NUREG-1603 DRFT: INDIVIDUAL PLANT EXAMINATION DATABASE.User's Guide.

LIN,D.

NUREG/CR-6463 R01: REVIEW GUIDELINES FOR SOFTWARE LANGUAGES FOR USE IN NUCLEAR POWER PLANT SAFETY SYSTEMS.Final Report.

LIU,W.C.

NUREG-1611: AGING MANAGEMENT OF NUCLEAR POWER PLANT CONTAINMENTS FOR LICENSE RENEWAL.

LIU,Y.C.

NUREG/CR-6507: CRITICAL HEAT FLUX (CHF) PHENOMENON ON A DOWNWARD FACING CURVED SURFACE.

LOGAN,R.J.

NUREG/CR-6535: DEVELOPMENT OF CONFORMAL RESPIRATOR MONITORING TECHNOLOGY.

LOMBARDI,D.A.

NUREG/CR-6528: ENVIRONMENTAL ASSESSMENT PROPOSED LICENSE RENEWAL OF NUCLEAR METALS,INC. CONCORD, MASSACHUSETTS.

LUBINSKI,J.

NUREG-1556 V3 DRF FC: CONSOLIDATED GUIDANCE ABOUT MATERIALS LICENSES.Applications for Sealed Source And Device Evaluation And Registration. Draft Report For Comment.

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LUEBBERS,P.R.

NUREG/CR-4667 V22: ENVIRONMENTALLY ASSISTED CRACKING IN LIGHT WATER REACTORS. Semiannual Report, January 1996 - June 1996.

NUREG/CR-4667 V23: ENVIRONMENTALLY ASSISTED CRACKING IN LIGHT WATER REACTORS. Semiannual Report, July-December 1996.

LUKEZICH,S.J.

NUREG/CR-6074 V03: SEALED SOURCE AND DEVICE DESIGN SAFETY TESTING. Technical Report On The Findings Of Task 4. Investigation Of A Failed Brachytherapy Needle Applicator.

LUND,A.L.

NUREG-1616: FEASIBILITY OF UNDERWATER WELDING OF HIGHLY IRRADIATED IN-VESSEL COMPONENTS OF BOILING WATER REACTORS. A Literature Review.

MACKINNON,R.J.

NUREG/CR-6515: BLT-EC (BREACH, LEACH, AND TRANSPORT-EQUILIBRIUM CHEMISTRY) DATA INPUT GUIDE. A Computer Model For Simulating Release And Coupled Geochemical Transport Of Contaminants From A Subsurface Disposal Facility.

MAJUMDAR,S.

NUREG/CR-6511 V01: STEAM GENERATOR TUBE INTEGRITY PROGRAM. Semiannual Report, August 1995 - March 1996.

MALLIAKOS,A.

NUREG/CR-6391: DETONATION CELL SIZE MEASUREMENTS IN HIGH-TEMPERATURE HYDROGEN-AIR-STEAM MIXTURES AT THE BNL HIGH-TEMPERATURE COMBUSTION FACILITY.

MANNESCHMIDT,E.

NUREG/CR-6426 V01: DUCTILE FRACTURE TOUGHNESS OF MODIFIED A 302 GRADE B PLATE MATERIALS. DATA ANALYSIS.

NUREG/CR-6426 V02: DUCTILE FRACTURE TOUGHNESS OF MODIFIED A 302 GRADE B PLATE MATERIALS. Data Records.

MARSHALL,C.

NUREG/CR-6233 V02: STABILITY OF CRACKED PIPE UNDER SEISMIC/DYNAMIC DISPLACEMENT-CONTROLLED STRESSES. Subtask 1.2 Final Report.

NUREG/CR-6233 V03: CRACK STABILITY IN A REPRESENTATIVE PIPING SYSTEM UNDER COMBINED INERTIAL AND SEISMIC/DYNAMIC DISPLACEMENT-CONTROLLED STRESSES. Subtask 1.3 Final Report.

NUREG/CR-6233 V04: INTERNATIONAL PIPING INTEGRITY RESEARCH PROGRAM (PIPIRG) PROGRAM. Program Final Report.

NUREG/CR-6389: IPIRG-2 TASK 1 - PIPE SYSTEM EXPERIMENTS WITH CIRCUMFERENTIAL CRACKS IN STRAIGHT-PIPE LOCATIONS. Final Report. September 1991 - November 1995.

MARTINEZ,G.M.

NUREG/CR-6533: CODE MANUAL FOR CONTAIN 2.0: A COMPUTER CODE FOR NUCLEAR REACTOR CONTAINMENT ANALYSIS.

MARTINEZ-GURIDI

NUREG/CR-6538: EVALUATION OF LOCA WITH DELAYED LOOP AND LOOP WITH DELAYED LOCA ACCIDENT SCENARIOS.

MATSON,E.R.

NUREG-1556 V01: CONSOLIDATED GUIDANCE ABOUT MATERIALS LICENSES. Program-Specific Guidance About Portable Gauge Licenses. Final Report.

MAYER,S.J.

NUREG/CR-6558: NRC ANTITRUST LICENSING ACTIONS, 1978-1996.

MAZUZAN,G.T.

NUREG-1610: CONTROLLING THE ATOM. The Beginnings Of Nuclear Regulation, 1946-1962.

MCCABE,D.E.

NUREG/CR-6426 V01: DUCTILE FRACTURE TOUGHNESS OF MODIFIED A 302 GRADE B PLATE MATERIALS. DATA ANALYSIS.

NUREG/CR-6426 V02: DUCTILE FRACTURE TOUGHNESS OF MODIFIED A 302 GRADE B PLATE MATERIALS. Data Records.

MCCARTHY,J.F.

NUREG/CR-6505 V01: THE POTENTIAL FOR CRITICALITY FOLLOWING DISPOSAL OF URANIUM AT LOW-LEVEL WASTE FACILITIES. Uranium Blended With Soil.

MCCONNELL,J.W.

NUREG/CR-5229 V09: FIELD LYSIMETER INVESTIGATIONS: LOW-LEVEL WASTE DATA BASE DEVELOPMENT PROGRAM FOR FISCAL YEAR 1996. Annual Report.

MCDONALD,J.P.

NUREG/CR-6566: DESCRIPTION OF MULTIMEDIA ENVIRONMENTAL POLLUTANT ASSESSMENT SYSTEM (MEPAS) VERSION 3.2 MODIFICATION FOR THE NUCLEAR REGULATORY COMMISSION.

MCGUIRE,S.A.

NUREG-1492: REGULATORY ANALYSIS ON CRITERIA FOR THE RELEASE OF PATIENTS ADMINISTERED RADIOACTIVE MATERIAL. Final Report.

MCKENNA,E.M.

NUREG-1606 DRFT FC: PROPOSED REGULATORY GUIDANCE RELATED TO IMPLEMENTATION OF 10 CFR 50.59 (CHANGES, TESTS, OR EXPERIMENTS). Draft Report For Comment.

MCLAUGHLIN,K.L.

NUREG/CR-6448 V02: EVALUATION OF NATIONAL SEISMOGRAPH NETWORK DETECTION CAPABILITIES. Final Report.

MEDOFF,J.

NUREG-1612: STATUS REPORT: REACTOR VESSEL INTEGRITY DATABASE.

MEINHOLD,C.B.

NUREG/CR-6397: RADIATION SAFETY CONCERNS FOR PREGNANT OR BREAST-FEEDING PATIENTS. The Positions Of The NCRP And The ICRP.

MEYER,P.D.

NUREG/CR-6565: UNCERTAINTY ANALYSES OF INFILTRATION AND SUBSURFACE FLOW AND TRANSPORT FOR SDMP SITES.

MILLER,R.L.

NUREG/CR-6528: ENVIRONMENTAL ASSESSMENT PROPOSED LICENSE RENEWAL OF NUCLEAR METALS, INC. CONCORD, MASSACHUSETTS.

MINARICK,J.W.

NUREG/CR-4674 V23: PRECURSORS TO POTENTIAL SEVERE CORE DAMAGE ACCIDENTS: 1995. A Status Report.

NUREG/CR-4674 V24: PRECURSORS TO POTENTIAL SEVERE CORE DAMAGE ACCIDENTS: 1982-83. A Status Report.

MITCHELL,B.J.

NUREG/CR-6563: LG EXCITATION, ATTENUATION, AND SOURCE SPECTRAL SCALING IN CENTRAL AND EASTERN NORTH AMERICA.

MITCHELL,D.B.

NUREG/CR-4674 V24: PRECURSORS TO POTENTIAL SEVERE CORE DAMAGE ACCIDENTS: 1982-83. A Status Report.

MITCHELL,M.W.

NUREG-1556 V5 DRF FC: CONSOLIDATED GUIDANCE ABOUT MATERIALS LICENSES. Program-Specific Guidance About Self-Shielded Irradiator Licenses. Draft Report For Comment.

MOHAN,R.

NUREG/CR-6452: THE SECOND INTERNATIONAL PIPING INTEGRITY RESEARCH GROUP (IPIRG-2) PROGRAM. Final Report.

MONTELEONE,S.

NUREG/CP-0157 V01: PROCEEDINGS OF THE TWENTY-FOURTH WATER REACTOR SAFETY INFORMATION MEETING. Plenary Session, High Burnup Fuel, Containment And Structural Aging.

NUREG/CP-0157 V02: PROCEEDINGS OF THE TWENTY-FOURTH WATER REACTOR SAFETY INFORMATION MEETING. Reactor Pressure Vessel Embrittlement And Thermal Annealing, Reactor Vessel Lower Head Integrity And Evaluation And Projection Of Steam Generator tube....

NUREG/CP-0157 V03: PROCEEDINGS OF THE TWENTY-FOURTH WATER REACTOR SAFETY INFORMATION MEETING. PRA And HRA, And Probabilistic Seismic Hazard Assessment And Seismic Siting Criteria.

NUREG/CP-0161: TRANSACTIONS OF THE TWENTY-FIFTH WATER REACTOR SAFETY INFORMATION MEETING.

MONTGOMERY,J.

NUREG-1516: MANAGEMENT OF RADIOACTIVE MATERIAL SAFETY PROGRAMS AT MEDICAL FACILITIES. Final Report.

MORANTE,R.

NUREG/CR-6486: ASSESSMENT OF MODULAR CONSTRUCTION FOR SAFETY-RELATED STRUCTURES AT ADVANCED NUCLEAR POWER PLANTS.

MORRIS,E.B.

NUREG-0540 V19 N08: TITLE LIST OF DOCUMENTS MADE PUBLICLY AVAILABLE.August 1-31, 1997.

MORRIS,P.A.

NUREG/CR-6372 V01: RECOMMENDATIONS FOR PROBABILISTIC SEISMIC HAZARD ANALYSIS: GUIDANCE ON UNCERTAINTY AND USE OF EXPERTS.Main Report.
NUREG/CR-6372 V02: RECOMMENDATIONS FOR PROBABILISTIC SEISMIC HAZARD ANALYSIS: GUIDANCE ON UNCERTAINTY AND USE OF EXPERTS.Appendices.

MUBAYI,V.

NUREG/CR-6295: REASSESSMENT OF SELECTED FACTORS AFFECTING SITING OF NUCLEAR POWER PLANTS.

MUHLHEIM,M.D.

NUREG/CR-4674 V23: PRECURSORS TO POTENTIAL SEVERE CORE DAMAGE ACCIDENTS: 1995. A Status Report.

MURATA,K.K.

NUREG/CR-6533: CODE MANUAL FOR CONTAIN 2.0: A COMPUTER CODE FOR NUCLEAR REACTOR CONTAINMENT ANALYSIS.

MURRELL,M.T.

NUREG/CR-6497: DATA COLLECTION AND FIELD EXPERIMENTS AT THE APACHE LEAP RESEARCH SITE.May 1995 - 1996.

NAIR,S.K.

NUREG/CR-6481 V01: REVIEW OF MODELS USED FOR DETERMINING CONSEQUENCES OF UF(6) RELEASE.Development Of Model Evaluation Criteria.
NUREG/CR-6481 V02: REVIEW OF MODELS USED FOR DETERMINING CONSEQUENCES OF UF(6) RELEASE.Model Evaluation Report.

NANEY,M.T.

NUREG/CR-6505 V01: THE POTENTIAL FOR CRITICALITY FOLLOWING DISPOSAL OF URANIUM AT LOW-LEVEL WASTE FACILITIES.Uranium Blended With Soil.

NANSTAD,R.K.

NUREG/CR-6363: EFFECTS OF THERMAL AGING AND NEUTRON IRRADIATION ON THE MECHANICAL PROPERTIES OF THREE-WIRE STAINLESS STEEL WELD OVERLAY CLADDING.

NASTA,K.

NUREG/CR-6400: HUMAN FACTORS ENGINEERING (HFE) INSIGHTS FOR ADVANCED REACTORS BASED UPON OPERATING EXPERIENCE.

NELLIS,D.

NUREG-1556 V2 DRF FC: CONSOLIDATED GUIDANCE ABOUT MATERIALS LICENSES.Program Specific Guidance About Industrial Radiography Licenses. Draft Report For Use And Comment.

NEUMAN,S.P.

NUREG/CR-6459: FIELD STUDIES AT THE APACHE LEAP RESEARCH SITE IN SUPPORT OF ALTERNATIVE CONCEPTUAL MODELS.
NUREG/CR-6497: DATA COLLECTION AND FIELD EXPERIMENTS AT THE APACHE LEAP RESEARCH SITE.May 1995 - 1996.

NOURBAKHSI,H.P.

NUREG/CR-6295: REASSESSMENT OF SELECTED FACTORS AFFECTING SITING OF NUCLEAR POWER PLANTS.

O'DONNELL,E.

NUREG/CR-4918 V10: CONTROL OF WATER INFILTRATION INTO NEAR SURFACE LOW-LEVEL WASTE DISPOSAL UNITS.Final Report On Field Experiments At A Humid Region Site,Beltsville,Maryland.

O'HARA,J.

NUREG/CR-6393: INTEGRATED SYSTEM VALIDATION: METHODOLOGY AND REVIEW CRITERIA.

OLSON,R.

NUREG/CR-6233 V03: CRACK STABILITY IN A REPRESENTATIVE PIPING SYSTEM UNDER COMBINED INERTIAL AND SEISMIC/DYNAMIC DISPLACEMENT-CONTROLLED STRESSES.Subtask 1.3 Final Report.
NUREG/CR-6233 V04: INTERNATIONAL PIPING INTEGRITY RESEARCH PROGRAM (IPIRG) PROGRAM.Program Final Report.

NUREG/CR-6389: IPIRG-2 TASK 1 - PIPE SYSTEM EXPERIMENTS WITH CIRCUMFERENTIAL CRACKS IN STRAIGHT-PIPE LOCATIONS.Final Report.September 1991 - November 1995.
NUREG/CR-6452: THE SECOND INTERNATIONAL PIPING INTEGRITY RESEARCH GROUP (IPIRG-2) PROGRAM.Final Report.

ORNSTEIN,H.L.

NUREG-1275 V12: OPERATING EXPERIENCE FEEDBACK REPORT.Assessment Of Spent Fuel Cooling.

PAINTER,C.L.

NUREG/CR-6534 V01: FRAPCON-3: MODIFICATIONS TO FUEL ROD MATERIAL PROPERTIES AND PERFORMANCE MODELS FOR HIGH-BURNUP APPLICATION.

PARK,J.-H.

NUREG/CR-4667 V22: ENVIRONMENTALLY ASSISTED CRACKING IN LIGHT WATER REACTORS. Semiannual Report,January 1996 - June 1996.
NUREG/CR-4667 V23: ENVIRONMENTALLY ASSISTED CRACKING IN LIGHT WATER REACTORS. Semiannual Report,July-December 1996.

PARK,J.Y.

NUREG/CR-6511 V01: STEAM GENERATOR TUBE INTEGRITY PROGRAM.Semiannual Report, August 1995 - March 1996.

PARK,S.H.

NUREG/CR-6481 V01: REVIEW OF MODELS USED FOR DETERMINING CONSEQUENCES OF UF(6) RELEASE.Development Of Model Evaluation Criteria.
NUREG/CR-6481 V02: REVIEW OF MODELS USED FOR DETERMINING CONSEQUENCES OF UF(6) RELEASE.Model Evaluation Report.

PARKS,C.V.

NUREG/CR-5661: RECOMMENDATIONS FOR PREPARING THE CRITICALITY SAFETY EVALUATION OF TRANSPORTATION PACKAGES.
NUREG/CR-6505 V01: THE POTENTIAL FOR CRITICALITY FOLLOWING DISPOSAL OF URANIUM AT LOW-LEVEL WASTE FACILITIES.Uranium Blended With Soil.

PAUL,D.

NUREG/CR-6233 V04: INTERNATIONAL PIPING INTEGRITY RESEARCH PROGRAM (IPIRG) PROGRAM.Program Final Report.
NUREG/CR-6452: THE SECOND INTERNATIONAL PIPING INTEGRITY RESEARCH GROUP (IPIRG-2) PROGRAM.Final Report.

PELCHAT,J.M.

NUREG-1556 V01: CONSOLIDATED GUIDANCE ABOUT MATERIALS LICENSES.Program-Specific Guidance About Portable Gauge Licenses.Final Report.

PELTON,M.A.

NUREG/CR-6566: DESCRIPTION OF MULTIMEDIA ENVIRONMENTAL POLLUTANT ASSESSMENT SYSTEM (MEPAS) VERSION 3.2 MODIFICATION FOR THE NUCLEAR REGULATORY COMMISSION.

PENNELL,W.E.

NUREG/CR-4219 V12 N2: HEAVY-SECTION STEEL TECHNOLOGY PROGRAM.Semiannual Progress Report For April 1995 Through September 1995.
NUREG/CR-4219 V13 N1: HEAVY-SECTION STEEL TECHNOLOGY PROGRAM.Semiannual Progress Report For October 1995 - March 1996.

PHAN,H.K.

NUREG/CR-6181 R01: A PILOT APPLICATION OF RISK-INFORMED METHODS TO ESTABLISH INSERVICE INSPECTION PRIORITIES FOR NUCLEAR COMPONENTS AT SURRY UNIT 1 NUCLEAR POWER STATION.

PILCH,M.M.

NUREG/CR-6469: EXPERIMENTS TO INVESTIGATE DIRECT CONTAINMENT HEATING PHENOMENA WITH SCALED MODELS OF THE CALVERT CLIFFS NUCLEAR POWER PLANT.

PISKURA,D.

NUREG-1556 V2 DRF FC: CONSOLIDATED GUIDANCE ABOUT MATERIALS LICENSES.Program Specific Guidance About Industrial Radiography Licenses. Draft Report For Use And Comment.

PLEUNE,T.T.

NUREG/CR-4667 V22: ENVIRONMENTALLY ASSISTED CRACKING IN LIGHT WATER REACTORS. Semiannual Report,January 1996 - June 1996.

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- POOLE, A.B.**
NUREG/CR-6508: COMPONENT UNAVAILABILITY VERSUS INSERVICE TEST (IST) INTERVAL EVALUATIONS OF COMPONENT AGING EFFECTS WITH APPLICATIONS TO CHECK VALVES.
- PORTER, A.M.**
NUREG/CR-6456: REVIEW OF INDUSTRY EFFORTS TO MANAGE PRESSURIZED WATER REACTOR FEEDWATER NOZZLE, PIPING, AND FEEDING CRACKING AND WALL THINNING.
- POWERS, D.A.**
NUREG/CR-6153: A SIMPLIFIED MODEL OF DECONTAMINATION BY BWR STEAM SUPPRESSION POOLS.
- PRENDERGAST, K.**
NUREG-1556 V2 DRF FC: CONSOLIDATED GUIDANCE ABOUT MATERIALS LICENSES. Program Specific Guidance About Industrial Radiography Licenses. Draft Report For Use And Comment.
- PULLANI, S.V.**
NUREG-1275 V12: OPERATING EXPERIENCE FEEDBACK REPORT. Assessment Of Spent Fuel Cooling.
- RADCLIFFE, W.H.**
NUREG-1556 V4 DRF FC: CONSOLIDATED GUIDANCE ABOUT MATERIALS LICENSES. Program Specific Guidance About Fixed Gauge Licenses. Draft Report For Comment.
NUREG-1556 V5 DRF FC: CONSOLIDATED GUIDANCE ABOUT MATERIALS LICENSES. Program-Specific Guidance About Self-Shielded Irradiator Licenses. Draft Report For Comment.
- RADDATZ, M.G.**
NUREG-1571: INFORMATION HANDBOOK ON INDEPENDENT SPENT FUEL STORAGE INSTALLATIONS.
- RADONJIC, Z.R.**
NUREG/CR-6481 V02: REVIEW OF MODELS USED FOR DETERMINING CONSEQUENCES OF UF(6) RELEASE. Model Evaluation Report.
- RAMSDELL, J.V.**
NUREG/CR-6331 R01: ATMOSPHERIC RELATIVE CONCENTRATIONS IN BUILDING WAKES.
- RANDALL, K.**
NUREG-1556 V3 DRF FC: CONSOLIDATED GUIDANCE ABOUT MATERIALS LICENSES. Applications for Sealed Source And Device Evaluation And Registration. Draft Report For Comment.
- RAO, D.V.**
NUREG/CR-6370: BLOCKAGE 2.5 USER'S MANUAL.
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- REIL, K.O.**
NUREG/CR-6167: LATE-PHASE MELT PROGRESSION EXPERIMENT MP-2. Results And Analysis.
- REMEC, I.**
NUREG/CR-6454: POOL CRITICAL ASSEMBLY PRESSURE VESSEL FACILITY BENCHMARK.
- RICH, T.**
NUREG-1556 V3 DRF FC: CONSOLIDATED GUIDANCE ABOUT MATERIALS LICENSES. Applications for Sealed Source And Device Evaluation And Registration. Draft Report For Comment.
NUREG-1562 DRFT FC: STANDARD REVIEW PLAN FOR APPLICATIONS FOR LICENSES TO DISTRIBUTE BYPRODUCT MATERIAL TO PERSONS EXEMPT FROM THE REQUIREMENTS FOR AN NRC LICENSE. 10CFR Parts 30.14, 30.15, 30.16, 30.18, 30.19 & 30.20.
- RIDGELY, J.N.**
NUREG/CR-6525: SECTOP90: SECTOR POPULATION, LAND FRACTION, AND ECONOMIC ESTIMATION PROGRAM.
- RIDKY, R.W.**
NUREG/CR-4918 V10: CONTROL OF WATER INFILTRATION INTO NEAR SURFACE LOW-LEVEL WASTE DISPOSAL UNITS. Final Report On Field Experiments At A Humid Region Site, Beltsville, Maryland.
- ROCKHOLD, M.L.**
NUREG/CR-6565: UNCERTAINTY ANALYSES OF INFILTRATION AND SUBSURFACE FLOW AND TRANSPORT FOR SDMP SITES.
- ROGERS, R.D.**
NUREG/CR-5229 V09: FIELD LYSIMETER INVESTIGATIONS: LOW-LEVEL WASTE DATA BASE DEVELOPMENT PROGRAM FOR FISCAL YEAR 1996. Annual Report.
- ROHATGI, U.S.**
NUREG/CR-6474: PRELIMINARY PHENOMENA IDENTIFICATION AND RANKING TABLES (PIRT) FOR SBWR STARTUP STABILITY.
- ROLLSTIN, J.A.**
NUREG/CR-6525: SECTOP90: SECTOR POPULATION, LAND FRACTION, AND ECONOMIC ESTIMATION PROGRAM.
- ROM, D.**
NUREG-1532: FINAL TECHNICAL EVALUATION REPORT FOR THE PROPOSED REVISED RECLAMATION PLAN FOR THE ATLAS CORPORATION MOAB MILL. Source Material License No. SUA-917. Docket No. 40-3453. (Atlas Corporation)
- ROOD, A.**
NUREG/CR-6523 V01: PROBABILISTIC ACCIDENT CONSEQUENCE UNCERTAINTY ANALYSIS. Food Chain Uncertainty Assessment. Main Report.
NUREG/CR-6523 V02: PROBABILISTIC ACCIDENT CONSEQUENCE UNCERTAINTY ANALYSIS. Food Chain Uncertainty Assessment. Appendices.
- RUDLAND, D.L.**
NUREG/CR-6389: IPIRG-2 TASK 1 - PIPE SYSTEM EXPERIMENTS WITH CIRCUMFERENTIAL CRACKS IN STRAIGHT-PIPE LOCATIONS. Final Report. September 1991 - November 1995.
NUREG/CR-6446: FRACTURE TOUGHNESS EVALUATIONS OF TP304 STAINLESS STEEL PIPES.
NUREG/CR-6452: THE SECOND INTERNATIONAL PIPING INTEGRITY RESEARCH GROUP (IPIRG-2) PROGRAM. Final Report.
- RUTHER, W.E.**
NUREG/CR-4667 V22: ENVIRONMENTALLY ASSISTED CRACKING IN LIGHT WATER REACTORS. Semiannual Report, January 1996 - June 1996.
NUREG/CR-4667 V23: ENVIRONMENTALLY ASSISTED CRACKING IN LIGHT WATER REACTORS. Semiannual Report, July-December 1996.
- SAGAR, B.**
NUREG/CR-6513 N01: NRC HIGH-LEVEL RADIOACTIVE WASTE MANAGEMENT PROGRAM ANNUAL PROGRESS REPORT: FISCAL YEAR 1996.
- SAMANTA, P.K.**
NUREG/CR-6538: EVALUATION OF LOCA WITH DELAYED LOOP AND LOOP WITH DELAYED LOCA ACCIDENT SCENARIOS.
- SANFORD, W.E.**
NUREG/CR-5229 V09: FIELD LYSIMETER INVESTIGATIONS: LOW-LEVEL WASTE DATA BASE DEVELOPMENT PROGRAM FOR FISCAL YEAR 1996. Annual Report.
- SANTIAGO, P.A.**
NUREG-1556 V01: CONSOLIDATED GUIDANCE ABOUT MATERIALS LICENSES. Program-Specific Guidance About Portable Gauge Licenses. Final Report.
- SCHAEFER, C.W.**
NUREG/CR-6531: EFFECTS OF RADIOACTIVE HOT PARTICLES ON PIG SKIN.
- SCHIFF, A.J.**
NUREG/CR-6464: AN EVALUATION OF METHODOLOGY FOR SEISMIC QUALIFICATION OF EQUIPMENT, CABLE TRAYS, AND DUCTS IN ALWR PLANTS BY USE OF EXPERIENCE DATA.
- SCHLUETER, J.**
NUREG-1516: MANAGEMENT OF RADIOACTIVE MATERIAL SAFETY PROGRAMS AT MEDICAL FACILITIES. Final Report.
- SCHMIDT, R.**
NUREG/CR-6233 V03: CRACK STABILITY IN A REPRESENTATIVE PIPING SYSTEM UNDER COMBINED INERTIAL AND SEISMIC/DYNAMIC DISPLACEMENT-CONTROLLED STRESSES. Subtask 1.3 Final Report.
NUREG/CR-6233 V04: INTERNATIONAL PIPING INTEGRITY RESEARCH PROGRAM (IPIRG) PROGRAM. Program Final Report.
- SCHMIDT, R.C.**
NUREG/CR-6167: LATE-PHASE MELT PROGRESSION EXPERIMENT MP-2. Results And Analysis.

SCHNEIDER,S.

NUREG-1492: REGULATORY ANALYSIS ON CRITERIA FOR THE RELEASE OF PATIENTS ADMINISTERED RADIOACTIVE MATERIAL.Final Report.

SCHRINER,H.K.

NUREG/CR-4674 V24: PRECURSORS TO POTENTIAL SEVERE CORE DAMAGE ACCIDENTS: 1982-83.A Status Report.

SCHULZ,R.K.

NUREG/CR-4918 V10: CONTROL OF WATER INFILTRATION INTO NEAR SURFACE LOW-LEVEL WASTE DISPOSAL UNITS.Final Report On Field Experiments At A Humid Region Site,Beltsville,Maryland.

SCHWARTZ,M.E.

NUREG-1556 V2 DRF FC: CONSOLIDATED GUIDANCE ABOUT MATERIALS LICENSES.Program Specific Guidance About Industrial Radiography Licenses. Draft Report For Use And Comment.

NUREG-1556 V5 DRF FC: CONSOLIDATED GUIDANCE ABOUT MATERIALS LICENSES.Program-Specific Guidance About Self-Shielded Irradiator Licenses. Draft Report For Comment.

SCOTT,P.

NUREG/CR-6233 V03: CRACK STABILITY IN A REPRESENTATIVE PIPING SYSTEM UNDER COMBINED INERTIAL AND SEISMIC/DYNAMIC DISPLACEMENT-CONTROLLED STRESSES.Subtask 1.3 Final Report.

NUREG/CR-6233 V04: INTERNATIONAL PIPING INTEGRITY RESEARCH PROGRAM (IPIRG) PROGRAM.Program Final Report.

NUREG/CR-6389: IPIRG-2 TASK 1 - PIPE SYSTEM EXPERIMENTS WITH CIRCUMFERENTIAL CRACKS IN STRAIGHT-PIPE LOCATIONS.Final Report.September 1991 - November 1995.

NUREG/CR-6452: THE SECOND INTERNATIONAL PIPING INTEGRITY RESEARCH GROUP (IPIRG-2) PROGRAM.Final Report.

SHACK,W.J.

NUREG/CR-4667 V22: ENVIRONMENTALLY ASSISTED CRACKING IN LIGHT WATER REACTORS. Semiannual Report,January 1996 - June 1996.

NUREG/CR-4667 V23: ENVIRONMENTALLY ASSISTED CRACKING IN LIGHT WATER REACTORS. Semiannual Report,July-December 1996.

NUREG/CR-6511 V01: STEAM GENERATOR TUBE INTEGRITY PROGRAM.Semiannual Report, August 1995 - March 1996.

SHAFFER,C.J.

NUREG/CR-6370: BLOCKAGE 2.5 USER'S MANUAL.

NUREG/CR-6371: BLOCKAGE 2.5 REFERENCE MANUAL.

SHAH,V.N.

NUREG/CR-6456: REVIEW OF INDUSTRY EFFORTS TO MANAGE PRESSURIZED WATER REACTOR FEEDWATER NOZZLE, PIPING, AND FEEDRING CRACKING AND WALL THINNING.

SHONKA,J.J.

NUREG/CR-6535: DEVELOPMENT OF CONFORMAL RESPIRATOR MONITORING TECHNOLOGY.

SIMOMEN,F.A.

NUREG/CR-6181 R01: A PILOT APPLICATION OF RISK-INFORMED METHODS TO ESTABLISH INSERVICE INSPECTION PRIORITIES FOR NUCLEAR COMPONENTS AT SURRY UNIT 1 NUCLEAR POWER STATION.

SIMONEN,C.A.

NUREG/CR-6331 R01: ATMOSPHERIC RELATIVE CONCENTRATIONS IN BUILDING WAKES.

SIMPSON,J.J.

NUREG/CR-6558: NRC ANTITRUST LICENSING ACTIONS, 1978-1996.

SMITH,B.

NUREG-1556 V3 DRF FC: CONSOLIDATED GUIDANCE ABOUT MATERIALS LICENSES.Applications for Sealed Source And Device Evaluation And Registration. Draft Report For Comment.

SNAY,R.A.

NUREG/CR-6586: HORIZONTAL VELOCITIES IN THE CENTRAL AND EASTERN UNITED STATES FROM GPS SURVEYS DURING THE 1987-1996 INTERVAL.

SOKOLOV,M.A.

NUREG/CR-6379: AN IMPROVED CORRELATION PROCEDURE FOR SUBSIZE AND FULL-SIZE CHARPY IMPACT SPECIMEN DATA.

SOPPET,W.K.

NUREG/CR-4667 V22: ENVIRONMENTALLY ASSISTED CRACKING IN LIGHT WATER REACTORS. Semiannual Report,January 1996 - June 1996.

NUREG/CR-4667 V23: ENVIRONMENTALLY ASSISTED CRACKING IN LIGHT WATER REACTORS. Semiannual Report,July-December 1996.

SOUTO,F.

NUREG/CR-6370: BLOCKAGE 2.5 USER'S MANUAL.

STAMPS,D.W.

NUREG/CR-6530: DELIBERATE IGNITION OF HYDROGEN-AIR-STEAM MIXTURES IN CONDENSING STEAM ENVIRONMENTS.

STEPHENS,D.M.

NUREG/CR-6497: DATA COLLECTION AND FIELD EXPERIMENTS AT THE APACHE LEAP RESEARCH SITE.May 1995 - 1996.

STOLLER,R.E.

NUREG/CR-6399: RESULTS OF CHARPY V-NOTCH IMPACT TESTING OF STRUCTURAL STEEL SPECIMENS IRRADIATED AT 30 DEGREES C TO 1 X 10(16) NEUTRONS/ CM(2) IN A COMMERCIAL REACTOR CAVITY.

STRAIN,R.V.

NUREG/CR-4667 V22: ENVIRONMENTALLY ASSISTED CRACKING IN LIGHT WATER REACTORS. Semiannual Report,January 1996 - June 1996.

NUREG/CR-4667 V23: ENVIRONMENTALLY ASSISTED CRACKING IN LIGHT WATER REACTORS. Semiannual Report,July-December 1996.

STRANGE,W.E.

NUREG/CR-6586: HORIZONTAL VELOCITIES IN THE CENTRAL AND EASTERN UNITED STATES FROM GPS SURVEYS DURING THE 1987-1996 INTERVAL.

STRENGE,D.L.

NUREG/CR-6566: DESCRIPTION OF MULTIMEDIA ENVIRONMENTAL POLLUTANT ASSESSMENT SYSTEM (MEPAS) VERSION 3.2 MODIFICATION FOR THE NUCLEAR REGULATORY COMMISSION.

STROSNIDER,J.R.

NUREG-1612: STATUS REPORT: REACTOR VESSEL INTEGRITY DATABASE.

STRUCKMEYER,R.

NUREG-0837 V16 N03: NRC TLD DIRECT RADIATION MONITORING NETWORK.Progress Report. July-September 1996.

NUREG-0837 V16 N04: NRC TLD DIRECT RADIATION MONITORING NETWORK.Progress Report. October-December 1996.

NUREG-0837 V17 N01: NRC TLD DIRECT RADIATION MONITORING NETWORK.Progress Report. January-March 1997.

NUREG-0837 V17 N02: NRC TLD DIRECT RADIATION MONITORING NETWORK.Progress Report. April-June 1997.

STUBLER,W.

NUREG/CR-6393: INTEGRATED SYSTEM VALIDATION: METHODOLOGY AND REVIEW CRITERIA.

SUT,T.M.

NUREG-1603 DRFT: INDIVIDUAL PLANT EXAMINATION DATABASE.User's Guide.

SUKALAC,T.R.

NUREG/CR-6535: DEVELOPMENT OF CONFORMAL RESPIRATOR MONITORING TECHNOLOGY.

SULLIVAN,T.M.

NUREG/CR-5229 V09: FIELD LYSIMETER INVESTIGATIONS: LOW-LEVEL WASTE DATA BASE DEVELOPMENT PROGRAM FOR FISCAL YEAR 1996.Annual Report.

NUREG/CR-6515: BLT-EC (BREACH, LEACH, AND TRANSPORT-EQUILIBRIUM CHEMISTRY) DATA INPUT GUIDE.A Computer Model For Simulating Release And Coupled Geochemical Transport Of Contaminants From A Subsurface Disposal Facility.

SWAIN,R.L.

NUREG/CR-6426 V01: DUCTILE FRACTURE TOUGHNESS OF MODIFIED A 302 GRADE B PLATE MATERIALS.DATA ANALYSIS.

NUREG/CR-6426 V02: DUCTILE FRACTURE TOUGHNESS OF MODIFIED A 302 GRADE B PLATE MATERIALS.Data Records.

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TALWANI,P.

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NUREG/CR-6543: EFFECTS OF SMOKE ON FUNCTIONAL CIRCUITS.

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NUREG/CR-6504 V01: AN UPDATED NUCLEAR CRITICALITY SLIDE RULE.Technical Basis.

THOMAS,M.L.

NUREG-0713 V17: OCCUPATIONAL RADIATION EXPOSURE AT COMMERCIAL NUCLEAR POWER REACTORS AND OTHER FACILITIES,1995.Twenty-Eighth Annual Report.

THOMASSON,M.J.

NUREG/CR-6497: DATA COLLECTION AND FIELD EXPERIMENTS AT THE APACHE LEAP RESEARCH SITE.May 1995 - 1996.

THOMPSON,D.L.

NUREG/CR-6459: FIELD STUDIES AT THE APACHE LEAP RESEARCH SITE IN SUPPORT OF ALTERNATIVE CONCEPTUAL MODELS.
NUREG/CR-6497: DATA COLLECTION AND FIELD EXPERIMENTS AT THE APACHE LEAP RESEARCH SITE.May 1995 - 1996.

TILLS,J.

NUREG/CR-6533: CODE MANUAL FOR CONTAIN 2.0: A COMPUTER CODE FOR NUCLEAR REACTOR CONTAINMENT ANALYSIS.

TINGLE,W.

NUREG-1556 V01: CONSOLIDATED GUIDANCE ABOUT MATERIALS LICENSES.Program-Specific Guidance About Portable Gauge Licenses.Final Report.

TOMPKINS,M.M.

NUREG/CR-4012 V04: REPLACEMENT ENERGY COSTS FOR NUCLEAR ELECTRICITY-GENERATING UNITS IN THE UNITED STATES: 1997-2001.

TORAN,L.E.

NUREG/CR-6505 V01: THE POTENTIAL FOR CRITICALITY FOLLOWING DISPOSAL OF URANIUM AT LOW-LEVEL WASTE FACILITIES.Uranium Blended With Soil.

TRAVIS,R.J.

NUREG/CR-6451: A SAFETY AND REGULATORY ASSESSMENT OF GENERIC BWR AND PWR PERMANENTLY SHUTDOWN NUCLEAR POWER PLANTS.

TREITLER,I.E.

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VANKUIKEN,J.C.

NUREG/CR-4012 V04: REPLACEMENT ENERGY COSTS FOR NUCLEAR ELECTRICITY-GENERATING UNITS IN THE UNITED STATES: 1997-2001.

VESELY,W.E.

NUREG/CR-6508: COMPONENT UNAVAILABILITY VERSUS INSERVICE TEST (IST) INTERVAL:EVALUATIONS OF COMPONENT AGING EFFECTS WITH APPLICATIONS TO CHECK VALVES.

VIETH,P.

NUREG/CR-6233 V02: STABILITY OF CRACKED PIPE UNDER SEISMIC/DYNAMIC DISPLACEMENT-CONTROLLED STRESSES.Subtask 1.2 Final Report.

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WALKER,S.

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WASHINGTON,K.E.

NUREG/CR-6533: CODE MANUAL FOR CONTAIN 2.0: A COMPUTER CODE FOR NUCLEAR REACTOR CONTAINMENT ANALYSIS.

WATERS,M.D.

NUREG-1571: INFORMATION HANDBOOK ON INDEPENDENT SPENT FUEL STORAGE INSTALLATIONS.

WATKINS,J.C.

NUREG/CR-6478: MOTOR-OPERATED VALVE (MOV) ACTUATOR MOTOR AND GEARBOX TESTING.

WATSON,G.M.

NUREG-1556 V4 DRF FC: CONSOLIDATED GUIDANCE ABOUT MATERIALS LICENSES.Program Specific Guidance About Fixed Gauge Licenses.Draft Report For Comment.

WEISMANN,J.J.

NUREG/CR-6535: DEVELOPMENT OF CONFORMAL RESPIRATOR MONITORING TECHNOLOGY.

WESLEY,D.A.

NUREG/CR-6433: CONTAINMENT PERFORMANCE OF PROTOTYPICAL REACTOR CONTAINMENTS SUBJECTED TO SEVERE ACCIDENT CONDITIONS.

WHITE,D.

NUREG-1556 V2 DRF FC: CONSOLIDATED GUIDANCE ABOUT MATERIALS LICENSES.Program Specific Guidance About Industrial Radiography Licenses. Draft Report For Use And Comment.

WHITEHEAD,D.W.

NUREG/CR-4674 V24: PRECURSORS TO POTENTIAL SEVERE CORE DAMAGE ACCIDENTS: 1982-83.A Status Report.

WHITTEN,J.

NUREG-1556 V2 DRF FC: CONSOLIDATED GUIDANCE ABOUT MATERIALS LICENSES.Program Specific Guidance About Industrial Radiography Licenses. Draft Report For Use And Comment.

WHITTEN,J.E.

NUREG-1556 V01: CONSOLIDATED GUIDANCE ABOUT MATERIALS LICENSES.Program-Specific Guidance About Portable Gauge Licenses.Final Report.

WHORLOW,K.M.

NUREG/CR-6539: EFFECTS OF FLUORIDE AND OTHER HALOGEN IONS ON THE EXTERNAL STRESS CORROSION CRACKING OF TYPE 304 AUSTENITIC STAINLESS STEEL.

WICHMAN,K.R.

NUREG-1612: STATUS REPORT: REACTOR VESSEL INTEGRITY DATABASE.

WIERENGA,P.J.

NUREG/CR-6437: FLOW AND TRANSPORT AT THE LAS CRUCES TRENCH SITE: EXPERIMENT IIB.
NUREG/CR-6459: FIELD STUDIES AT THE APACHE LEAP RESEARCH SITE IN SUPPORT OF ALTERNATIVE CONCEPTUAL MODELS.
NUREG/CR-6497: DATA COLLECTION AND FIELD EXPERIMENTS AT THE APACHE LEAP RESEARCH SITE.May 1995 - 1996.

WILKOWSKI,G.M.

NUREG/CR-6233 V02: STABILITY OF CRACKED PIPE UNDER SEISMIC/DYNAMIC DISPLACEMENT-CONTROLLED STRESSES.Subtask 1.2 Final Report.
NUREG/CR-6233 V03: CRACK STABILITY IN A REPRESENTATIVE PIPING SYSTEM UNDER COMBINED INERTIAL AND SEISMIC/DYNAMIC DISPLACEMENT-CONTROLLED STRESSES.Subtask 1.3 Final Report.
NUREG/CR-6233 V04: INTERNATIONAL PIPING INTEGRITY RESEARCH PROGRAM (IPIRG) PROGRAM.Program Final Report.
NUREG/CR-6389: IPIRG-2 TASK 1 - PIPE SYSTEM EXPERIMENTS WITH CIRCUMFERENTIAL CRACKS IN STRAIGHT-PIPE LOCATIONS.Final Report.September 1991 - November 1995.
NUREG/CR-6446: FRACTURE TOUGHNESS EVALUATIONS OF TP304 STAINLESS STEEL PIPES.
NUREG/CR-6452: THE SECOND INTERNATIONAL PIPING INTEGRITY RESEARCH GROUP (IPIRG-2) PROGRAM.Final Report.

WILLIAMS,D.C.

NUREG/CR-6533: CODE MANUAL FOR CONTAIN 2.0: A COMPUTER CODE FOR NUCLEAR REACTOR CONTAINMENT ANALYSIS.

WILSON,G.E.

NUREG/CR-6541 R02: PHENOMENA IDENTIFICATION AND RANKING TABLES FOR WESTINGHOUSE AP600 SMALL BREAK LOSS-OF-COOLANT ACCIDENT, MAIN STEAM LINE BREAK, AND STEAM GENERATOR TUBE RUPTURE SCENARIOS.

WINBOW,R.T.

NUREG/CR-6528: ENVIRONMENTAL ASSESSMENT PROPOSED LICENSE RENEWAL OF NUCLEAR METALS,INC. CONCORD, MASSACHUSETTS.

WOLTERMAN,R.

NUREG/CR-6389: IPIRG-2 TASK 1 - PIPE SYSTEM EXPERIMENTS WITH CIRCUMFERENTIAL CRACKS IN STRAIGHT-PIPE LOCATIONS.Final Report.September 1991 - November 1995.

WOOD,R.S.

NUREG-1577 DRFT FC: STANDARD REVIEW PLAN ON POWER REACTOR LICENSEE FINANCIAL QUALIFICATIONS AND DECOMMISSIONING FUNDING ASSURANCE.Draft Report For Comment.

WOODHOUSE,E.G.

NUREG/CR-6459: FIELD STUDIES AT THE APACHE LEAP RESEARCH SITE IN SUPPORT OF ALTERNATIVE CONCEPTUAL MODELS.

NUREG/CR-6497: DATA COLLECTION AND FIELD EXPERIMENTS AT THE APACHE LEAP RESEARCH SITE.May 1995 - 1996.

WOODS,S.

NUREG-1516: MANAGEMENT OF RADIOACTIVE MATERIAL SAFETY PROGRAMS AT MEDICAL FACILITIES.Final Report.

WULFF,W.

NUREG/CR-6474: PRELIMINARY PHENOMENA IDENTIFICATION AND RANKING TABLES (PIRT) FOR SBWR STARTUP STABILITY.

XIE,J.

NUREG/CR-6563: LG EXCITATION, ATTENUATION, AND SOURCE SPECTRAL SCALING IN CENTRAL AND EASTERN NORTH AMERICA.

XIE,J.W.

NUREG/CR-4409 V06: DATA BASE ON DOSE REDUCTION PROJECTS FOR NUCLEAR POWER PLANTS.

YANG,J.W.

NUREG/CR-6538: EVALUATION OF LOCA WITH DELAYED LOOP AND LOOP WITH DELAYED LOCA ACCIDENT SCENARIOS.

YOUNG,M.H.

NUREG/CR-6437: FLOW AND TRANSPORT AT THE LAS CRUCES TRENCH SITE: EXPERIMENT IIB.

YOUNG,M.L.

NUREG/CR-6523 V01: PROBABILISTIC ACCIDENT CONSEQUENCE UNCERTAINTY ANALYSIS.Food Chain Uncertainty Assessment.Main Report.
NUREG/CR-6523 V02: PROBABILISTIC ACCIDENT CONSEQUENCE UNCERTAINTY ANALYSIS. Food Chain Uncertainty Assessment.Appendices.
NUREG/CR-6526 V01: PROBABILISTIC ACCIDENT CONSEQUENCE UNCERTAINTY ANALYSIS. Uncertainty Assessment For Deposited Material And External Doses.Main Report.
NUREG/CR-6526 V02: PROBABILISTIC ACCIDENT CONSEQUENCE UNCERTAINTY ANALYSIS. UNCERTAINTY ASSESSMENT FOR DEPOSITED MATERIAL AND EXTERNAL DOSES.Appendices.
NUREG/CR-6547: DOSFAC2 USER'S GUIDE.

ZHANG,J.

NUREG/CR-4667 V23: ENVIRONMENTALLY ASSISTED CRACKING IN LIGHT WATER REACTORS. Semiannual Report,July-December 1996.

ZIMMERMAN,G.P.

NUREG/CR-6528: ENVIRONMENTAL ASSESSMENT PROPOSED LICENSE RENEWAL OF NUCLEAR METALS,INC. CONCORD, MASSACHUSETTS.

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A 302 Grade B Steel Plate

NUREG/CR-6426 V01: DUCTILE FRACTURE TOUGHNESS OF MODIFIED A 302 GRADE B PLATE MATERIALS.DATA ANALYSIS.
NUREG/CR-6426 V02: DUCTILE FRACTURE TOUGHNESS OF MODIFIED A 302 GRADE B PLATE MATERIALS.Data Records.

ACRS Report

NUREG-1125 V18: A COMPILATION OF REPORTS OF THE ADVISORY COMMITTEE ON REACTOR SAFEGUARDS.1996 Annual.

ALARA

NUREG/CR-4409 V06: DATA BASE ON DOSE REDUCTION PROJECTS FOR NUCLEAR POWER PLANTS.

ALWR

NUREG/CR-6464: AN EVALUATION OF METHODOLOGY FOR SEISMIC QUALIFICATION OF EQUIPMENT,CABLE TRAYS, AND DUCTS IN ALWR PLANTS BY USE OF EXPERIENCE DATA.

Abnormal Occurrence

NUREG-0090 V19: REPORT TO CONGRESS ON ABNORMAL OCCURRENCES.Fiscal Year 1996.

Accident Scenario

NUREG/CR-6538: EVALUATION OF LOCA WITH DELAYED LOOP AND LOOP WITH DELAYED LOCA ACCIDENT SCENARIOS.

Accident Sequence Precursor

NUREG/CR-4674 V23: PRECURSORS TO POTENTIAL SEVERE CORE DAMAGE ACCIDENTS: 1995. A Status Report.
NUREG/CR-4674 V24: PRECURSORS TO POTENTIAL SEVERE CORE DAMAGE ACCIDENTS: 1982-83.A Status Report.

Accountability Report

NUREG-1542 V02: ACCOUNTABILITY REPORT FISCAL YEAR 1996.

Actuator Gearbox

NUREG/CR-6478: MOTOR-OPERATED VALVE (MOV) ACTUATOR MOTOR AND GEARBOX TESTING.

Advanced Boiling Water Reactor

NUREG-1503 S01: FINAL SAFETY EVALUATION REPORT RELATED TO THE CERTIFICATION OF THE ADVANCED BOILING WATER REACTOR DESIGN.Supplement No. 1.Docket No. 52-001.(General Electric Nuclear Energy)

Advanced Nuclear Power Plant

NUREG/CR-6486: ASSESSMENT OF MODULAR CONSTRUCTION FOR SAFETY-RELATED STRUCTURES AT ADVANCED NUCLEAR POWER PLANTS.

Advisory Committee On Nuclear Waste

NUREG-1423 V07: A COMPILATION OF REPORTS OF THE ADVISORY COMMITTEE ON NUCLEAR WASTE.July 1996 - June 1997.

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NUREG-1611: AGING MANAGEMENT OF NUCLEAR POWER PLANT CONTAINMENTS FOR LICENSE RENEWAL.
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NUREG-1145 V13: U.S. NUCLEAR REGULATORY COMMISSION 1996 ANNUAL REPORT.

Antitrust

NUREG-1574: STANDARD REVIEW PLAN ON ANTITRUST REVIEWS.Final Report.
NUREG-1574 DRFT FC: STANDARD REVIEW PLAN ON ANTITRUST.Draft Report For Comment.
NUREG/CR-6558: NRC ANTITRUST LICENSING ACTIONS, 1978-1996.

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NUREG/CR-6459: FIELD STUDIES AT THE APACHE LEAP RESEARCH SITE IN SUPPORT OF ALTERNATIVE CONCEPTUAL MODELS.
NUREG/CR-6497: DATA COLLECTION AND FIELD EXPERIMENTS AT THE APACHE LEAP RESEARCH SITE.May 1995 - 1996.

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NUREG-1532: FINAL TECHNICAL EVALUATION REPORT FOR THE PROPOSED REVISED RECLAMATION PLAN FOR THE ATLAS CORPORATION MOAB MILL.Source Material License No. SUA-917.Docket No. 40-3453.(Atlas Corporation)

Atmospheric Dispersion

NUREG/CR-6331 R01: ATMOSPHERIC RELATIVE CONCENTRATIONS IN BUILDING WAKES.
NUREG/CR-6481 V01: REVIEW OF MODELS USED FOR DETERMINING CONSEQUENCES OF UF(6) RELEASE.Development Of Model Evaluation Criteria.
NUREG/CR-6481 V02: REVIEW OF MODELS USED FOR DETERMINING CONSEQUENCES OF UF(6) RELEASE.Model Evaluation Report.

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NUREG-0383 V02 R20: DIRECTORY OF CERTIFICATES OF COMPLIANCE FOR RADIOACTIVE MATERIALS PACKAGES. Certificates Of Compliance.
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NUREG-1571: INFORMATION HANDBOOK ON INDEPENDENT SPENT FUEL STORAGE INSTALLATIONS.

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NUREG-1462 S01: FINAL SAFETY EVALUATION REPORT RELATED TO THE CERTIFICATION OF THE SYSTEM 80+ DESIGN. Docket No. 52-002. (Asea Brown Boveri-Combustion Engineering)

NUREG/CR-6400: HUMAN FACTORS ENGINEERING (HFE) INSIGHTS FOR ADVANCED REACTORS BASED UPON OPERATING EXPERIENCE.

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NUREG/CR-6389: IPIRG-2 TASK 1 - PIPE SYSTEM EXPERIMENTS WITH CIRCUMFERENTIAL CRACKS IN STRAIGHT-PIPE LOCATIONS. Final Report. September 1991 - November 1995.

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NUREG/CR-6534 V01: FRAPCON-3: MODIFICATIONS TO FUEL ROD MATERIAL PROPERTIES AND PERFORMANCE MODELS FOR HIGH-BURNUP APPLICATION.

Cladding Effect

NUREG/CR-4219 V12 N2: HEAVY-SECTION STEEL TECHNOLOGY PROGRAM. Semiannual Progress Report For April 1995 Through September 1995.

Code Architecture

NUREG/CP-0159: PROCEEDINGS OF THE OECD/CSNI WORKSHOP ON TRANSIENT THERMAL-HYDRAULIC AND NEUTRONIC CODES REQUIREMENTS. Held In Annapolis, Maryland, USA, November 5-8, 1996.

Code Manual

NUREG/CR-6533: CODE MANUAL FOR CONTAIN 2.0: A COMPUTER CODE FOR NUCLEAR REACTOR CONTAINMENT ANALYSIS.

Communication

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Consolidated Guidance

NUREG-1556 V01: CONSOLIDATED GUIDANCE ABOUT MATERIALS LICENSES. Program-Specific Guidance About Portable Gauge Licenses. Final Report.
NUREG-1556 V3 DRF FC: CONSOLIDATED GUIDANCE ABOUT MATERIALS LICENSES. Applications for Sealed Source And Device Evaluation And Registration. Draft Report For Comment.
NUREG-1556 V4 DRF FC: CONSOLIDATED GUIDANCE ABOUT MATERIALS LICENSES. Program Specific Guidance About Fixed Gauge Licenses. Draft Report For Comment.
NUREG-1556 V5 DRF FC: CONSOLIDATED GUIDANCE ABOUT MATERIALS LICENSES. Program-Specific Guidance About Self-Shielded Irradiator Licenses. Draft Report For Comment.

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NUREG-1555 DRFT: ENVIRONMENTAL STANDARD REVIEW PLAN. Standard Review Plans For Environmental Reviews For Nuclear Power Plants.
NUREG/CR-6558: NRC ANTITRUST LICENSING ACTIONS, 1978-1996.

Containment

NUREG/CP-0157 V01: PROCEEDINGS OF THE TWENTY-FOURTH WATER REACTOR SAFETY INFORMATION MEETING. Plenary Session, High Burnup Fuel, Containment And Structural Aging.

NUREG/CR-6533: CODE MANUAL FOR CONTAIN 2.0: A COMPUTER CODE FOR NUCLEAR REACTOR CONTAINMENT ANALYSIS.

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NUREG-1608 DRFT FC: CATEGORIZING AND TRANSPORTING LOW SPECIFIC ACTIVITY MATERIALS AND SURFACE CONTAMINATED OBJECTS. Draft Rept For Comment.

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NUREG/CR-4674 V23: PRECURSORS TO POTENTIAL SEVERE CORE DAMAGE ACCIDENTS: 1995. A Status Report.
NUREG/CR-4674 V24: PRECURSORS TO POTENTIAL SEVERE CORE DAMAGE ACCIDENTS: 1982-83. A Status Report.

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NUREG/CR-6527: FINAL RESULTS OF THE XR2-1 BWR METALLIC MELT RELOCATION EXPERIMENT.

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NUREG/CR-4667 V22: ENVIRONMENTALLY ASSISTED CRACKING IN LIGHT WATER REACTORS. Semiannual Report, January 1996 - June 1996.
NUREG/CR-4667 V23: ENVIRONMENTALLY ASSISTED CRACKING IN LIGHT WATER REACTORS. Semiannual Report, July-December 1996.

Cost Estimate

NUREG-1307 R07: REPORT ON WASTE BURIAL CHARGES. Escalation Of Decommissioning Waste Disposal Costs At Low-Level Waste Burial Facilities.

Crack Stability

NUREG/CR-6233 V03: CRACK STABILITY IN A REPRESENTATIVE PIPING SYSTEM UNDER COMBINED INERTIAL AND SEISMIC/DYNAMIC DISPLACEMENT-CONTROLLED STRESSES. Subtask 1.3 Final Report.

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NUREG/CR-6233 V02: STABILITY OF CRACKED PIPE UNDER SEISMIC/DYNAMIC DISPLACEMENT-CONTROLLED STRESSES. Subtask 1.2 Final Report.

Criticality Safety

NUREG/CR-0200 R5V1P1: SCALE: A MODULAR CODE SYSTEM FOR PERFORMING STANDARDIZED COMPUTER ANALYSES FOR LICENSING EVALUATION. Control Modules C4, C6.
NUREG/CR-0200 R5V1P2: SCALE: A MODULAR CODE SYSTEM FOR PERFORMING STANDARDIZED COMPUTER ANALYSES FOR LICENSING EVALUATION. Control Modules S1 - H1.
NUREG/CR-0200 R5V2P1: SCALE: A MODULAR CODE SYSTEM FOR PERFORMING STANDARDIZED COMPUTER ANALYSES FOR LICENSING EVALUATION. Functional Modules F1 - F8.

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NUREG/CR-0200 R5V2P3: SCALE: A MODULAR CODE SYSTEM FOR PERFORMING STANDARDIZED COMPUTER ANALYSES FOR LICENSING EVALUATION. Functional Modules F16 - F17.

NUREG/CR-0200 R5V3: SCALE: A MODULAR CODE SYSTEM FOR PERFORMING STANDARDIZED COMPUTER ANALYSES FOR LICENSING EVALUATION. Miscellaneous.

NUREG/CR-5661: RECOMMENDATIONS FOR PREPARING THE CRITICALITY SAFETY EVALUATION OF TRANSPORTATION PACKAGES.

NUREG/CR-6361: CRITICALITY BENCHMARK GUIDE FOR LIGHT-WATER-REACTOR FUEL IN TRANSPORTATION AND STORAGE PACKAGES.

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NUREG-1508: FINAL ENVIRONMENTAL IMPACT STATEMENT TO CONSTRUCT AND OPERATE THE CROWNPOINT URANIUM SOLUTION MINING PROJECT, CROWNPOINT, NEW MEXICO. Docket No. 40-8968. (Hydro Resources, Inc.)

Crustal Strain

NUREG/CR-6529: VALIDATION OF TECTONIC MODELS FOR AN INTRAPLATE SEISMIC ZONE, CHARLESTON, SOUTH CAROLINA WITH GPS GEODETIC DATA.

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NUREG/CR-6547: DOSFAC2 USER'S GUIDE.

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NUREG/CR-6497: DATA COLLECTION AND FIELD EXPERIMENTS AT THE APACHE LEAP RESEARCH SITE. May 1995 - 1996.

Database

NUREG-1603 DRFT: INDIVIDUAL PLANT EXAMINATION DATABASE. User's Guide.

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NUREG/CR-6370: BLOCKAGE 2.5 USER'S MANUAL.
NUREG/CR-6371: BLOCKAGE 2.5 REFERENCE MANUAL.

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NUREG-1307 R07: REPORT ON WASTE BURIAL CHARGES. Escalation Of Decommissioning Waste Disposal Costs At Low-Level Waste Burial Facilities.
NUREG-1496 V01: FINAL GENERIC ENVIRONMENTAL IMPACT STATEMENT IN SUPPORT OF RULEMAKING ON RADIOLOGICAL CRITERIA FOR LICENSE TERMINATION OF NRC-LICENSED NUCLEAR FACILITIES. Main Report. Final Report.
NUREG-1496 V02: FINAL GENERIC ENVIRONMENTAL IMPACT STATEMENT IN SUPPORT OF RULEMAKING ON RADIOLOGICAL CRITERIA FOR LICENSE TERMINATION OF NRC-LICENSED NUCLEAR FACILITIES. Appendices A And B. Final Report.
NUREG-1496 V03: FINAL GENERIC ENVIRONMENTAL IMPACT STATEMENT IN SUPPORT OF RULEMAKING ON RADIOLOGICAL CRITERIA FOR LICENSE TERMINATION OF NRC-LICENSED NUCLEAR FACILITIES. Appendices C-H. Final Report.
NUREG-1577 DRFT FC: STANDARD REVIEW PLAN ON POWER REACTOR LICENSEE FINANCIAL QUALIFICATIONS AND DECOMMISSIONING FUNDING ASSURANCE. Draft Report For Comment.
NUREG/CP-0153: PROCEEDINGS OF THE 24TH DOE/NRC NUCLEAR AIR CLEANING AND TREATMENT CONFERENCE. Held In Portland, Oregon, July 15-18, 1996.
NUREG/CR-6451: A SAFETY AND REGULATORY ASSESSMENT OF GENERIC BWR AND PWR PERMANENTLY SHUTDOWN NUCLEAR POWER PLANTS.
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NUREG/CR-6233 V04: INTERNATIONAL PIPING INTEGRITY RESEARCH PROGRAM (IPIRG) PROGRAM. Program Final Report.

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NUREG-1555 DRFT: ENVIRONMENTAL STANDARD REVIEW PLAN. Standard Review Plans For Environmental Reviews For Nuclear Power Plants.

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NUREG/CR-6372 V01: RECOMMENDATIONS FOR PROBABILISTIC SEISMIC HAZARD ANALYSIS: GUIDANCE ON UNCERTAINTY AND USE OF EXPERTS. Main Report.
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Emergency Planning

NUREG/CR-6504 V01: AN UPDATED NUCLEAR CRITICALITY SLIDE RULE. Technical Basis.

Enforcement Action

NUREG-0940 V15 N2 P1: ENFORCEMENT ACTIONS: SIGNIFICANT ACTIONS RESOLVED INDIVIDUAL ACTIONS. Semiannual Progress Report, July-December 1996.
NUREG-0940 V15 N2 P2: ENFORCEMENT ACTIONS: SIGNIFICANT ACTIONS RESOLVED REACTOR LICENSEES. Semiannual Progress Report, July-December 1996.
NUREG-0940 V15 N2 P3: ENFORCEMENT ACTIONS: SIGNIFICANT ACTIONS RESOLVED MATERIAL LICENSEES. Semiannual Progress Report, July-December 1996.
NUREG-0940 V16 N1 P1: ENFORCEMENT ACTIONS: SIGNIFICANT ACTIONS RESOLVED INDIVIDUAL ACTIONS. Semiannual Progress Report, January-June 1997.
NUREG-0940 V16 N1 P2: ENFORCEMENT ACTIONS: SIGNIFICANT ACTIONS RESOLVED REACTOR LICENSEES. Semiannual Progress Report, January-June 1997.
NUREG-0940 V16 N1 P3: ENFORCEMENT ACTIONS: SIGNIFICANT ACTIONS RESOLVED MATERIAL LICENSEES. Semiannual Progress Report, January-June 1997.

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NUREG-1496 V01: FINAL GENERIC ENVIRONMENTAL IMPACT STATEMENT IN SUPPORT OF RULEMAKING ON RADIOLOGICAL CRITE-

RIA FOR LICENSE TERMINATION OF NRC-LICENSED NUCLEAR FACILITIES. Main Report. Final Report.
 NUREG-1496 V02: FINAL GENERIC ENVIRONMENTAL IMPACT STATEMENT IN SUPPORT OF RULEMAKING ON RADIOLOGICAL CRITERIA FOR LICENSE TERMINATION OF NRC-LICENSED NUCLEAR FACILITIES. Appendices A And B. Final Report.
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NUREG/CR-6566: DESCRIPTION OF MULTIMEDIA ENVIRONMENTAL POLLUTANT ASSESSMENT SYSTEM (MEPAS) VERSION 3.2 MODIFICATION FOR THE NUCLEAR REGULATORY COMMISSION.

Examination Standard

NUREG-1021 INT R08: OPERATOR LICENSING EXAMINATION STANDARDS FOR POWER REACTORS.

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NUREG-1562 DRFT FC: STANDARD REVIEW PLAN FOR APPLICATIONS FOR LICENSES TO DISTRIBUTE BYPRODUCT MATERIAL TO PERSONS EXEMPT FROM THE REQUIREMENTS FOR AN NRC LICENSE. 10CFR Parts 30.14, 30.15, 30.16, 30.18, 30.19 & 30.20.

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 NUREG/CR-6526 V02: PROBABILISTIC ACCIDENT CONSEQUENCE UNCERTAINTY ANALYSIS. UNCERTAINTY ASSESSMENT FOR DEPOSITED MATERIAL AND EXTERNAL DOSES. Appendices.

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NUREG/CR-6456: REVIEW OF INDUSTRY EFFORTS TO MANAGE PRESSURIZED WATER REACTOR FEEDWATER NOZZLE, PIPING, AND FEEDING CRACKING AND WALL THINNING.

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NUREG/CR-6456: REVIEW OF INDUSTRY EFFORTS TO MANAGE PRESSURIZED WATER REACTOR FEEDWATER NOZZLE, PIPING, AND FEEDING CRACKING AND WALL THINNING.

Field Experiment

NUREG/CR-4918 V10: CONTROL OF WATER INFILTRATION INTO NEAR SURFACE LOW-LEVEL WASTE DISPOSAL UNITS. Final Report On Field Experiments At A Humid Region Site, Beltsville, Maryland.

Field Lysimeter

NUREG/CR-5229 V09: FIELD LYSIMETER INVESTIGATIONS: LOW-LEVEL WASTE DATA BASE DEVELOPMENT PROGRAM FOR FISCAL YEAR 1996. Annual Report.

Final Environmental Impact Statement

NUREG-1508: FINAL ENVIRONMENTAL IMPACT STATEMENT TO CONSTRUCT AND OPERATE THE CROWNPOINT URANIUM SOLUTION MINING PROJECT, CROWNPOINT, NEW MEXICO. Docket No. 40-8968. (Hydro Resources, Inc.)

Final Safety Evaluation Report

NUREG-1462 S01: FINAL SAFETY EVALUATION REPORT RELATED TO THE CERTIFICATION OF THE SYSTEM 80+ DESIGN. Docket No. 52-002. (Asea Brown Boveri-Combustion Engineering)
 NUREG-1503 S01: FINAL SAFETY EVALUATION REPORT RELATED TO THE CERTIFICATION OF THE ADVANCED BOILING WATER REACTOR DESIGN. Supplement No. 1. Docket No. 52-001. (General Electric Nuclear Energy)

Financial Assurance

NUREG/CR-6514: ANALYSIS OF POTENTIAL SELF-GUARANTEE TESTS FOR DEMONSTRATING FINANCIAL ASSURANCE BY NON-PROFIT COLLEGES, UNIVERSITIES, AND HOSPITALS AND BY BUSINESS FIRMS THAT DO NOT ISSUE BONDS.

Financial Qualification

NUREG-1577 DRFT FC: STANDARD REVIEW PLAN ON POWER REACTOR LICENSEE FINANCIAL QUALIFICATIONS AND DECOMMISSIONING FUNDING ASSURANCE. Draft Report For Comment.

Financial Statement

NUREG-1542 V02: ACCOUNTABILITY REPORT FISCAL YEAR 1996.

Fissile Material

NUREG/CR-5661: RECOMMENDATIONS FOR PREPARING THE CRITICALITY SAFETY EVALUATION OF TRANSPORTATION PACKAGES.

Fixed Gauge

NUREG-1556 V4 DRF FC: CONSOLIDATED GUIDANCE ABOUT MATERIALS LICENSES. Program Specific Guidance About Fixed Gauge Licenses. Draft Report For Comment.

Fluoride

NUREG/CR-6539: EFFECTS OF FLUORIDE AND OTHER HALOGEN IONS ON THE EXTERNAL STRESS CORROSION CRACKING OF TYPE 304 AUSTENITIC STAINLESS STEEL.

Food Chain

NUREG/CR-6523 V01: PROBABILISTIC ACCIDENT CONSEQUENCE UNCERTAINTY ANALYSIS. Food Chain Uncertainty Assessment. Main Report.
 NUREG/CR-6523 V02: PROBABILISTIC ACCIDENT CONSEQUENCE UNCERTAINTY ANALYSIS. Food Chain Uncertainty Assessment. Appendices.

Fracture Mechanics

NUREG/CP-0157 V02: PROCEEDINGS OF THE TWENTY-FOURTH WATER REACTOR SAFETY INFORMATION MEETING. Reactor Pressure Vessel Embrittlement And Thermal Annealing, Reactor Vessel Lower Head Integrity And Evaluation And Projection of Steam Generator tube....
 NUREG/CR-6233 V02: STABILITY OF CRACKED PIPE UNDER SEISMIC/DYNAMIC DISPLACEMENT-CONTROLLED STRESSES. Subtask 1.2 Final Report.
 NUREG/CR-6233 V03: CRACK STABILITY IN A REPRESENTATIVE PIPING SYSTEM UNDER COMBINED INERTIAL AND SEISMIC/DYNAMIC DISPLACEMENT-CONTROLLED STRESSES. Subtask 1.3 Final Report.
 NUREG/CR-6233 V04: INTERNATIONAL PIPING INTEGRITY RESEARCH PROGRAM (IPIRG) PROGRAM. Program Final Report.
 NUREG/CR-6452: THE SECOND INTERNATIONAL PIPING INTEGRITY RESEARCH GROUP (IPIRG-2) PROGRAM. Final Report.

Fracture Toughness

NUREG/CR-4219 V12 N2: HEAVY-SECTION STEEL TECHNOLOGY PROGRAM. Semiannual Progress Report For April 1995 Through September 1995.
 NUREG/CR-6233 V02: STABILITY OF CRACKED PIPE UNDER SEISMIC/DYNAMIC DISPLACEMENT-CONTROLLED STRESSES. Subtask 1.2 Final Report.
 NUREG/CR-6233 V03: CRACK STABILITY IN A REPRESENTATIVE PIPING SYSTEM UNDER COMBINED INERTIAL AND SEISMIC/DYNAMIC DISPLACEMENT-CONTROLLED STRESSES. Subtask 1.3 Final Report.
 NUREG/CR-6363: EFFECTS OF THERMAL AGING AND NEUTRON IRRADIATION ON THE MECHANICAL PROPERTIES OF THREE-WIRE STAINLESS STEEL WELD OVERLAY CLADDING.
 NUREG/CR-6389: IPIRG-2 TASK 1 - PIPE SYSTEM EXPERIMENTS WITH CIRCUMFERENTIAL CRACKS IN STRAIGHT-PIPE LOCATIONS. Final Report. September 1991 - November 1995.
 NUREG/CR-6426 V01: DUCTILE FRACTURE TOUGHNESS OF MODIFIED A 302 GRADE B PLATE MATERIALS. DATA ANALYSIS.
 NUREG/CR-6426 V02: DUCTILE FRACTURE TOUGHNESS OF MODIFIED A 302 GRADE B PLATE MATERIALS. Data Records.

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- NUREG/CR-6446: FRACTURE TOUGHNESS EVALUATIONS OF TP304 STAINLESS STEEL PIPES.
NUREG/CR-6506: EMBRITTLEMENT DATA BASE, VERSION 1.
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NUREG/CR-6361: CRITICALITY BENCHMARK GUIDE FOR LIGHT-WATER-REACTOR FUEL IN TRANSPORTATION AND STORAGE PACKAGES.
- Fuel Cycle Facility**
NUREG-1601: CHEMICAL PROCESS SAFETY AT FUEL CYCLE FACILITIES.
- Fuel Rack**
NUREG-1275 V12: OPERATING EXPERIENCE FEEDBACK REPORT.Assessment Of Spent Fuel Cooling.
- Fuel Rod**
NUREG/CR-6534 V01: FRAPCON-3: MODIFICATIONS TO FUEL ROD MATERIAL PROPERTIES AND PERFORMANCE MODELS FOR HIGH-BURNUP APPLICATION.
- Functional Circuit**
NUREG/CR-6543: EFFECTS OF SMOKE ON FUNCTIONAL CIRCUITS.
- Funding Assurance**
NUREG-1577 DRFT FC: STANDARD REVIEW PLAN ON POWER REACTOR LICENSEE FINANCIAL QUALIFICATIONS AND DECOMMISSIONING FUNDING ASSURANCE.Draft Report For Comment.
- Geochemical Transport**
NUREG/CR-6515: BLT-EC (BREACH, LEACH, AND TRANSPORT-EQUILIBRIUM CHEMISTRY) DATA INPUT GUIDE.A Computer Model For Simulating Release And Coupled Geochemical Transport Of Contaminants From A Subsurface Disposal Facility.
- Geodetic Data**
NUREG/CR-6529: VALIDATION OF TECTONIC MODELS FOR AN INTRAPLATE SEISMIC ZONE,CHARLESTON,SOUTH CAROLINA WITH GPS GEODETIC DATA.
- Geodetic Strain**
NUREG/CR-6586: HORIZONTAL VELOCITIES IN THE CENTRAL AND EASTERN UNITED STATES FROM GPS SURVEYS DURING THE 1987-1996 INTERVAL.
- Geosciences Data**
NUREG/CR-6372 V01: RECOMMENDATIONS FOR PROBABILISTIC SEISMIC HAZARD ANALYSIS: GUIDANCE ON UNCERTAINTY AND USE OF EXPERTS.Main Report.
NUREG/CR-6372 V02: RECOMMENDATIONS FOR PROBABILISTIC SEISMIC HAZARD ANALYSIS: GUIDANCE ON UNCERTAINTY AND USE OF EXPERTS.Appendices.
- Geostatistic**
NUREG/CR-6459: FIELD STUDIES AT THE APACHE LEAP RESEARCH SITE IN SUPPORT OF ALTERNATIVE CONCEPTUAL MODELS.
NUREG/CR-6497: DATA COLLECTION AND FIELD EXPERIMENTS AT THE APACHE LEAP RESEARCH SITE.May 1995 - 1996.
- Guidance**
NUREG-1608 DRFT FC: CATEGORIZING AND TRANSPORTING LOW SPECIFIC ACTIVITY MATERIALS AND SURFACE CONTAMINATED OBJECTS.Draft Rept For Comment.
- Guidelines**
NUREG/CR-6463 R01: REVIEW GUIDELINES FOR SOFTWARE LANGUAGES FOR USE IN NUCLEAR POWER PLANT SAFETY SYSTEMS.Final Report.
- HEPA Filter**
NUREG/CP-0153: PROCEEDINGS OF THE 24TH DOE/NRC NUCLEAR AIR CLEANING AND TREATMENT CONFERENCE.Held In Portland, Oregon, July 15-18, 1996.
- Halogen Ions**
NUREG/CR-6539: EFFECTS OF FLUORIDE AND OTHER HALOGEN IONS ON THE EXTERNAL STRESS CORROSION CRACKING OF TYPE 304 AUSTENITIC STAINLESS STEEL.
- Hazard Evaluation**
NUREG-1601: CHEMICAL PROCESS SAFETY AT FUEL CYCLE FACILITIES.
- Health Physic**
NUREG/CR-6547: DOSFAC2 USER'S GUIDE.
- Heat Flux**
NUREG/CR-6507: CRITICAL HEAT FLUX (CHF) PHENOMENON ON A DOWNWARD FACING CURVED SURFACE.
- Heat Transfer**
NUREG/CR-0200 R5V1P1: SCALE: A MODULAR CODE SYSTEM FOR PERFORMING STANDARDIZED COMPUTER ANALYSES FOR LICENSING EVALUATION.Control Modules C4, C6.
NUREG/CR-0200 R5V1P2: SCALE: A MODULAR CODE SYSTEM FOR PERFORMING STANDARDIZED COMPUTER ANALYSES FOR LICENSING EVALUATION.Control Modules S1 - H1.
NUREG/CR-0200 R5V2P1: SCALE: A MODULAR CODE SYSTEM FOR PERFORMING STANDARDIZED COMPUTER ANALYSES FOR LICENSING EVALUATION.Functional Modules F1 - F8.
NUREG/CR-0200 R5V2P2: SCALE: A MODULAR CODE SYSTEM FOR PERFORMING STANDARDIZED COMPUTER ANALYSES FOR LICENSING EVALUATION.Functional Modules F9 - F11.
NUREG/CR-0200 R5V2P3: SCALE: A MODULAR CODE SYSTEM FOR PERFORMING STANDARDIZED COMPUTER ANALYSES FOR LICENSING EVALUATION.Functional Modules F16 - F17.
NUREG/CR-0200 R5V3: SCALE: A MODULAR CODE SYSTEM FOR PERFORMING STANDARDIZED COMPUTER ANALYSES FOR LICENSING EVALUATION. Miscellaneous.
NUREG/CR-6167: LATE-PHASE MELT PROGRESSION EXPERIMENT MP-2.Results And Analysis.
- Heavy-Section Steel Irradiation Program**
NUREG/CR-5591 V07 N1: HEAVY-SECTION STEEL IRRADIATION PROGRAM.Semiannual Progress Report For October 1995 Through March 1996.
NUREG/CR-5591 V07 N2: HEAVY-SECTION STEEL IRRADIATION PROGRAM.Semiannual Progress Report For April Through September 1996.
- Heavy-Section Steel Technology Program**
NUREG/CR-4219 V12 N2: HEAVY-SECTION STEEL TECHNOLOGY PROGRAM.Semiannual Progress Report For April 1995 Through September 1995.
NUREG/CR-4219 V13 N1: HEAVY-SECTION STEEL TECHNOLOGY PROGRAM.Semiannual Progress Report For October 1995 - March 1996.
- High Burnup Fuel**
NUREG/CP-0157 V01: PROCEEDINGS OF THE TWENTY-FOURTH WATER REACTOR SAFETY INFORMATION MEETING.Plenary Session, High Burnup Fuel, Containment And Structural Aging.
- High Temperature**
NUREG/CR-6391: DETONATION CELL SIZE MEASUREMENTS IN HIGH-TEMPERATURE HYDROGEN-AIR-STEAM MIXTURES AT THE BNL HIGH-TEMPERATURE COMBUSTION FACILITY.
- High-Burnup Application**
NUREG/CR-6534 V01: FRAPCON-3: MODIFICATIONS TO FUEL ROD MATERIAL PROPERTIES AND PERFORMANCE MODELS FOR HIGH-BURNUP APPLICATION.
- High-Level Waste**
NUREG/CR-6513 N01: NRC HIGH-LEVEL RADIOACTIVE WASTE MANAGEMENT PROGRAM ANNUAL PROGRESS REPORT: FISCAL YEAR 1996.
- Horizontal Velocities**
NUREG/CR-6586: HORIZONTAL VELOCITIES IN THE CENTRAL AND EASTERN UNITED STATES FROM GPS SURVEYS DURING THE 1987-1996 INTERVAL.
- Human Factor**
NUREG-1545: EVALUATION CRITERIA FOR COMMUNICATIONS-RELATED CORRECTIVE ACTION PLANS.
- Human Factors Engineering**
NUREG/CR-6393: INTEGRATED SYSTEM VALIDATION: METHODOLOGY AND REVIEW CRITERIA.
NUREG/CR-6400: HUMAN FACTORS ENGINEERING (HFE) INSIGHTS FOR ADVANCED REACTORS BASED UPON OPERATING EXPERIENCE.
- Humid Region Site**
NUREG/CR-4918 V10: CONTROL OF WATER INFILTRATION INTO NEAR SURFACE LOW-LEVEL WASTE DISPOSAL UNITS.Final Report On Field Experiments At A Humid Region Site,Beltsville,Maryland.

Hydrogen Combustion

NUREG/CR-6530: DELIBERATE IGNITION OF HYDROGEN-AIR-STEAM MIXTURES IN CONDENSING STEAM ENVIRONMENTS.

Hydrogeochemical Modeling

NUREG/CR-6505 V01: THE POTENTIAL FOR CRITICALITY FOLLOWING DISPOSAL OF URANIUM AT LOW-LEVEL WASTE FACILITIES. Uranium Blended With Soil.

IPIRG-2 Task 1

NUREG/CR-6389: IPIRG-2 TASK 1 - PIPE SYSTEM EXPERIMENTS WITH CIRCUMFERENTIAL CRACKS IN STRAIGHT-PIPE LOCATIONS. Final Report. September 1991 - November 1995.

ISFSI

NUREG-1536: STANDARD REVIEW PLAN FOR DRY SPENT FUEL STORAGE SYSTEMS. Final Report.

Ignition

NUREG/CR-6391: DETONATION CELL SIZE MEASUREMENTS IN HIGH-TEMPERATURE HYDROGEN-AIR-STEAM MIXTURES AT THE BNL HIGH-TEMPERATURE COMBUSTION FACILITY.
NUREG/CR-6530: DELIBERATE IGNITION OF HYDROGEN-AIR-STEAM MIXTURES IN CONDENSING STEAM ENVIRONMENTS.

Impact Testing

NUREG/CR-6379: AN IMPROVED CORRELATION PROCEDURE FOR SUBSIZE AND FULL-SIZE CHARPY IMPACT SPECIMEN DATA.

In Situ Evaluation

NUREG/CR-6557: DEVELOPMENT OF THE MAGNESCOPE AS AN INSTRUMENT FOR IN SITU EVALUATION OF STEEL COMPONENTS OF NUCLEAR SYSTEMS.

In Situ Leach

NUREG-1508: FINAL ENVIRONMENTAL IMPACT STATEMENT TO CONSTRUCT AND OPERATE THE CROWNPOINT URANIUM SOLUTION MINING PROJECT, CROWNPOINT, NEW MEXICO. Docket No. 40-8968. (Hydro Resources, Inc.)
NUREG-1569 DRFT: DRAFT STANDARD REVIEW PLAN FOR IN SITU LEACH URANIUM EXTRACTION LICENSE APPLICATIONS.

In-Vessel Component

NUREG-1616: FEASIBILITY OF UNDERWATER WELDING OF HIGHLY IRRADIATED IN-VESEL COMPONENTS OF BOILING WATER REACTORS. A Literature Review.

In-Vessel Retention

NUREG/CR-6507: CRITICAL HEAT FLUX (CHF) PHENOMENON ON A DOWNWARD FACING CURVED SURFACE.

Independent Spent Fuel Storage Installation

NUREG-1571: INFORMATION HANDBOOK ON INDEPENDENT SPENT FUEL STORAGE INSTALLATIONS.

Individual Plant Examination

NUREG-1603 DRFT: INDIVIDUAL PLANT EXAMINATION DATABASE. User's Guide.

Industrial Radiography

NUREG-1556 V2 DRF FC: CONSOLIDATED GUIDANCE ABOUT MATERIALS LICENSES. Program Specific Guidance About Industrial Radiography Licenses. Draft Report For Use And Comment.

Infiltration

NUREG/CR-6565: UNCERTAINTY ANALYSES OF INFILTRATION AND SUBSURFACE FLOW AND TRANSPORT FOR SDMP SITES.

Information Digest

NUREG-1350 V09: NUCLEAR REGULATORY COMMISSION INFORMATION DIGEST. 1997 Edition.

Ingestion Pathway

NUREG/CR-6523 V01: PROBABILISTIC ACCIDENT CONSEQUENCE UNCERTAINTY ANALYSIS. Food Chain Uncertainty Assessment. Main Report.
NUREG/CR-6523 V02: PROBABILISTIC ACCIDENT CONSEQUENCE UNCERTAINTY ANALYSIS. Food Chain Uncertainty Assessment. Appendices.

Inservice Inspection

NUREG/CR-6181 R01: A PILOT APPLICATION OF RISK-INFORMED METHODS TO ESTABLISH INSERVICE INSPECTION PRIORITIES FOR NUCLEAR COMPONENTS AT SURRY UNIT 1 NUCLEAR POWER STATION.

NUREG/CR-6511 V01: STEAM GENERATOR TUBE INTEGRITY PROGRAM. Semiannual Report, August 1995 - March 1996.

Inservice Test Interval

NUREG/CR-6508: COMPONENT UNAVAILABILITY VERSUS INSERVICE TEST (IST) INTERVAL. EVALUATIONS OF COMPONENT AGING EFFECTS WITH APPLICATIONS TO CHECK VALVES.

Integrated System

NUREG/CR-6393: INTEGRATED SYSTEM VALIDATION: METHODOLOGY AND REVIEW CRITERIA.

Integrity Database

NUREG-1612: STATUS REPORT: REACTOR VESSEL INTEGRITY DATABASE.

Interim Storage

NUREG-1571: INFORMATION HANDBOOK ON INDEPENDENT SPENT FUEL STORAGE INSTALLATIONS.

Ion Exchange

NUREG/CR-5229 V09: FIELD LYSIMETER INVESTIGATIONS: LOW-LEVEL WASTE DATA BASE DEVELOPMENT PROGRAM FOR FISCAL YEAR 1996. Annual Report.

Irradiated Reactor Fuel

NUREG-0725 R12: PUBLIC INFORMATION CIRCULAR FOR SHIPMENTS OF IRRADIATED REACTOR FUEL.

Irradiation

NUREG/CR-6363: EFFECTS OF THERMAL AGING AND NEUTRON IRRADIATION ON THE MECHANICAL PROPERTIES OF THREE-WIRE STAINLESS STEEL WELD OVERLAY CLADDING.
NUREG/CR-6399: RESULTS OF CHARPY V-NOTCH IMPACT TESTING OF STRUCTURAL STEEL SPECIMENS IRRADIATED AT 30 DEGREES C TO 1×10^{16} NEUTRONS/CM² IN A COMMERCIAL REACTOR CAVITY.

J-Integral

NUREG/CR-6389: IPIRG-2 TASK 1 - PIPE SYSTEM EXPERIMENTS WITH CIRCUMFERENTIAL CRACKS IN STRAIGHT-PIPE LOCATIONS. Final Report. September 1991 - November 1995.
NUREG/CR-6452: THE SECOND INTERNATIONAL PIPING INTEGRITY RESEARCH GROUP (IPIRG-2) PROGRAM. Final Report.

J-R Curve

NUREG/CR-6426 V02: DUCTILE FRACTURE TOUGHNESS OF MODIFIED A 302 GRADE B PLATE MATERIALS. Data Records.
NUREG/CR-6446: FRACTURE TOUGHNESS EVALUATIONS OF TP304 STAINLESS STEEL PIPES.
NUREG/CR-6452: THE SECOND INTERNATIONAL PIPING INTEGRITY RESEARCH GROUP (IPIRG-2) PROGRAM. Final Report.

LOCA

NUREG/CR-6538: EVALUATION OF LOCA WITH DELAYED LOOP AND LOOP WITH DELAYED LOCA ACCIDENT SCENARIOS.

LOOP

NUREG/CR-6538: EVALUATION OF LOCA WITH DELAYED LOOP AND LOOP WITH DELAYED LOCA ACCIDENT SCENARIOS.

LWR

NUREG/CR-4667 V22: ENVIRONMENTALLY ASSISTED CRACKING IN LIGHT WATER REACTORS. Semiannual Report, January 1996 - June 1996.
NUREG/CR-4667 V23: ENVIRONMENTALLY ASSISTED CRACKING IN LIGHT WATER REACTORS. Semiannual Report, July-December 1996.
NUREG/CR-6361: CRITICALITY BENCHMARK GUIDE FOR LIGHT-WATER-REACTOR FUEL IN TRANSPORTATION AND STORAGE PACKAGES.

Land Fraction

NUREG/CR-6525: SECPOP90: SECTOR POPULATION, LAND FRACTION, AND ECONOMIC ESTIMATION PROGRAM.

Las Cruces Trench Site

NUREG/CR-6437: FLOW AND TRANSPORT AT THE LAS CRUCES TRENCH SITE: EXPERIMENT IIB.

Leak Rate

NUREG/CP-0155: PROCEEDINGS OF THE SEMINAR ON LEAK BEFORE BREAK IN REACTOR PIPING AND VESSELS.

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Leak-Before-Break

- NUREG/CP-0155: PROCEEDINGS OF THE SEMINAR ON LEAK BEFORE BREAK IN REACTOR PIPING AND VESSELS.
NUREG/CR-6233 V02: STABILITY OF CRACKED PIPE UNDER SEISMIC/DYNAMIC DISPLACEMENT-CONTROLLED STRESSES.Subtask 1.2 Final Report.
NUREG/CR-6233 V04: INTERNATIONAL PIPING INTEGRITY RESEARCH PROGRAM (IPIRG) PROGRAM.Program Final Report.

Legal Issuances

- NUREG-0750 V44 I01: INDEXES TO NUCLEAR REGULATORY COMMISSION ISSUANCES.July-September 1996.
NUREG-0750 V44 I02: INDEXES TO NUCLEAR REGULATORY COMMISSION ISSUANCES.July-December 1996.
NUREG-0750 V44 N05: NUCLEAR REGULATORY COMMISSION ISSUANCES FOR NOVEMBER 1996. Pages 229-314.
NUREG-0750 V44 N06: NUCLEAR REGULATORY COMMISSION ISSUANCES FOR DECEMBER 1996. Pages 315-432.
NUREG-0750 V45 I01: INDEXES TO NUCLEAR REGULATORY COMMISSION ISSUANCES.January-March 1997.
NUREG-0750 V45 I02: INDEXES TO NUCLEAR REGULATORY COMMISSION ISSUANCES.January-June 1997.
NUREG-0750 V45 N01: NUCLEAR REGULATORY COMMISSION ISSUANCES FOR JANUARY 1997. Pages 1-47.
NUREG-0750 V45 N02: NUCLEAR REGULATORY COMMISSION ISSUANCES FOR FEBRUARY 1997. Pages 49-93.
NUREG-0750 V45 N03: NUCLEAR REGULATORY COMMISSION ISSUANCES FOR MARCH 1997.Pages 95-263.
NUREG-0750 V45 N04: NUCLEAR REGULATORY COMMISSION ISSUANCES FOR APRIL 1997.Pages 265-353.
NUREG-0750 V45 N05: NUCLEAR REGULATORY COMMISSION ISSUANCES FOR MAY 1997.Pages 355-435.
NUREG-0750 V45 N06: NUCLEAR REGULATORY COMMISSION ISSUANCES FOR JUNE 1997. Pages 437-495.
NUREG-0750 V46 N01: NUCLEAR REGULATORY COMMISSION ISSUANCES FOR JULY 1997.Pages 1-20.
NUREG-0750 V46 N02: NUCLEAR REGULATORY COMMISSION ISSUANCES FOR AUGUST 1997. Pages 21-48.

Lg Coda Q

- NUREG/CR-6563: LG EXCITATION, ATTENUATION, AND SOURCE SPECTRAL SCALING IN CENTRAL AND EASTERN NORTH AMERICA.

Lg Excitation

- NUREG/CR-6563: LG EXCITATION, ATTENUATION, AND SOURCE SPECTRAL SCALING IN CENTRAL AND EASTERN NORTH AMERICA.

License Application

- NUREG-1569 DRFT: DRAFT STANDARD REVIEW PLAN FOR IN SITU LEACH URANIUM EXTRACTION LICENSE APPLICATIONS.

License Condition

- NUREG/CR-6558: NRC ANTITRUST LICENSING ACTIONS, 1978-1996.

License Renewal

- NUREG-1555 DRFT: ENVIRONMENTAL STANDARD REVIEW PLAN.Standard Review Plans For Environmental Reviews For Nuclear Power Plants.
NUREG-1611: AGING MANAGEMENT OF NUCLEAR POWER PLANT CONTAINMENTS FOR LICENSE RENEWAL.
NUREG/CR-6528: ENVIRONMENTAL ASSESSMENT PROPOSED LICENSE RENEWAL OF NUCLEAR METALS,INC. CONCORD, MASSACHUSETTS.

License Termination

- NUREG-1496 V01: FINAL GENERIC ENVIRONMENTAL IMPACT STATEMENT IN SUPPORT OF RULEMAKING ON RADIOLOGICAL CRITERIA FOR LICENSE TERMINATION OF NRC-LICENSED NUCLEAR FACILITIES.Main Report.Final Report.
NUREG-1496 V02: FINAL GENERIC ENVIRONMENTAL IMPACT STATEMENT IN SUPPORT OF RULEMAKING ON RADIOLOGICAL CRITERIA FOR LICENSE TERMINATION OF NRC-LICENSED NUCLEAR FACILITIES.Appendices A And B.Final Report.
NUREG-1496 V03: FINAL GENERIC ENVIRONMENTAL IMPACT STATEMENT IN SUPPORT OF RULEMAKING ON RADIOLOGICAL CRITERIA FOR LICENSE TERMINATION OF NRC-LICENSED NUCLEAR FACILITIES.Appendices C-H.Final Report.

Licensee Event Report

- NUREG/CR-4674 V23: PRECURSORS TO POTENTIAL SEVERE CORE DAMAGE ACCIDENTS: 1995. A Status Report.
NUREG/CR-4674 V24: PRECURSORS TO POTENTIAL SEVERE CORE DAMAGE ACCIDENTS: 1982-83.A Status Report.

Light Water Reactor

- NUREG/CR-4667 V22: ENVIRONMENTALLY ASSISTED CRACKING IN LIGHT WATER REACTORS. Semiannual Report,January 1996 - June 1996.
NUREG/CR-4667 V23: ENVIRONMENTALLY ASSISTED CRACKING IN LIGHT WATER REACTORS. Semiannual Report,July-December 1996.
NUREG/CR-6361: CRITICALITY BENCHMARK GUIDE FOR LIGHT-WATER-REACTOR FUEL IN TRANSPORTATION AND STORAGE PACKAGES.

Loss-Of-Coolant Accident

- NUREG/CR-6541 R02: PHENOMENA IDENTIFICATION AND RANKING TABLES FOR WESTINGHOUSE AP600 SMALL BREAK LOSS-OF-COOLANT ACCIDENT, MAIN STEAM LINE BREAK, AND STEAM GENERATOR TUBE RUPTURE SCENARIOS.

Low-Level Waste

- NUREG/CR-5229 V09: FIELD LYSIMETER INVESTIGATIONS: LOW-LEVEL WASTE DATA BASE DEVELOPMENT PROGRAM FOR FISCAL YEAR 1996.Annual Report.
NUREG/CR-6505 V01: THE POTENTIAL FOR CRITICALITY FOLLOWING DISPOSAL OF URANIUM AT LOW-LEVEL WASTE FACILITIES.Uranium Blended With Soil.

Low-Level Waste Disposal

- NUREG/CR-4918 V10: CONTROL OF WATER INFILTRATION INTO NEAR SURFACE LOW-LEVEL WASTE DISPOSAL UNITS.Final Report On Field Experiments At A Humid Region Site,Beltsville,Maryland.

Low-Specific Activity Material

- NUREG-1608 DRFT FC: CATEGORIZING AND TRANSPORTING LOW SPECIFIC ACTIVITY MATERIALS AND SURFACE CONTAMINATED OBJECTS.Draft Rept For Comment.

Lower Head Integrity

- NUREG/CR-6507: CRITICAL HEAT FLUX (CHF) PHENOMENON ON A DOWNWARD FACING CURVED SURFACE.

MEPAS

- NUREG/CR-6566: DESCRIPTION OF MULTIMEDIA ENVIRONMENTAL POLLUTANT ASSESSMENT SYSTEM (MEPAS) VERSION 3.2 MODIFICATION FOR THE NUCLEAR REGULATORY COMMISSION.

Magnescop

- NUREG/CR-6557: DEVELOPMENT OF THE MAGNESCOPE AS AN INSTRUMENT FOR IN SITU EVALUATION OF STEEL COMPONENTS OF NUCLEAR SYSTEMS.

Main Steam Line Break

- NUREG/CR-6541 R02: PHENOMENA IDENTIFICATION AND RANKING TABLES FOR WESTINGHOUSE AP600 SMALL BREAK LOSS-OF-COOLANT ACCIDENT, MAIN STEAM LINE BREAK, AND STEAM GENERATOR TUBE RUPTURE SCENARIOS.

Materials Licenses

- NUREG-1556 V01: CONSOLIDATED GUIDANCE ABOUT MATERIALS LICENSES.Program-Specific Guidance About Portable Gauge Licenses.Final Report.
NUREG-1556 V2 DRF FC: CONSOLIDATED GUIDANCE ABOUT MATERIALS LICENSES.Program Specific Guidance About Industrial Radiography Licenses. Draft Report For Use And Comment.
NUREG-1556 V3 DRF FC: CONSOLIDATED GUIDANCE ABOUT MATERIALS LICENSES.Applications for Sealed Source And Device Evaluation And Registration. Draft Report For Comment.
NUREG-1556 V4 DRF FC: CONSOLIDATED GUIDANCE ABOUT MATERIALS LICENSES.Program Specific Guidance About Fixed Gauge Licenses.Draft Report For Comment.
NUREG-1556 V5 DRF FC: CONSOLIDATED GUIDANCE ABOUT MATERIALS LICENSES.Program-Specific Guidance About Self-Shielded Irradiator Licenses. Draft Report For Comment.

Medical Facility

- NUREG-1516: MANAGEMENT OF RADIOACTIVE MATERIAL SAFETY PROGRAMS AT MEDICAL FACILITIES.Final Report.

Melt Progression

- NUREG/CR-6167: LATE-PHASE MELT PROGRESSION EXPERIMENT MP-2.Results And Analysis.

Metallic Melt Relocation

- NUREG/CR-6527: FINAL RESULTS OF THE XR2-1 BWR METALLIC MELT RELOCATION EXPERIMENT.

Microstructural Change

NUREG/CR-6557: DEVELOPMENT OF THE MAGNESCOPE AS AN INSTRUMENT FOR IN SITU EVALUATION OF STEEL COMPONENTS OF NUCLEAR SYSTEMS.

Mill Tailing

NUREG-1532: FINAL TECHNICAL EVALUATION REPORT FOR THE PROPOSED REVISED RECLAMATION PLAN FOR THE ATLAS CORPORATION MOAB MILL. Source Material License No. SUA-917. Docket No. 40-3453. (Atlas Corporation)

Model Evaluation

NUREG/CR-6481 V01: REVIEW OF MODELS USED FOR DETERMINING CONSEQUENCES OF UF(6) RELEASE. Development Of Model Evaluation Criteria.
NUREG/CR-6481 V02: REVIEW OF MODELS USED FOR DETERMINING CONSEQUENCES OF UF(6) RELEASE. Model Evaluation Report.

Modular Construction

NUREG/CR-6486: ASSESSMENT OF MODULAR CONSTRUCTION FOR SAFETY-RELATED STRUCTURES AT ADVANCED NUCLEAR POWER PLANTS.

Molten Pool

NUREG/CR-6167: LATE-PHASE MELT PROGRESSION EXPERIMENT MP-2. Results And Analysis.

Motor-Operated Valve

NUREG/CR-6478: MOTOR-OPERATED VALVE (MOV) ACTUATOR MOTOR AND GEARBOX TESTING.

Multi-Phase Flow

NUREG/CP-0159: PROCEEDINGS OF THE OECD/CSNI WORKSHOP ON TRANSIENT THERMAL-HYDRAULIC AND NEUTRONIC CODES REQUIREMENTS. Held In Annapolis, Maryland, USA, November 5-8, 1996.

NRC Strategic Plan

NUREG-1614 V01: NRC STRATEGIC PLAN. Fiscal Year 1997 - Fiscal Year 2002.

Needle Applicator

NUREG/CR-6074 V03: SEALED SOURCE AND DEVICE DESIGN SAFETY TESTING. Technical Report On The Findings Of Task 4. Investigation Of A Failed Brachytherapy Needle Applicator.

Neutron Dosimetry

NUREG/CR-6454: POOL CRITICAL ASSEMBLY PRESSURE VESSEL FACILITY BENCHMARK.

Neutronic

NUREG/CP-0159: PROCEEDINGS OF THE OECD/CSNI WORKSHOP ON TRANSIENT THERMAL-HYDRAULIC AND NEUTRONIC CODES REQUIREMENTS. Held In Annapolis, Maryland, USA, November 5-8, 1996.

Nondestructive Evaluation

NUREG/CR-6181 R01: A PILOT APPLICATION OF RISK-INFORMED METHODS TO ESTABLISH INSERVICE INSPECTION PRIORITIES FOR NUCLEAR COMPONENTS AT SURRY UNIT 1 NUCLEAR POWER STATION.

Nuclear Air Cleaning

NUREG/CP-0153: PROCEEDINGS OF THE 24TH DOE/NRC NUCLEAR AIR CLEANING AND TREATMENT CONFERENCE. Held In Portland, Oregon, July 15-18, 1996.

Nuclear Component

NUREG/CR-6181 R01: A PILOT APPLICATION OF RISK-INFORMED METHODS TO ESTABLISH INSERVICE INSPECTION PRIORITIES FOR NUCLEAR COMPONENTS AT SURRY UNIT 1 NUCLEAR POWER STATION.

Nuclear Criticality

NUREG/CR-6504 V01: AN UPDATED NUCLEAR CRITICALITY SLIDE RULE. Technical Basis.
NUREG/CR-6505 V01: THE POTENTIAL FOR CRITICALITY FOLLOWING DISPOSAL OF URANIUM AT LOW-LEVEL WASTE FACILITIES. Uranium Blended With Soil.

Nuclear Medicine

NUREG/CR-6493: DOSES TO THE HAND DURING THE ADMINISTRATION OF RADIOLABELED ANTIBODIES CONTAINING Y-90, TC-99M, I-131, AND LU-177.

Nuclear Metals, Inc

NUREG/CR-6528: ENVIRONMENTAL ASSESSMENT PROPOSED LICENSE RENEWAL OF NUCLEAR METALS, INC. CONCORD, MASSACHUSETTS.

Nuclear Power Plant

NUREG/CR-6295: REASSESSMENT OF SELECTED FACTORS AFFECTING SITING OF NUCLEAR POWER PLANTS.

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NUREG-1610: CONTROLLING THE ATOM. The Beginnings Of Nuclear Regulation, 1946-1962.

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NUREG/CP-0161: TRANSACTIONS OF THE TWENTY-FIFTH WATER REACTOR SAFETY INFORMATION MEETING.

Nuclear Waste

NUREG/CR-6459: FIELD STUDIES AT THE APACHE LEAP RESEARCH SITE IN SUPPORT OF ALTERNATIVE CONCEPTUAL MODELS.

Nuclear Waste Management

NUREG/CP-0153: PROCEEDINGS OF THE 24TH DOE/NRC NUCLEAR AIR CLEANING AND TREATMENT CONFERENCE. Held In Portland, Oregon, July 15-18, 1996.

Occupational Radiation Exposure

NUREG-0713 V17: OCCUPATIONAL RADIATION EXPOSURE AT COMMERCIAL NUCLEAR POWER REACTORS AND OTHER FACILITIES, 1995. Twenty-Eighth Annual Report.

Operating Experience

NUREG-1275 V12: OPERATING EXPERIENCE FEEDBACK REPORT. Assessment Of Spent Fuel Cooling.
NUREG/CR-6400: HUMAN FACTORS ENGINEERING (HFE) INSIGHTS FOR ADVANCED REACTORS BASED UPON OPERATING EXPERIENCE.

Operating License

NUREG/CR-6558: NRC ANTITRUST LICENSING ACTIONS, 1978-1996.

Operator Licensing

NUREG-1021 INT R08: OPERATOR LICENSING EXAMINATION STANDARDS FOR POWER REACTORS.

Organization Chart

NUREG-0325 R22: U.S. NUCLEAR REGULATORY COMMISSION ORGANIZATION CHARTS AND FUNCTIONAL STATEMENTS. November 1997.

PRA

NUREG-1602 DRFT FC: THE USE OF PRA IN RISK-INFORMED APPLICATIONS. Draft Rept For Comment.

PWR

NUREG/CR-6451: A SAFETY AND REGULATORY ASSESSMENT OF GENERIC BWR AND PWR PERMANENTLY SHUTDOWN NUCLEAR POWER PLANTS.
NUREG/CR-6456: REVIEW OF INDUSTRY EFFORTS TO MANAGE PRESSURIZED WATER REACTOR FEEDWATER NOZZLE, PIPING, AND FEEDING CRACKING AND WALL THINNING.
NUREG/CR-6469: EXPERIMENTS TO INVESTIGATE DIRECT CONTAINMENT HEATING PHENOMENA WITH SCALED MODELS OF THE CALVERT CLIFFS NUCLEAR POWER PLANT.

Patient Release Criteria

NUREG-1492: REGULATORY ANALYSIS ON CRITERIA FOR THE RELEASE OF PATIENTS ADMINISTERED RADIOACTIVE MATERIAL. Final Report.

Performance Assessment

NUREG/CR-6513 N01: NRC HIGH-LEVEL RADIOACTIVE WASTE MANAGEMENT PROGRAM ANNUAL PROGRESS REPORT: FISCAL YEAR 1996.

Performance Measure

NUREG-1542 V02: ACCOUNTABILITY REPORT FISCAL YEAR 1996.

Petitions For Rulemaking

NUREG-0936 V15 N02: NRC REGULATORY AGENDA. Semiannual Report. July-December 1996.
NUREG-0936 V16 N01: NRC REGULATORY AGENDA. Semiannual Report. January-June 1997.

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NUREG/CR-6541 R02: PHENOMENA IDENTIFICATION AND RANKING TABLES FOR WESTINGHOUSE AP600 SMALL BREAK LOSS-OF-COOLANT ACCIDENT, MAIN STEAM LINE BREAK, AND STEAM GENERATOR TUBE RUPTURE SCENARIOS.

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NUREG/CR-6531: EFFECTS OF RADIOACTIVE HOT PARTICLES ON PIG SKIN.

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NUREG/CR-6446: FRACTURE TOUGHNESS EVALUATIONS OF TP304 STAINLESS STEEL PIPES.
NUREG/CR-6452: THE SECOND INTERNATIONAL PIPING INTEGRITY RESEARCH GROUP (IPIRG-2) PROGRAM.Final Report.

Pipe System

NUREG/CR-6389: IPIRG-2 TASK 1 - PIPE SYSTEM EXPERIMENTS WITH CIRCUMFERENTIAL CRACKS IN STRAIGHT-PIPE LOCATIONS.Final Report.September 1991 - November 1995.

Piping

NUREG/CR-6414: PIPING BENCHMARK PROBLEMS FOR THE WESTINGHOUSE AP600 STANDARDIZED PLANT.
NUREG/CR-6456: REVIEW OF INDUSTRY EFFORTS TO MANAGE PRESSURIZED WATER REACTOR FEEDWATER NOZZLE, PIPING, AND FEEDRING CRACKING AND WALL THINNING.
NUREG/CR-6519: SCREENING REACTOR STEAM/WATER PIPING SYSTEMS FOR WATER HAMMER.

Piping Integrity

NUREG/CR-6233 V04: INTERNATIONAL PIPING INTEGRITY RESEARCH PROGRAM (IPIRG) PROGRAM.Program Final Report.

Piping System

NUREG/CR-6181 R01: A PILOT APPLICATION OF RISK-INFORMED METHODS TO ESTABLISH INSERVICE INSPECTION PRIORITIES FOR NUCLEAR COMPONENTS AT SURRY UNIT 1 NUCLEAR POWER STATION.
NUREG/CR-6233 V03: CRACK STABILITY IN A REPRESENTATIVE PIPING SYSTEM UNDER COMBINED INERTIAL AND SEISMIC/DYNAMIC DISPLACEMENT-CONTROLLED STRESSES.Subtask 1.3 Final Report.

Plastic Scintillator

NUREG/CR-6535: DEVELOPMENT OF CONFORMAL RESPIRATOR MONITORING TECHNOLOGY.

Plate Material

NUREG/CR-6426 V02: DUCTILE FRACTURE TOUGHNESS OF MODIFIED A 302 GRADE B PLATE MATERIALS.Data Records.

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NUREG/CR-6454: POOL CRITICAL ASSEMBLY PRESSURE VESSEL FACILITY BENCHMARK.

Portable Gauge

NUREG-1556 V01: CONSOLIDATED GUIDANCE ABOUT MATERIALS LICENSES.Program-Specific Guidance About Portable Gauge Licenses.Final Report.

Post-Accident Analysis

NUREG/CR-6481 V01: REVIEW OF MODELS USED FOR DETERMINING CONSEQUENCES OF UF(6) RELEASE.Development Of Model Evaluation Criteria.
NUREG/CR-6481 V02: REVIEW OF MODELS USED FOR DETERMINING CONSEQUENCES OF UF(6) RELEASE.Model Evaluation Report.

Power Reactor

NUREG/CR-6506: EMBRITTEMENT DATA BASE, VERSION 1.

Practice And Procedure Digest

NUREG-0386 D08: UNITED STATES NUCLEAR REGULATORY COMMISSION STAFF PRACTICE AND PROCEDURE DIGEST.Commission, Appeal Board And Licensing Board Decisions.July 1972 - June 1996.

Pregnant Women

NUREG/CR-6397: RADIATION SAFETY CONCERNS FOR PREGNANT OR BREAST-FEEDING PATIENTS.The Positions Of The NCRP And The ICRP.

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NUREG/CR-6379: AN IMPROVED CORRELATION PROCEDURE FOR SUBSIZE AND FULL-SIZE CHARPY IMPACT SPECIMEN DATA.

NUREG/CR-6454: POOL CRITICAL ASSEMBLY PRESSURE VESSEL FACILITY BENCHMARK.

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NUREG/CR-6456: REVIEW OF INDUSTRY EFFORTS TO MANAGE PRESSURIZED WATER REACTOR FEEDWATER NOZZLE, PIPING, AND FEEDRING CRACKING AND WALL THINNING.

NUREG/CR-6469: EXPERIMENTS TO INVESTIGATE DIRECT CONTAINMENT HEATING PHENOMENA WITH SCALED MODELS OF THE CALVERT CLIFFS NUCLEAR POWER PLANT.

Primary Dosimetry

NUREG/CR-6581: CONSIDERATIONS IN THE APPLICATION OF THE ELECTRONIC DOSIMETER TO DOSE OF RECORD.

Probabilistic Accident Consequence

NUREG/CR-6523 V01: PROBABILISTIC ACCIDENT CONSEQUENCE UNCERTAINTY ANALYSIS.Food Chain Uncertainty Assessment.Main Report.

NUREG/CR-6523 V02: PROBABILISTIC ACCIDENT CONSEQUENCE UNCERTAINTY ANALYSIS. Food Chain Uncertainty Assessment.Appendices.

NUREG/CR-6526 V01: PROBABILISTIC ACCIDENT CONSEQUENCE UNCERTAINTY ANALYSIS. Uncertainty Assessment For Deposited Material And External Doses.Main Report.

NUREG/CR-6526 V02: PROBABILISTIC ACCIDENT CONSEQUENCE UNCERTAINTY ANALYSIS. UNCERTAINTY ASSESSMENT FOR DEPOSITED MATERIAL AND EXTERNAL DOSES.Appendices.

Probabilistic Risk Assessment

NUREG-1602 DRFT FC: THE USE OF PRA IN RISK-INFORMED APPLICATIONS.Draft Rept For Comment.

NUREG/CR-6508: COMPONENT UNAVAILABILITY VERSUS INSERVICE TEST (IST) INTERVAL:EVALUATIONS OF COMPONENT AGING EFFECTS WITH APPLICATIONS TO CHECK VALVES.

Probabilistic Seismic Hazard Analysis

NUREG/CR-6372 V01: RECOMMENDATIONS FOR PROBABILISTIC SEISMIC HAZARD ANALYSIS: GUIDANCE ON UNCERTAINTY AND USE OF EXPERTS.Main Report.

NUREG/CR-6372 V02: RECOMMENDATIONS FOR PROBABILISTIC SEISMIC HAZARD ANALYSIS: GUIDANCE ON UNCERTAINTY AND USE OF EXPERTS.Appendices.

Program-Specific

NUREG-1556 V01: CONSOLIDATED GUIDANCE ABOUT MATERIALS LICENSES.Program-Specific Guidance About Portable Gauge Licenses.Final Report.

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NUREG/CR-6397: RADIATION SAFETY CONCERNS FOR PREGNANT OR BREAST-FEEDING PATIENTS.The Positions Of The NCRP And The ICRP.

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NUREG/CR-6493: DOSES TO THE HAND DURING THE ADMINISTRATION OF RADIOLABELED ANTIBODIES CONTAINING Y-90,TC-99M,I-131, AND LU-177.

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NUREG-1612: STATUS REPORT: REACTOR VESSEL INTEGRITY DATABASE.

Radiation Injury

NUREG/CR-6531: EFFECTS OF RADIOACTIVE HOT PARTICLES ON PIG SKIN.

Radiation Protection

NUREG-1610: CONTROLLING THE ATOM.The Beginnings Of Nuclear Regulation, 1946-1962.

NUREG/CR-4409 V06: DATA BASE ON DOSE REDUCTION PROJECTS FOR NUCLEAR POWER PLANTS.

NUREG/CR-6504 V01: AN UPDATED NUCLEAR CRITICALITY SLIDE RULE.Technical Basis.

Radioactive Hot Particle

NUREG/CR-6531: EFFECTS OF RADIOACTIVE HOT PARTICLES ON PIG SKIN.

Radioactive Material

NUREG-0383 V01 R20: DIRECTORY OF CERTIFICATES OF COMPLIANCE FOR RADIOACTIVE MATERIALS PACKAGES.Report Of NRC-Approved Packages.
 NUREG-0383 V02 R20: DIRECTORY OF CERTIFICATES OF COMPLIANCE FOR RADIOACTIVE MATERIALS PACKAGES.Certificates Of Compliance.
 NUREG-0383 V03 R17: DIRECTORY OF CERTIFICATES OF COMPLIANCE FOR RADIOACTIVE MATERIALS PACKAGES.Report Of NRC-Approved Quality Assurance Programs For Radioactive Materials Packages.
 NUREG-1492: REGULATORY ANALYSIS ON CRITERIA FOR THE RELEASE OF PATIENTS ADMINISTERED RADIOACTIVE MATERIAL.Final Report.
 NUREG-1516: MANAGEMENT OF RADIOACTIVE MATERIAL SAFETY PROGRAMS AT MEDICAL FACILITIES.Final Report.
 NUREG-1609 DRFT FC: STANDARD REVIEW PLAN FOR TRANSPORTATION PACKAGES FOR RADIOACTIVE MATERIAL.Draft Report For Comment.

Radiocarbon

NUREG/CR-6459: FIELD STUDIES AT THE APACHE LEAP RESEARCH SITE IN SUPPORT OF ALTERNATIVE CONCEPTUAL MODELS.
 NUREG/CR-6497: DATA COLLECTION AND FIELD EXPERIMENTS AT THE APACHE LEAP RESEARCH SITE.May 1995 - 1996.

Radiolabeled Antibodies

NUREG/CR-6493: DOSES TO THE HAND DURING THE ADMINISTRATION OF RADIOLABELED ANTIBODIES CONTAINING Y-90,TC-99M,I-131, AND LU-177.

Radiological Criteria

NUREG-1496 V01: FINAL GENERIC ENVIRONMENTAL IMPACT STATEMENT IN SUPPORT OF RULEMAKING ON RADIOLOGICAL CRITERIA FOR LICENSE TERMINATION OF NRC-LICENSED NUCLEAR FACILITIES.Main Report.Final Report.
 NUREG-1496 V02: FINAL GENERIC ENVIRONMENTAL IMPACT STATEMENT IN SUPPORT OF RULEMAKING ON RADIOLOGICAL CRITERIA FOR LICENSE TERMINATION OF NRC-LICENSED NUCLEAR FACILITIES.Appendices A And B.Final Report.
 NUREG-1496 V03: FINAL GENERIC ENVIRONMENTAL IMPACT STATEMENT IN SUPPORT OF RULEMAKING ON RADIOLOGICAL CRITERIA FOR LICENSE TERMINATION OF NRC-LICENSED NUCLEAR FACILITIES.Appendices C-H.Final Report.

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NUREG/CR-6547: DOSFAC2 USER'S GUIDE.

Radionuclide Transport

NUREG/CR-6523 V01: PROBABILISTIC ACCIDENT CONSEQUENCE UNCERTAINTY ANALYSIS.Food Chain Uncertainty Assessment.Main Report.
 NUREG/CR-6523 V02: PROBABILISTIC ACCIDENT CONSEQUENCE UNCERTAINTY ANALYSIS. Food Chain Uncertainty Assessment.Appendices.

Reactivity Transient

NUREG/CP-0158: PROCEEDINGS OF THE OECD/CSNI SPECIALISTS MEETING ON BORON DILUTION REACTIVITY TRANSIENTS.Held In State College, Pennsylvania,USA,October 18-20, 1995.

Reactor Accident

NUREG/CR-6295: REASSESSMENT OF SELECTED FACTORS AFFECTING SITING OF NUCLEAR POWER PLANTS.
 NUREG/CR-6527: FINAL RESULTS OF THE XR2-1 BWR METALLIC MELT RELOCATION EXPERIMENT.
 NUREG/CR-6538: EVALUATION OF LOCA WITH DELAYED LOOP AND LOOP WITH DELAYED LOCA ACCIDENT SCENARIOS.

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NUREG/CP-0157 V02: PROCEEDINGS OF THE TWENTY-FOURTH WATER REACTOR SAFETY INFORMATION MEETING.Reactor Pressure Vessel Embrittlement And Thermal Annealing,Reactor Vessel Lower Head Integrity And Evaluation And Projection of Steam Generator tube....
 NUREG/CR-6400: HUMAN FACTORS ENGINEERING (HFE) INSIGHTS FOR ADVANCED REACTORS BASED UPON OPERATING EXPERIENCE.

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NUREG/CP-0155: PROCEEDINGS OF THE SEMINAR ON LEAK BEFORE BREAK IN REACTOR PIPING AND VESSELS.

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NUREG/CR-6399: RESULTS OF CHARPY V-NOTCH IMPACT TESTING OF STRUCTURAL STEEL SPECIMENS IRRADIATED AT 30 DEGREES C TO 1 X 10(16) NEUTRONS/ CM(2) IN A COMMERCIAL REACTOR CAVITY.
 NUREG/CR-6426 V01: DUCTILE FRACTURE TOUGHNESS OF MODIFIED A 302 GRADE B PLATE MATERIALS,DATA ANALYSIS.

Reactor Safety

NUREG/CP-0157 V01: PROCEEDINGS OF THE TWENTY-FOURTH WATER REACTOR SAFETY INFORMATION MEETING.Plenary Session, High Burnup Fuel, Containment And Structural Aging.
 NUREG/CP-0157 V02: PROCEEDINGS OF THE TWENTY-FOURTH WATER REACTOR SAFETY INFORMATION MEETING.Reactor Pressure Vessel Embrittlement And Thermal Annealing,Reactor Vessel Lower Head Integrity And Evaluation And Projection of Steam Generator tube....
 NUREG/CP-0157 V03: PROCEEDINGS OF THE TWENTY-FOURTH WATER REACTOR SAFETY INFORMATION MEETING.PRA And HRA, And Probabilistic Seismic Hazard Assessment And Seismic Siting Criteria.
 NUREG/CR-6042 R01: PERSPECTIVES ON REACTOR SAFETY.
 NUREG/CR-6295: REASSESSMENT OF SELECTED FACTORS AFFECTING SITING OF NUCLEAR POWER PLANTS.

Reactor Safety Research

NUREG/CP-0161: TRANSACTIONS OF THE TWENTY-FIFTH WATER REACTOR SAFETY INFORMATION MEETING.

Reactor Shutdown

NUREG/CR-4012 V04: REPLACEMENT ENERGY COSTS FOR NUCLEAR ELECTRICITY-GENERATING UNITS IN THE UNITED STATES: 1997-2001.

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NUREG/CR-6525: SECPOP90: SECTOR POPULATION, LAND FRACTION, AND ECONOMIC ESTIMATION PROGRAM.

Reactor Vessel

NUREG-1612: STATUS REPORT: REACTOR VESSEL INTEGRITY DATABASE.

Reclamation Plan

NUREG-1532: FINAL TECHNICAL EVALUATION REPORT FOR THE PROPOSED REVISED RECLAMATION PLAN FOR THE ATLAS CORPORATION MOAB MILL.Source Material License No. SUA-917.Docket No. 40-3453.(Atlas Corporation)

Regulatory Agenda

NUREG-0936 V15 N02: NRC REGULATORY AGENDA.Semiannual Report.July-December 1996.
 NUREG-0936 V16 N01: NRC REGULATORY AGENDA.Semiannual Report.January-June 1997.

Regulatory Analysis

NUREG-1492: REGULATORY ANALYSIS ON CRITERIA FOR THE RELEASE OF PATIENTS ADMINISTERED RADIOACTIVE MATERIAL.Final Report.

Regulatory And Technical Report

NUREG-0304 V21 N03: REGULATORY AND TECHNICAL REPORTS (ABSTRACT INDEX JOURNAL). Compilation For Third Quarter 1996,July-September.
 NUREG-0304 V21 N04: REGULATORY AND TECHNICAL REPORTS (ABSTRACT INDEX JOURNAL). Annual Compilation For 1996.
 NUREG-0304 V22 N01: REGULATORY AND TECHNICAL REPORTS (ABSTRACT INDEX JOURNAL). Compilation For First Quarter 1997,January-March.
 NUREG-0304 V22 N02: REGULATORY AND TECHNICAL REPORTS (ABSTRACT INDEX JOURNAL). Compilation For Second Quarter 1997,April-June.

Regulatory Assessment

NUREG/CR-6451: A SAFETY AND REGULATORY ASSESSMENT OF GENERIC BWR AND PWR PERMANENTLY SHUTDOWN NUCLEAR POWER PLANTS.

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Regulatory Guidance

NUREG-1606 DRFT FC: PROPOSED REGULATORY GUIDANCE RELATED TO IMPLEMENTATION OF 10 CFR 50.59 (CHANGES, TESTS, OR EXPERIMENTS).Draft Report For Comment.

Regulatory Mission

NUREG-1614 V01: NRC STRATEGIC PLAN.Fiscal Year 1997 - Fiscal Year 2002.

Replacement Energy Cost

NUREG/CR-4012 V04: REPLACEMENT ENERGY COSTS FOR NUCLEAR ELECTRICITY-GENERATING UNITS IN THE UNITED STATES: 1997-2001.

Report To Congress

NUREG-0090 V19: REPORT TO CONGRESS ON ABNORMAL OCCURRENCES.Fiscal Year 1996.

Repository Design

NUREG/CR-6513 N01: NRC HIGH-LEVEL RADIOACTIVE WASTE MANAGEMENT PROGRAM ANNUAL PROGRESS REPORT: FISCAL YEAR 1996.

Respirator Monitor

NUREG/CR-6535: DEVELOPMENT OF CONFORMAL RESPIRATOR MONITORING TECHNOLOGY.

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NUREG-1602 DRFT FC: THE USE OF PRA IN RISK-INFORMED APPLICATIONS.Draft Rept For Comment.

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NUREG-1496 V01: FINAL GENERIC ENVIRONMENTAL IMPACT STATEMENT IN SUPPORT OF RULEMAKING ON RADIOLOGICAL CRITERIA FOR LICENSE TERMINATION OF NRC-LICENSED NUCLEAR FACILITIES.Main Report.Final Report.

NUREG-1496 V02: FINAL GENERIC ENVIRONMENTAL IMPACT STATEMENT IN SUPPORT OF RULEMAKING ON RADIOLOGICAL CRITERIA FOR LICENSE TERMINATION OF NRC-LICENSED NUCLEAR FACILITIES.Appendices A And B.Final Report.

NUREG-1496 V03: FINAL GENERIC ENVIRONMENTAL IMPACT STATEMENT IN SUPPORT OF RULEMAKING ON RADIOLOGICAL CRITERIA FOR LICENSE TERMINATION OF NRC-LICENSED NUCLEAR FACILITIES.Appendices C-H.Final Report.

Rules

NUREG-0936 V15 N02: NRC REGULATORY AGENDA.Semiannual Report.July-December 1996.

NUREG-0936 V16 N01: NRC REGULATORY AGENDA.Semiannual Report.January-June 1997.

Rules Of Practice

NUREG-0386 D08: UNITED STATES NUCLEAR REGULATORY COMMISSION STAFF PRACTICE AND PROCEDURE DIGEST.Commission, Appeal Board And Licensing Board Decisions.July 1972 - June 1996.

SBWR

NUREG/CR-6474: PRELIMINARY PHENOMENA IDENTIFICATION AND RANKING TABLES (PIRT) FOR SBWR STARTUP STABILITY.

SCALE

NUREG/CR-0200 R5V1P1: SCALE: A MODULAR CODE SYSTEM FOR PERFORMING STANDARDIZED COMPUTER ANALYSES FOR LICENSING EVALUATION.Control Modules C4, C6.

NUREG/CR-0200 R5V1P2: SCALE: A MODULAR CODE SYSTEM FOR PERFORMING STANDARDIZED COMPUTER ANALYSES FOR LICENSING EVALUATION.Control Modules S1 - H1.

NUREG/CR-0200 R5V2P1: SCALE: A MODULAR CODE SYSTEM FOR PERFORMING STANDARDIZED COMPUTER ANALYSES FOR LICENSING EVALUATION.Functional Modules F1 - F8.

NUREG/CR-0200 R5V2P2: SCALE: A MODULAR CODE SYSTEM FOR PERFORMING STANDARDIZED COMPUTER ANALYSES FOR LICENSING EVALUATION.Functional Modules F9 - F11.

NUREG/CR-0200 R5V2P3: SCALE: A MODULAR CODE SYSTEM FOR PERFORMING STANDARDIZED COMPUTER ANALYSES FOR LICENSING EVALUATION.Functional Modules F16 - F17.

NUREG/CR-0200 R5V3: SCALE: A MODULAR CODE SYSTEM FOR PERFORMING STANDARDIZED COMPUTER ANALYSES FOR LICENSING EVALUATION. Miscellaneous.

SDMP

NUREG/CR-6565: UNCERTAINTY ANALYSES OF INFILTRATION AND SUBSURFACE FLOW AND TRANSPORT FOR SDMP SITES.

SECP0P90

NUREG/CR-6525: SECP0P90: SECTOR POPULATION, LAND FRACTION, AND ECONOMIC ESTIMATION PROGRAM.

Safeguards Summary Event List

NUREG-0525 V02 R05: SAFEGUARDS SUMMARY EVENT LIST (SSEL).January 1,1990 Through December 31,1996.

Safety Evaluation

NUREG-1606 DRFT FC: PROPOSED REGULATORY GUIDANCE RELATED TO IMPLEMENTATION OF 10 CFR 50.59 (CHANGES, TESTS, OR EXPERIMENTS).Draft Report For Comment.

Safety Evaluation Report

NUREG-1572: SAFETY EVALUATION REPORT RELATED TO THE RENEWAL OF THE OPERATING LICENSE FOR THE RESEARCH REACTOR AT NORTH CAROLINA STATE UNIVERSITY.

NUREG-1607: SAFETY EVALUATION REPORT RELATED TO THE DEPARTMENT OF ENERGY'S PROPOSAL FOR THE IRRADIATION OF LEAD TEST ASSEMBLIES CONTAINING TRITIUM-PRODUCING BURNABLE ABSORBER RODS IN COMMERCIAL LIGHT-WATER REACTORS.

Safety Program

NUREG-1516: MANAGEMENT OF RADIOACTIVE MATERIAL SAFETY PROGRAMS AT MEDICAL FACILITIES.Final Report.

Safety System

NUREG/CR-6463 R01: REVIEW GUIDELINES FOR SOFTWARE LANGUAGES FOR USE IN NUCLEAR POWER PLANT SAFETY SYSTEMS.Final Report.

Safety-Related Structure

NUREG/CR-6486: ASSESSMENT OF MODULAR CONSTRUCTION FOR SAFETY-RELATED STRUCTURES AT ADVANCED NUCLEAR POWER PLANTS.

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NUREG/CR-6563: LG EXCITATION, ATTENUATION, AND SOURCE SPECTRAL SCALING IN CENTRAL AND EASTERN NORTH AMERICA.

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NUREG-1556 V3 DRF FC: CONSOLIDATED GUIDANCE ABOUT MATERIALS LICENSES.Applications for Sealed Source And Device Evaluation And Registration. Draft Report For Comment.

NUREG/CR-6074 V03: SEALED SOURCE AND DEVICE DESIGN SAFETY TESTING.Technical Report On The Findings Of Task 4.Investigation Of A Failed Brachytherapy Needle Applicator.

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NUREG/CR-6525: SECP0P90: SECTOR POPULATION, LAND FRACTION, AND ECONOMIC ESTIMATION PROGRAM.

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NUREG/CP-0157 V03: PROCEEDINGS OF THE TWENTY-FOURTH WATER REACTOR SAFETY INFORMATION MEETING.PRA And HRA, And Probabilistic Seismic Hazard Assessment And Seismic Siting Criteria.

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NUREG/CR-6464: AN EVALUATION OF METHODOLOGY FOR SEISMIC QUALIFICATION OF EQUIPMENT,CABLE TRAYS, AND DUCTS IN ALWR PLANTS BY USE OF EXPERIENCE DATA.

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NUREG/CR-6404: AN EXPERIMENTAL SCALE-MODEL STUDY OF SEISMIC RESPONSE OF AN UNDERGROUND OPENING IN JOINTED ROCK MASS.

Seismic Zone

NUREG/CR-6529: VALIDATION OF TECTONIC MODELS FOR AN INTRAPLATE SEISMIC ZONE,CHARLESTON,SOUTH CAROLINA WITH GPS GEODETIC DATA.

Seismograph

NUREG/CR-6448 V02: EVALUATION OF NATIONAL SEISMOGRAPH NETWORK DETECTION CAPABILITIES.Final Report.

Self-Shielded Irradiation

NUREG-1556 V5 DRF FC: CONSOLIDATED GUIDANCE ABOUT MATERIALS LICENSES. Program-Specific Guidance About Self-Shielded Irradiator Licenses. Draft Report For Comment.

Semiannual Report To Congress

NUREG-1415 V10 N01: OFFICE OF THE INSPECTOR GENERAL. Semiannual Report To Congress, April 1, 1997 - September 30, 1997.

Severe Accident

NUREG/CR-6433: CONTAINMENT PERFORMANCE OF PROTOTYPICAL REACTOR CONTAINMENTS SUBJECTED TO SEVERE ACCIDENT CONDITIONS.
NUREG/CR-6469: EXPERIMENTS TO INVESTIGATE DIRECT CONTAINMENT HEATING PHENOMENA WITH SCALED MODELS OF THE CALVERT CLIFFS NUCLEAR POWER PLANT.
NUREG/CR-6533: CODE MANUAL FOR CONTAIN 2.0: A COMPUTER CODE FOR NUCLEAR REACTOR CONTAINMENT ANALYSIS.

Severe Reactor Accident

NUREG/CR-6167: LATE-PHASE MELT PROGRESSION EXPERIMENT MP-2. Results And Analysis.

Shearing Rate

NUREG/CR-6586: HORIZONTAL VELOCITIES IN THE CENTRAL AND EASTERN UNITED STATES FROM GPS SURVEYS DURING THE 1987-1996 INTERVAL.

Simplified Boiling-Water Reactor

NUREG/CR-6474: PRELIMINARY PHENOMENA IDENTIFICATION AND RANKING TABLES (PIRT) FOR SBWR STARTUP STABILITY.

Site Characterization

NUREG/CP-0157 V03: PROCEEDINGS OF THE TWENTY-FOURTH WATER REACTOR SAFETY INFORMATION MEETING. PRA And HRA, And Probabilistic Seismic Hazard Assessment And Seismic Siting Criteria.

Site Selection

NUREG/CR-6295: REASSESSMENT OF SELECTED FACTORS AFFECTING SITING OF NUCLEAR POWER PLANTS.

Slide Rule

NUREG/CR-6504 V01: AN UPDATED NUCLEAR CRITICALITY SLIDE RULE. Technical Basis.

Small Break

NUREG/CR-6541 R02: PHENOMENA IDENTIFICATION AND RANKING TABLES FOR WESTINGHOUSE AP600 SMALL BREAK LOSS-OF-COOLANT ACCIDENT, MAIN STEAM LINE BREAK, AND STEAM GENERATOR TUBE RUPTURE SCENARIOS.

Smoke

NUREG/CR-6543: EFFECTS OF SMOKE ON FUNCTIONAL CIRCUITS.

Software Languages

NUREG/CR-6463 R01: REVIEW GUIDELINES FOR SOFTWARE LANGUAGES FOR USE IN NUCLEAR POWER PLANT SAFETY SYSTEMS. Final Report.

Solute Transport

NUREG/CR-6437: FLOW AND TRANSPORT AT THE LAS CRUCES TRENCH SITE: EXPERIMENT IIB.

Solution Mine

NUREG-1508: FINAL ENVIRONMENTAL IMPACT STATEMENT TO CONSTRUCT AND OPERATE THE CROWNPOINT URANIUM SOLUTION MINING PROJECT, CROWNPOINT, NEW MEXICO. Docket No. 40-8968. (Hydro Resources, Inc.)

Spent Fuel

NUREG-1275 V12: OPERATING EXPERIENCE FEEDBACK REPORT. Assessment Of Spent Fuel Cooling.
NUREG-1536: STANDARD REVIEW PLAN FOR DRY SPENT FUEL STORAGE SYSTEMS. Final Report.
NUREG/CR-0200 R5V1P1: SCALE: A MODULAR CODE SYSTEM FOR PERFORMING STANDARDIZED COMPUTER ANALYSES FOR LICENSING EVALUATION. Control Modules C4, C6.
NUREG/CR-0200 R5V1P2: SCALE: A MODULAR CODE SYSTEM FOR PERFORMING STANDARDIZED COMPUTER ANALYSES FOR LICENSING EVALUATION. Control Modules S1 - H1.
NUREG/CR-0200 R5V2P1: SCALE: A MODULAR CODE SYSTEM FOR PERFORMING STANDARDIZED COMPUTER ANALYSES FOR LICENSING EVALUATION. Functional Modules F1 - F8.

NUREG/CR-0200 R5V2P2: SCALE: A MODULAR CODE SYSTEM FOR PERFORMING STANDARDIZED COMPUTER ANALYSES FOR LICENSING EVALUATION. Functional Modules F9 - F11.

NUREG/CR-0200 R5V2P3: SCALE: A MODULAR CODE SYSTEM FOR PERFORMING STANDARDIZED COMPUTER ANALYSES FOR LICENSING EVALUATION. Functional Modules F16 - F17.

NUREG/CR-0200 R5V3: SCALE: A MODULAR CODE SYSTEM FOR PERFORMING STANDARDIZED COMPUTER ANALYSES FOR LICENSING EVALUATION. Miscellaneous.

Spent Fuel Shipment

NUREG-0725 R12: PUBLIC INFORMATION CIRCULAR FOR SHIPMENTS OF IRRADIATED REACTOR FUEL.

Stainless Steel

NUREG/CR-6363: EFFECTS OF THERMAL AGING AND NEUTRON IRRADIATION ON THE MECHANICAL PROPERTIES OF THREE-WIRE STAINLESS STEEL WELD OVERLAY CLADDING.

Standard Review Plan

NUREG-1536: STANDARD REVIEW PLAN FOR DRY SPENT FUEL STORAGE SYSTEMS. Final Report.

NUREG-1555 DRFT: ENVIRONMENTAL STANDARD REVIEW PLAN. Standard Review Plans For Environmental Reviews For Nuclear Power Plants.

NUREG-1562 DRFT FC: STANDARD REVIEW PLAN FOR APPLICATIONS FOR LICENSES TO DISTRIBUTE BYPRODUCT MATERIAL TO PERSONS EXEMPT FROM THE REQUIREMENTS FOR AN NRC LICENSE. 10CFR Parts 30.14, 30.15, 30.16, 30.18, 30.19 & 30.20.

NUREG-1569 DRFT: DRAFT STANDARD REVIEW PLAN FOR IN SITU LEACH URANIUM EXTRACTION LICENSE APPLICATIONS.

NUREG-1574: STANDARD REVIEW PLAN ON ANTITRUST REVIEWS. Final Report.

NUREG-1574 DRFT FC: STANDARD REVIEW PLAN ON ANTITRUST. Draft Report For Comment.

NUREG-1577 DRFT FC: STANDARD REVIEW PLAN ON POWER REACTOR LICENSEE FINANCIAL QUALIFICATIONS AND DECOMMISSIONING FUNDING ASSURANCE. Draft Report For Comment.

NUREG-1609 DRFT FC: STANDARD REVIEW PLAN FOR TRANSPORTATION PACKAGES FOR RADIOACTIVE MATERIAL. Draft Report For Comment.

Startup Stability

NUREG/CR-6474: PRELIMINARY PHENOMENA IDENTIFICATION AND RANKING TABLES (PIRT) FOR SBWR STARTUP STABILITY.

Station Blackout

NUREG/CR-6527: FINAL RESULTS OF THE XR2-1 BWR METALLIC MELT RELOCATION EXPERIMENT.

Steam Bubble

NUREG/CR-6519: SCREENING REACTOR STEAM/WATER PIPING SYSTEMS FOR WATER HAMMER.

Steam Condensation

NUREG/CR-6530: DELIBERATE IGNITION OF HYDROGEN-AIR-STEAM MIXTURES IN CONDENSING STEAM ENVIRONMENTS.

Steam Generator

NUREG-1604: CIRCUMFERENTIAL CRACKING OF STEAM GENERATOR TUBES.

NUREG/CP-0154: PROCEEDINGS OF THE CNRA/CSNI WORKSHOP ON STEAM GENERATOR TUBE INTEGRITY IN NUCLEAR POWER PLANTS.

NUREG/CR-4409 V06: DATA BASE ON DOSE REDUCTION PROJECTS FOR NUCLEAR POWER PLANTS.

NUREG/CR-6511 V01: STEAM GENERATOR TUBE INTEGRITY PROGRAM. Semiannual Report, August 1995 - March 1996.

NUREG/CR-6541 R02: PHENOMENA IDENTIFICATION AND RANKING TABLES FOR WESTINGHOUSE AP600 SMALL BREAK LOSS-OF-COOLANT ACCIDENT, MAIN STEAM LINE BREAK, AND STEAM GENERATOR TUBE RUPTURE SCENARIOS.

Steam/Water System

NUREG/CR-6519: SCREENING REACTOR STEAM/WATER PIPING SYSTEMS FOR WATER HAMMER.

Steel Component

NUREG/CR-6557: DEVELOPMENT OF THE MAGNESCOPE AS AN INSTRUMENT FOR IN SITU EVALUATION OF STEEL COMPONENTS OF NUCLEAR SYSTEMS.

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Storage Cask

NUREG-1536: STANDARD REVIEW PLAN FOR DRY SPENT FUEL STORAGE SYSTEMS. Final Report.
NUREG-1571: INFORMATION HANDBOOK ON INDEPENDENT SPENT FUEL STORAGE INSTALLATIONS.

Stress Corrosion Cracking

NUREG/CP-0154: PROCEEDINGS OF THE CNRA/CSNI WORKSHOP ON STEAM GENERATOR TUBE INTEGRITY IN NUCLEAR POWER PLANTS.
NUREG/CR-4667 V22: ENVIRONMENTALLY ASSISTED CRACKING IN LIGHT WATER REACTORS. Semiannual Report, January 1996 - June 1996.
NUREG/CR-4667 V23: ENVIRONMENTALLY ASSISTED CRACKING IN LIGHT WATER REACTORS. Semiannual Report, July-December 1996.
NUREG/CR-6511 V01: STEAM GENERATOR TUBE INTEGRITY PROGRAM. Semiannual Report, August 1995 - March 1996.

Structural Aging

NUREG/CP-0157 V01: PROCEEDINGS OF THE TWENTY-FOURTH WATER REACTOR SAFETY INFORMATION MEETING. Plenary Session, High Burnup Fuel, Containment And Structural Aging.

Structural Steel

NUREG/CR-6399: RESULTS OF CHARPY V-NOTCH IMPACT TESTING OF STRUCTURAL STEEL SPECIMENS IRRADIATED AT 30 DEGREES C TO 1×10^{16} NEUTRONS/CM² IN A COMMERCIAL REACTOR CAVITY.

Subsize Specimen

NUREG/CR-6379: AN IMPROVED CORRELATION PROCEDURE FOR SUBSIZE AND FULL-SIZE CHARPY IMPACT SPECIMEN DATA.

Subsurface Flow

NUREG/CR-6565: UNCERTAINTY ANALYSES OF INFILTRATION AND SUBSURFACE FLOW AND TRANSPORT FOR SDMP SITES.

Suction Strainer

NUREG/CR-6370: BLOCKAGE 2.5 USER'S MANUAL.
NUREG/CR-6371: BLOCKAGE 2.5 REFERENCE MANUAL.

Suppression Pool

NUREG/CR-6153: A SIMPLIFIED MODEL OF DECONTAMINATION BY BWR STEAM SUPPRESSION POOLS.

Surface Crack

NUREG/CR-6233 V04: INTERNATIONAL PIPING INTEGRITY RESEARCH PROGRAM (IPIRG) PROGRAM. Program Final Report.
NUREG/CR-6452: THE SECOND INTERNATIONAL PIPING INTEGRITY RESEARCH GROUP (IPIRG-2) PROGRAM. Final Report.

Surtsey Test Facility

NUREG/CR-6530: DELIBERATE IGNITION OF HYDROGEN-AIR-STEAM MIXTURES IN CONDENSING STEAM ENVIRONMENTS.

System 80+ Design

NUREG-1462 S01: FINAL SAFETY EVALUATION REPORT RELATED TO THE CERTIFICATION OF THE SYSTEM 80+ DESIGN. Docket No. 52-002. (Asea Brown Boveri-Combustion Engineering)

TLD

NUREG-0837 V16 N03: NRC TLD DIRECT RADIATION MONITORING NETWORK. Progress Report. July-September 1996.
NUREG-0837 V16 N04: NRC TLD DIRECT RADIATION MONITORING NETWORK. Progress Report. October-December 1996.
NUREG-0837 V17 N01: NRC TLD DIRECT RADIATION MONITORING NETWORK. Progress Report. January-March 1997.
NUREG-0837 V17 N02: NRC TLD DIRECT RADIATION MONITORING NETWORK. Progress Report. April-June 1997.
NUREG/CR-6037: MEASUREMENT OF RESIDUAL RADIOACTIVE SURFACE CONTAMINATION BY 2-D LASER HEATED TLD.

TP304 Stainless Steel

NUREG/CR-6446: FRACTURE TOUGHNESS EVALUATIONS OF TP304 STAINLESS STEEL PIPES.

Technical Training Center

NUREG/CR-6042 R01: PERSPECTIVES ON REACTOR SAFETY.

Tectonic Model

NUREG/CR-6529: VALIDATION OF TECTONIC MODELS FOR AN INTRAPLATE SEISMIC ZONE, CHARLESTON, SOUTH CAROLINA WITH GPS GEODETIC DATA.

Test Reactor

NUREG/CR-6506: EMBRITTLEMENT DATA BASE, VERSION 1.

Therapeutic Administration

NUREG-1492: REGULATORY ANALYSIS ON CRITERIA FOR THE RELEASE OF PATIENTS ADMINISTERED RADIOACTIVE MATERIAL. Final Report.

Thermal Aging

NUREG/CR-6363: EFFECTS OF THERMAL AGING AND NEUTRON IRRADIATION ON THE MECHANICAL PROPERTIES OF THREE-WIRE STAINLESS STEEL WELD OVERLAY CLADDING.

Thermal-Hydraulic

NUREG/CP-0158: PROCEEDINGS OF THE OECD/CSNI SPECIALISTS MEETING ON BORON DILUTION REACTIVITY TRANSIENTS. Held in State College, Pennsylvania, USA, October 18-20, 1995.
NUREG/CP-0159: PROCEEDINGS OF THE OECD/CSNI WORKSHOP ON TRANSIENT THERMAL-HYDRAULIC AND NEUTRONIC CODES REQUIREMENTS. Held in Annapolis, Maryland, USA, November 5-8, 1996.

Thermoluminescent Dosimeter

NUREG-0837 V16 N03: NRC TLD DIRECT RADIATION MONITORING NETWORK. Progress Report. July-September 1996.
NUREG-0837 V16 N04: NRC TLD DIRECT RADIATION MONITORING NETWORK. Progress Report. October-December 1996.
NUREG-0837 V17 N01: NRC TLD DIRECT RADIATION MONITORING NETWORK. Progress Report. January-March 1997.
NUREG-0837 V17 N02: NRC TLD DIRECT RADIATION MONITORING NETWORK. Progress Report. April-June 1997.

Title List

NUREG-0540 V18 N11: TITLE LIST OF DOCUMENTS MADE PUBLICLY AVAILABLE. November 1-30, 1996.
NUREG-0540 V18 N12: TITLE LIST OF DOCUMENTS MADE PUBLICLY AVAILABLE. December 1-31, 1996.
NUREG-0540 V19 N01: TITLE LIST OF DOCUMENTS MADE PUBLICLY AVAILABLE. January 1-31, 1997.
NUREG-0540 V19 N02: TITLE LIST OF DOCUMENTS MADE PUBLICLY AVAILABLE. February 1-28, 1997.
NUREG-0540 V19 N03: TITLE LIST OF DOCUMENTS MADE PUBLICLY AVAILABLE. March 1-31, 1997.
NUREG-0540 V19 N04: TITLE LIST OF DOCUMENTS MADE PUBLICLY AVAILABLE. April 1-30, 1997.
NUREG-0540 V19 N05: TITLE LIST OF DOCUMENTS MADE PUBLICLY AVAILABLE. May 1-31, 1997.
NUREG-0540 V19 N06: TITLE LIST OF DOCUMENTS MADE PUBLICLY AVAILABLE. June 1-30, 1997.
NUREG-0540 V19 N07: TITLE LIST OF DOCUMENTS MADE PUBLICLY AVAILABLE. July 1-31, 1997.
NUREG-0540 V19 N08: TITLE LIST OF DOCUMENTS MADE PUBLICLY AVAILABLE. August 1-31, 1997.
NUREG-0540 V19 N09: TITLE LIST OF DOCUMENTS MADE PUBLICLY AVAILABLE. September 1-30, 1997.
NUREG-0540 V19 N10: TITLE LIST OF DOCUMENTS MADE PUBLICLY AVAILABLE. October 1-31, 1997.

Topical Report

NUREG-0390 V11: TOPICAL REPORT REVIEW STATUS.

Transportation

NUREG-1608 DRFT FC: CATEGORIZING AND TRANSPORTING LOW SPECIFIC ACTIVITY MATERIALS AND SURFACE CONTAMINATED OBJECTS. Draft Rept For Comment.

Transportation Package

NUREG-1609 DRFT FC: STANDARD REVIEW PLAN FOR TRANSPORTATION PACKAGES FOR RADIOACTIVE MATERIAL. Draft Report For Comment.
NUREG/CR-5661: RECOMMENDATIONS FOR PREPARING THE CRITICALITY SAFETY EVALUATION OF TRANSPORTATION PACKAGES.

Tube

NUREG-1604: CIRCUMFERENTIAL CRACKING OF STEAM GENERATOR TUBES.
NUREG/CR-6511 V01: STEAM GENERATOR TUBE INTEGRITY PROGRAM. Semiannual Report, August 1995 - March 1996.

Tube Integrity

NUREG/CP-0154: PROCEEDINGS OF THE CNRA/CSNI WORKSHOP ON STEAM GENERATOR TUBE INTEGRITY IN NUCLEAR POWER PLANTS.

UF6

NUREG/CR-6481 V01: REVIEW OF MODELS USED FOR DETERMINING CONSEQUENCES OF UF(6) RELEASE. Development Of Model Evaluation Criteria.

NUREG/CR-6481 V02: REVIEW OF MODELS USED FOR DETERMINING CONSEQUENCES OF UF(6) RELEASE. Model Evaluation Report.

Uncertainty Analysis

NUREG/CR-6523 V01: PROBABILISTIC ACCIDENT CONSEQUENCE UNCERTAINTY ANALYSIS. Food Chain Uncertainty Assessment. Main Report.

NUREG/CR-6523 V02: PROBABILISTIC ACCIDENT CONSEQUENCE UNCERTAINTY ANALYSIS. Food Chain Uncertainty Assessment. Appendices.

NUREG/CR-6526 V01: PROBABILISTIC ACCIDENT CONSEQUENCE UNCERTAINTY ANALYSIS. Uncertainty Assessment For Deposited Material And External Doses. Main Report.

NUREG/CR-6526 V02: PROBABILISTIC ACCIDENT CONSEQUENCE UNCERTAINTY ANALYSIS. UNCERTAINTY ASSESSMENT FOR DEPOSITED MATERIAL AND EXTERNAL DOSES. Appendices.

Underground Disposal

NUREG/CR-6515: BLT-EC (BREACH, LEACH, AND TRANSPORT-EQUILIBRIUM CHEMISTRY) DATA INPUT GUIDE. A Computer Model For Simulating Release And Coupled Geochemical Transport Of Contaminants From A Subsurface Disposal Facility.

Underwater Welding

NUREG-1616: FEASIBILITY OF UNDERWATER WELDING OF HIGHLY IRRADIATED IN-VESSEL COMPONENTS OF BOILING WATER REACTORS. A Literature Review.

Unsaturated Zone

NUREG/CR-6565: UNCERTAINTY ANALYSES OF INFILTRATION AND SUBSURFACE FLOW AND TRANSPORT FOR SDMP SITES.

Uranium

NUREG-1532: FINAL TECHNICAL EVALUATION REPORT FOR THE PROPOSED REVISED RECLAMATION PLAN FOR THE ATLAS CORPORATION MOAB MILL. Source Material License No. SUA-917. Docket No. 40-3453 (Atlas Corporation)

NUREG-1569 DRFT: DRAFT STANDARD REVIEW PLAN FOR IN SITU LEACH URANIUM EXTRACTION LICENSE APPLICATIONS.

NUREG/CR-6505 V01: THE POTENTIAL FOR CRITICALITY FOLLOWING DISPOSAL OF URANIUM AT LOW-LEVEL WASTE FACILITIES. Uranium Blended With Soil.

NUREG/CR-6528: ENVIRONMENTAL ASSESSMENT PROPOSED LICENSE RENEWAL OF NUCLEAR METALS, INC. CONCORD, MASSACHUSETTS.

User's Guide

NUREG/CR-6547: DOSFAC2 USER'S GUIDE.

Vadose Zone

NUREG/CR-6437: FLOW AND TRANSPORT AT THE LAS CRUCES TRENCH SITE: EXPERIMENT IIB.

Vendor Inspection

NUREG-0040 V20 N03: LICENSEE CONTRACTOR AND VENDOR INSPECTION STATUS REPORT. Quarterly Report, July-September 1996. (White Book)

NUREG-0040 V20 N04: LICENSEE CONTRACTOR AND VENDOR INSPECTION STATUS REPORT. Quarterly Report, October-December 1996. (White Book)

NUREG-0040 V21 N01: LICENSEE CONTRACTOR AND VENDOR INSPECTION STATUS REPORT. Quarterly Report, January-March 1997. (White Book)

NUREG-0040 V21 N02: LICENSEE CONTRACTOR AND VENDOR INSPECTION STATUS REPORT. Quarterly Report, April-June 1997. (White Book)

NUREG-0040 V21 N03: LICENSEE CONTRACTOR AND VENDOR INSPECTION STATUS REPORT. Quarterly Report, July-September 1997. (White Book)

Wall Thinning

NUREG/CR-6456: REVIEW OF INDUSTRY EFFORTS TO MANAGE PRESSURIZED WATER REACTOR FEEDWATER NOZZLE, PIPING, AND FEEDRING CRACKING AND WALL THINNING.

Waste Burial

NUREG-1307 R07: REPORT ON WASTE BURIAL CHARGES. Escalation Of Decommissioning Waste Disposal Costs At Low-Level Waste Burial Facilities.

Water Flow

NUREG/CR-6437: FLOW AND TRANSPORT AT THE LAS CRUCES TRENCH SITE: EXPERIMENT IIB.

Water Hammer

NUREG/CR-6519: SCREENING REACTOR STEAM/WATER PIPING SYSTEMS FOR WATER HAMMER.

Water Infiltration

NUREG/CR-4918 V10: CONTROL OF WATER INFILTRATION INTO NEAR SURFACE LOW-LEVEL WASTE DISPOSAL UNITS. Final Report On Field Experiments At A Humid Region Site, Beltsville, Maryland.

Weld

NUREG/CR-6181 R01: A PILOT APPLICATION OF RISK-INFORMED METHODS TO ESTABLISH INSERVICE INSPECTION PRIORITIES FOR NUCLEAR COMPONENTS AT SURRY UNIT 1 NUCLEAR POWER STATION.

Weld Overlay

NUREG/CR-6363: EFFECTS OF THERMAL AGING AND NEUTRON IRRADIATION ON THE MECHANICAL PROPERTIES OF THREE-WIRE STAINLESS STEEL WELD OVERLAY CLADDING.

Westinghouse AP600

NUREG/CR-6414: PIPING BENCHMARK PROBLEMS FOR THE WESTINGHOUSE AP600 STANDARDIZED PLANT.

NUREG/CR-6541 R02: PHENOMENA IDENTIFICATION AND RANKING TABLES FOR WESTINGHOUSE AP600 SMALL BREAK LOSS-OF-COOLANT ACCIDENT, MAIN STEAM LINE BREAK, AND STEAM GENERATOR TUBE RUPTURE SCENARIOS.

Yucca Mountain

NUREG/CR-6513 N01: NRC HIGH-LEVEL RADIOACTIVE WASTE MANAGEMENT PROGRAM ANNUAL PROGRESS REPORT: FISCAL YEAR 1996.

NRC Originating Organization Index (Staff Reports)

This index lists those NRC organizations that have published staff reports. The index is arranged alphabetically by major NRC organizations (e.g., program offices) and then by subsections of these (e.g., divisions, branches) where appropriate. Each entry is followed by a NUREG number and title of the report(s). If further information is needed, refer to the main citation by NUREG number.

ADVISORY COMMITTEE(S)

ADVISORY COMMITTEE ON NUCLEAR WASTE

NUREG-1423 V07: A COMPILATION OF REPORTS OF THE ADVISORY COMMITTEE ON NUCLEAR WASTE. July 1996 - June 1997.

ACRS - ADVISORY COMMITTEE ON REACTOR SAFEGUARDS
NUREG-1125 V18: A COMPILATION OF REPORTS OF THE ADVISORY COMMITTEE ON REACTOR SAFEGUARDS. 1996 Annual.

OFFICE OF EXECUTIVE DIRECTOR FOR OPERATIONS (EDO)

REGION 1 (POST 820201)

NUREG-0837 V16 N03: NRC TLD DIRECT RADIATION MONITORING NETWORK. Progress Report. July-September 1996.

NUREG-0837 V16 N04: NRC TLD DIRECT RADIATION MONITORING NETWORK. Progress Report. October-December 1996.

NUREG-0837 V17 N01: NRC TLD DIRECT RADIATION MONITORING NETWORK. Progress Report. January-March 1997.

NUREG-0837 V17 N02: NRC TLD DIRECT RADIATION MONITORING NETWORK. Progress Report. April-June 1997.

OFC OF ENFORCEMENT (POST 870413)

NUREG-0940 V15 N2 P1: ENFORCEMENT ACTIONS: SIGNIFICANT ACTIONS RESOLVED INDIVIDUAL ACTIONS. Semiannual Progress Report. July-December 1996.

NUREG-0940 V15 N2 P2: ENFORCEMENT ACTIONS: SIGNIFICANT ACTIONS RESOLVED REACTOR LICENSEES. Semiannual Progress Report. July-December 1996.

NUREG-0940 V15 N2 P3: ENFORCEMENT ACTIONS: SIGNIFICANT ACTIONS RESOLVED MATERIAL LICENSEES. Semiannual Progress Report. July-December 1996.

NUREG-0940 V16 N1 P1: ENFORCEMENT ACTIONS: SIGNIFICANT ACTIONS RESOLVED INDIVIDUAL ACTIONS. Semiannual Progress Report. January-June 1997.

NUREG-0940 V16 N1 P2: ENFORCEMENT ACTIONS: SIGNIFICANT ACTIONS RESOLVED REACTOR LICENSEES. Semiannual Progress Report. January-June 1997.

NUREG-0940 V16 N1 P3: ENFORCEMENT ACTIONS: SIGNIFICANT ACTIONS RESOLVED MATERIAL LICENSEES. Semiannual Progress Report. January-June 1997.

EDO - OFFICE OF ADMINISTRATION (PRE 870413 & POST 890205)

RULES & DIRECTIVES REVIEW BRANCH (POST 920323)

NUREG-0936 V15 N02: NRC REGULATORY AGENDA. Semiannual Report. July-December 1996.

OFFICE OF ADMINISTRATION, DIRECTOR (POST 940714)

NUREG-0936 V16 N01: NRC REGULATORY AGENDA. Semiannual Report. January-June 1997.

EDO - OFFICE OF THE CONTROLLER (PRE 820418 & POST 890205)

OFFICE OF THE CONTROLLER (POST 890205)

NUREG-1542 V02: ACCOUNTABILITY REPORT FISCAL YEAR 1996.

DIVISION OF BUDGET & ANALYSIS (POST 890205)

NUREG-1100 V13: BUDGET ESTIMATES. Fiscal Year 1998.

NUREG-1350 V09: NUCLEAR REGULATORY COMMISSION INFORMATION DIGEST. 1997 Edition.

EDO - OFFICE FOR ANALYSIS & EVALUATION OF OPERATIONAL DATA

OFFICE FOR ANALYSIS & EVALUATION OF OPERATIONAL DATA, DIRECTOR

NUREG-0090 V19: REPORT TO CONGRESS ON ABNORMAL OCCURRENCES. Fiscal Year 1996.

DIVISION OF SAFETY PROGRAMS (POST 870413)

NUREG-1275 V12: OPERATING EXPERIENCE FEEDBACK REPORT. Assessment Of Spent Fuel Cooling.

EDO - OFFICE OF INFORMATION RESOURCES MANAGEMENT & ARM (POST 861109)

OFFICE OF INFORMATION RESOURCES MANAGEMENT (POST 890205)

NUREG-0304 V21 N03: REGULATORY AND TECHNICAL REPORTS (ABSTRACT INDEX JOURNAL). Compilation For Third Quarter 1996. July-September.

NUREG-0304 V21 N04: REGULATORY AND TECHNICAL REPORTS (ABSTRACT INDEX JOURNAL). Annual Compilation For 1996.

NUREG-0304 V22 N01: REGULATORY AND TECHNICAL REPORTS (ABSTRACT INDEX JOURNAL). Compilation For First Quarter 1997. January-March.

NUREG-0304 V22 N02: REGULATORY AND TECHNICAL REPORTS (ABSTRACT INDEX JOURNAL). Compilation For Second Quarter 1997. April-June.

NUREG-0540 V18 N11: TITLE LIST OF DOCUMENTS MADE PUBLICLY AVAILABLE. November 1-30, 1996.

NUREG-0540 V18 N12: TITLE LIST OF DOCUMENTS MADE PUBLICLY AVAILABLE. December 1-31, 1996.

NUREG-0540 V19 N01: TITLE LIST OF DOCUMENTS MADE PUBLICLY AVAILABLE. January 1-31, 1997.

NUREG-0540 V19 N02: TITLE LIST OF DOCUMENTS MADE PUBLICLY AVAILABLE. February 1-28, 1997.

NUREG-0540 V19 N03: TITLE LIST OF DOCUMENTS MADE PUBLICLY AVAILABLE. March 1-31, 1997.

NUREG-0540 V19 N04: TITLE LIST OF DOCUMENTS MADE PUBLICLY AVAILABLE. April 1-30, 1997.

NUREG-0540 V19 N05: TITLE LIST OF DOCUMENTS MADE PUBLICLY AVAILABLE. May 1-31, 1997.

NUREG-0540 V19 N06: TITLE LIST OF DOCUMENTS MADE PUBLICLY AVAILABLE. June 1-30, 1997.

NUREG-0540 V19 N07: TITLE LIST OF DOCUMENTS MADE PUBLICLY AVAILABLE. July 1-31, 1997.

NUREG-0540 V19 N08: TITLE LIST OF DOCUMENTS MADE PUBLICLY AVAILABLE. August 1-31, 1997.

NUREG-0750 V44 I01: INDEXES TO NUCLEAR REGULATORY COMMISSION ISSUANCES. July-September 1996.

NUREG-0750 V44 I02: INDEXES TO NUCLEAR REGULATORY COMMISSION ISSUANCES. July-December 1996.

NUREG-0750 V44 N05: NUCLEAR REGULATORY COMMISSION ISSUANCES FOR NOVEMBER 1996. Pages 229-314.

NUREG-0750 V44 N06: NUCLEAR REGULATORY COMMISSION ISSUANCES FOR DECEMBER 1996. Pages 315-432.

NUREG-0750 V45 I01: INDEXES TO NUCLEAR REGULATORY COMMISSION ISSUANCES. January-March 1997.

NUREG-0750 V45 I02: INDEXES TO NUCLEAR REGULATORY COMMISSION ISSUANCES. January-June 1997.

NUREG-0750 V45 N01: NUCLEAR REGULATORY COMMISSION ISSUANCES FOR JANUARY 1997. Pages 1-47.

NUREG-0750 V45 N02: NUCLEAR REGULATORY COMMISSION ISSUANCES FOR FEBRUARY 1997. Pages 49-93.

NUREG-0750 V45 N03: NUCLEAR REGULATORY COMMISSION ISSUANCES FOR MARCH 1997. Pages 95-263.

NUREG-0750 V45 N04: NUCLEAR REGULATORY COMMISSION ISSUANCES FOR APRIL 1997. Pages 265-353.

NUREG-0750 V45 N05: NUCLEAR REGULATORY COMMISSION ISSUANCES FOR MAY 1997. Pages 355-435.

NUREG-0750 V45 N06: NUCLEAR REGULATORY COMMISSION ISSUANCES FOR JUNE 1997. Pages 437-495.

NUREG-1145 V13: U.S. NUCLEAR REGULATORY COMMISSION 1996 ANNUAL REPORT.

NUREG-1603 DRFT: INDIVIDUAL PLANT EXAMINATION DATABASE. User's Guide.

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EDO - OFFICE OF NUCLEAR MATERIAL SAFETY & SAFEGUARDS

OFFICE OF NUCLEAR MATERIAL SAFETY & SAFEGUARDS

NUREG-0383 V01 R20: DIRECTORY OF CERTIFICATES OF COMPLIANCE FOR RADIOACTIVE MATERIALS PACKAGES. Report Of NRC-Approved Packages.

NUREG-0383 V02 R20: DIRECTORY OF CERTIFICATES OF COMPLIANCE FOR RADIOACTIVE MATERIALS PACKAGES. Certificates Of Compliance.

NUREG-0383 V03 R17: DIRECTORY OF CERTIFICATES OF COMPLIANCE FOR RADIOACTIVE MATERIALS PACKAGES. Report Of NRC-Approved Quality Assurance Programs For Radioactive Materials Packages.

NUREG-0725 R12: PUBLIC INFORMATION CIRCULAR FOR SHIPMENTS OF IRRADIATED REACTOR FUEL.

NUREG-1536: STANDARD REVIEW PLAN FOR DRY SPENT FUEL STORAGE SYSTEMS. Final Report.

NUREG-1571: INFORMATION HANDBOOK ON INDEPENDENT SPENT FUEL STORAGE INSTALLATIONS.

NUREG-1608 DRFT FC: CATEGORIZING AND TRANSPORTING LOW SPECIFIC ACTIVITY MATERIALS AND SURFACE CONTAMINATED OBJECTS. Draft Rept For Comment.

NUREG-1609 DRFT FC: STANDARD REVIEW PLAN FOR TRANSPORTATION PACKAGES FOR RADIOACTIVE MATERIAL. Draft Report For Comment.

DIVISION OF INDUSTRIAL & MEDICAL NUCLEAR SAFETY (POST 870729)

NUREG-1516: MANAGEMENT OF RADIOACTIVE MATERIAL SAFETY PROGRAMS AT MEDICAL FACILITIES. Final Report.

NUREG-1556 V01: CONSOLIDATED GUIDANCE ABOUT MATERIALS LICENSES. Program-Specific Guidance About Portable Gauge Licenses. Final Report.

NUREG-1556 V2 DRF FC: CONSOLIDATED GUIDANCE ABOUT MATERIALS LICENSES. Program Specific Guidance About Industrial Radiography Licenses. Draft Report For Use And Comment.

NUREG-1556 V3 DRF FC: CONSOLIDATED GUIDANCE ABOUT MATERIALS LICENSES. Applications for Sealed Source And Device Evaluation And Registration. Draft Report For Comment.

NUREG-1556 V4 DRF FC: CONSOLIDATED GUIDANCE ABOUT MATERIALS LICENSES. Program Specific Guidance About Fixed Gauge Licenses. Draft Report For Comment.

NUREG-1556 V5 DRF FC: CONSOLIDATED GUIDANCE ABOUT MATERIALS LICENSES. Program-Specific Guidance About Self-Shielded Irradiator Licenses. Draft Report For Comment.

NUREG-1562 DRFT FC: STANDARD REVIEW PLAN FOR APPLICATIONS FOR LICENSES TO DISTRIBUTE BYPRODUCT MATERIAL TO PERSONS EXEMPT FROM THE REQUIREMENTS FOR AN NRC LICENSE. 10CFR Parts 30.14, 30.15, 30.16, 30.18, 30.19 & 30.20.

DIVISION OF FUEL CYCLE SAFETY & SAFEGUARDS (POST 930207)

NUREG-1601: CHEMICAL PROCESS SAFETY AT FUEL CYCLE FACILITIES.

OPERATIONS BRANCH

NUREG-0525 V02 R05: SAFEGUARDS SUMMARY EVENT LIST (SSEL). January 1, 1990 Through December 31, 1996.

DIVISION OF WASTE MANAGEMENT (NMSS 940403)

NUREG-1508: FINAL ENVIRONMENTAL IMPACT STATEMENT TO CONSTRUCT AND OPERATE THE CROWNPOINT URANIUM SOLUTION MINING PROJECT, CROWNPOINT, NEW MEXICO. Docket No. 40-8968. (Hydro Resources, Inc.)

NUREG-1532: FINAL TECHNICAL EVALUATION REPORT FOR THE PROPOSED REVISED RECLAMATION PLAN FOR THE ATLAS CORPORATION MOAB MILL. Source Material License No. SUA-917. Docket No. 40-3453. (Atlas Corporation)

NUREG-1569 DRFT: DRAFT STANDARD REVIEW PLAN FOR IN SITU LEACH URANIUM EXTRACTION LICENSE APPLICATIONS.

PERFORMANCE ASSESSMENT & HYDROLOGY BRANCH (NMSS 940403)

NUREG/CR-6505 V01: THE POTENTIAL FOR CRITICALITY FOLLOWING DISPOSAL OF URANIUM AT LOW-LEVEL WASTE FACILITIES. Uranium Blended With Soil.

U.S. NUCLEAR REGULATORY COMMISSION

OFFICE OF THE GENERAL COUNSEL (POST 860701)

NUREG-0386 D08: UNITED STATES NUCLEAR REGULATORY COMMISSION STAFF PRACTICE AND PROCEDURE DIGEST. Commission, Appeal Board And Licensing Board Decisions. July 1972 - June 1996.

OFFICE OF THE INSPECTOR GENERAL (POST 890417)

NUREG-1415 V10 N01: OFFICE OF THE INSPECTOR GENERAL. Semiannual Report To Congress. April 1, 1997 - September 30, 1997.

OFFICE OF THE SECRETARY OF THE COMMISSION

NUREG-1610: CONTROLLING THE ATOM. The Beginnings Of Nuclear Regulation, 1946-1962.

NRC - NO DETAILED AFFILIATION GIVEN

NUREG-0325 R22: U.S. NUCLEAR REGULATORY COMMISSION ORGANIZATION CHARTS AND FUNCTIONAL STATEMENTS. November 1997.

NUREG-0540 V19 N09: TITLE LIST OF DOCUMENTS MADE PUBLICLY AVAILABLE. September 1-30, 1997.

NUREG-0540 V19 N10: TITLE LIST OF DOCUMENTS MADE PUBLICLY AVAILABLE. October 1-31, 1997.

NUREG-0750 V46 N01: NUCLEAR REGULATORY COMMISSION ISSUANCES FOR JULY 1997. Pages 1-20.

NUREG-0750 V46 N02: NUCLEAR REGULATORY COMMISSION ISSUANCES FOR AUGUST 1997. Pages 21-48.

NUREG-1614 V01: NRC STRATEGIC PLAN. Fiscal Year 1997 - Fiscal Year 2002.

EDO - OFFICE OF NUCLEAR REGULATORY RESEARCH (POST 820405)

OFFICE OF NUCLEAR REGULATORY RESEARCH (POST 941217)

NUREG-1603 DRFT: INDIVIDUAL PLANT EXAMINATION DATABASE. User's Guide.

DIVISION OF ENGINEERING TECHNOLOGY (POST 941217)

NUREG-1616: FEASIBILITY OF UNDERWATER WELDING OF HIGHLY IRRADIATED IN-VESSEL COMPONENTS OF BOILING WATER REACTORS. A Literature Review.

DIVISION OF REGULATORY APPLICATIONS (POST 941217)

NUREG-0713 V17: OCCUPATIONAL RADIATION EXPOSURE AT COMMERCIAL NUCLEAR POWER REACTORS AND OTHER FACILITIES, 1995. Twenty-Eighth Annual Report.

NUREG-1307 R07: REPORT ON WASTE BURIAL CHARGES. Escalation Of Decommissioning Waste Disposal Costs At Low-Level Waste Burial Facilities.

NUREG-1492: REGULATORY ANALYSIS ON CRITERIA FOR THE RELEASE OF PATIENTS ADMINISTERED RADIOACTIVE MATERIAL. Final Report.

NUREG-1496 V01: FINAL GENERIC ENVIRONMENTAL IMPACT STATEMENT IN SUPPORT OF RULEMAKING ON RADIOLOGICAL CRITERIA FOR LICENSE TERMINATION OF NRC-LICENSED NUCLEAR FACILITIES. Main Report. Final Report.

NUREG-1496 V02: FINAL GENERIC ENVIRONMENTAL IMPACT STATEMENT IN SUPPORT OF RULEMAKING ON RADIOLOGICAL CRITERIA FOR LICENSE TERMINATION OF NRC-LICENSED NUCLEAR FACILITIES. Appendices A And B. Final Report.

NUREG-1496 V03: FINAL GENERIC ENVIRONMENTAL IMPACT STATEMENT IN SUPPORT OF RULEMAKING ON RADIOLOGICAL CRITERIA FOR LICENSE TERMINATION OF NRC-LICENSED NUCLEAR FACILITIES. Appendices C-H. Final Report.

NUREG/CR-4918 V10: CONTROL OF WATER INFILTRATION INTO NEAR SURFACE LOW-LEVEL WASTE DISPOSAL UNITS. Final Report On Field Experiments At A Humid Region Site, Beltsville, Maryland.

DIVISION OF SYSTEMS TECHNOLOGY (POST 941217)

NUREG-1545: EVALUATION CRITERIA FOR COMMUNICATIONS-RELATED CORRECTIVE ACTION PLANS.

NUREG-1602 DRFT FC: THE USE OF PRA IN RISK-INFORMED APPLICATIONS. Draft Rept For Comment.

NUREG/CR-6391: DETONATION CELL SIZE MEASUREMENTS IN HIGH-TEMPERATURE HYDROGEN-AIR-STEAM MIXTURES AT THE BNL HIGH-TEMPERATURE COMBUSTION FACILITY.

NUREG/CR-6525: SECPOP90: SECTOR POPULATION, LAND FRACTION, AND ECONOMIC ESTIMATION PROGRAM.

EDO - OFFICE OF NUCLEAR REACTOR REGULATION (POST 800428)

OFFICE OF NUCLEAR REACTOR REGULATION (POST 941001)

NUREG-0040 V20 N03: LICENSEE CONTRACTOR AND VENDOR INSPECTION STATUS REPORT. Quarterly Report, July-September 1996. (White Book)

NUREG-0040 V20 N04: LICENSEE CONTRACTOR AND VENDOR INSPECTION STATUS REPORT. Quarterly Report, October-December 1996. (White Book)

NUREG-0040 V21 N01: LICENSEE CONTRACTOR AND VENDOR INSPECTION STATUS REPORT. Quarterly Report, January-March 1997. (White Book)

NUREG-0040 V21 N02: LICENSEE CONTRACTOR AND VENDOR INSPECTION STATUS REPORT. Quarterly Report, April-June 1997. (White Book)

NUREG-0040 V21 N03: LICENSEE CONTRACTOR AND VENDOR INSPECTION STATUS REPORT. Quarterly Report, July-September 1997. (White Book)

NUREG-0390 V11: TOPICAL REPORT REVIEW STATUS.

NUREG-1021 INT R08: OPERATOR LICENSING EXAMINATION STANDARDS FOR POWER REACTORS.

NUREG-1462 S01: FINAL SAFETY EVALUATION REPORT RELATED TO THE CERTIFICATION OF THE SYSTEM 80+ DESIGN. Docket No. 52-002. (Asea Brown Boveri-Combustion Engineering)

NUREG-1503 S01: FINAL SAFETY EVALUATION REPORT RELATED TO THE CERTIFICATION OF THE ADVANCED BOILING WATER

REACTOR DESIGN.Supplement No. 1.Docket No. 52-001.(General Electric Nuclear Energy)
 NUREG-1545: EVALUATION CRITERIA FOR COMMUNICATIONS-RELATED CORRECTIVE ACTION PLANS.
 NUREG-1555 DRFT: ENVIRONMENTAL STANDARD REVIEW PLAN.Standard Review Plans For Environmental Reviews For Nuclear Power Plants.
 NUREG-1572: SAFETY EVALUATION REPORT RELATED TO THE RENEWAL OF THE OPERATING LICENSE FOR THE RESEARCH REACTOR AT NORTH CAROLINA STATE UNIVERSITY.
 NUREG-1574: STANDARD REVIEW PLAN ON ANTITRUST REVIEWS.Final Report.
 NUREG-1574 DRFT FC: STANDARD REVIEW PLAN ON ANTITRUST.Draft Report For Comment.
 NUREG-1577 DRFT FC: STANDARD REVIEW PLAN ON POWER REACTOR LICENSEE FINANCIAL QUALIFICATIONS AND DECOMMISSIONING FUNDING ASSURANCE.Draft Report For Comment.

NUREG-1604: CIRCUMFERENTIAL CRACKING OF STEAM GENERATOR TUBES.
 NUREG-1606 DRFT FC: PROPOSED REGULATORY GUIDANCE RELATED TO IMPLEMENTATION OF 10 CFR 50.59 (CHANGES, TESTS, OR EXPERIMENTS).Draft Report For Comment.
 NUREG-1607: SAFETY EVALUATION REPORT RELATED TO THE DEPARTMENT OF ENERGY'S PROPOSAL FOR THE IRRADIATION OF LEAD TEST ASSEMBLIES CONTAINING TRITIUM-PRODUCING BURNABLE ABSORBER RODS IN COMMERCIAL LIGHT-WATER REACTORS.
 NUREG-1611: AGING MANAGEMENT OF NUCLEAR POWER PLANT CONTAINMENTS FOR LICENSE RENEWAL.
 NUREG-1612: STATUS REPORT: REACTOR VESSEL INTEGRITY DATABASE.

NRC Originating Organization Index (International Agreements)

This index lists those NRC organizations that have published international agreement reports. The index is arranged alphabetically by major NRC organizations (e.g., program offices) and then by subsections of these (e.g., divisions, branches) where appropriate. Each entry is followed by a NUREG number and title of the report(s). If further information is needed, refer to the main citation by NUREG number.

There were no NUREG/IA reports published this year.

NRC Contract Sponsor Index (Contractor Reports)

This index lists the NRC organizations that sponsored the contractor reports listed in this compilation. It is arranged alphabetically by major NRC organization (e.g., program office) and then by subsections of these (e.g., divisions) where appropriate. The sponsor organization is followed by the NUREG/CR number and title of the report(s) prepared by that organization. If further information is needed, refer to the main citation by the NUREG/CR number.

EDO - OFFICE FOR ANALYSIS & EVALUATION OF OPERATIONAL

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OFFICE FOR ANALYSIS & EVALUATION OF OPERATIONAL DATA, DIRECTOR
 NUREG/CR-6042 R01: PERSPECTIVES ON REACTOR SAFETY.
 DIVISION OF SAFETY PROGRAMS (POST 870413)
 NUREG/CR-4674 V23: PRECURSORS TO POTENTIAL SEVERE CORE DAMAGE ACCIDENTS: 1995. A Status Report.
 NUREG/CR-4674 V24: PRECURSORS TO POTENTIAL SEVERE CORE DAMAGE ACCIDENTS: 1982-83. A Status Report.
 NUREG/CR-6456: REVIEW OF INDUSTRY EFFORTS TO MANAGE PRESSURIZED WATER REACTOR FEEDWATER NOZZLE, PIPING, AND FEEDING CRACKING AND WALL THINNING.

EDO - OFFICE OF NUCLEAR MATERIAL SAFETY & SAFEGUARDS

OFFICE OF NUCLEAR MATERIAL SAFETY & SAFEGUARDS
 NUREG/CR-0200 R5V1P1: SCALE: A MODULAR CODE SYSTEM FOR PERFORMING STANDARDIZED COMPUTER ANALYSES FOR LICENSING EVALUATION. Control Modules C4, C6.
 NUREG/CR-0200 R5V1P2: SCALE: A MODULAR CODE SYSTEM FOR PERFORMING STANDARDIZED COMPUTER ANALYSES FOR LICENSING EVALUATION. Control Modules S1 - H1.
 NUREG/CR-0200 R5V2P1: SCALE: A MODULAR CODE SYSTEM FOR PERFORMING STANDARDIZED COMPUTER ANALYSES FOR LICENSING EVALUATION. Functional Modules F1 - F8.
 NUREG/CR-0200 R5V2P2: SCALE: A MODULAR CODE SYSTEM FOR PERFORMING STANDARDIZED COMPUTER ANALYSES FOR LICENSING EVALUATION. Functional Modules F9 - F11.
 NUREG/CR-0200 R5V2P3: SCALE: A MODULAR CODE SYSTEM FOR PERFORMING STANDARDIZED COMPUTER ANALYSES FOR LICENSING EVALUATION. Functional Modules F16 - F17.
 NUREG/CR-0200 R5V3: SCALE: A MODULAR CODE SYSTEM FOR PERFORMING STANDARDIZED COMPUTER ANALYSES FOR LICENSING EVALUATION. Miscellaneous.
 NUREG/CR-5661: RECOMMENDATIONS FOR PREPARING THE CRITICALITY SAFETY EVALUATION OF TRANSPORTATION PACKAGES.
 NUREG/CR-6361: CRITICALITY BENCHMARK GUIDE FOR LIGHT-WATER-REACTOR FUEL IN TRANSPORTATION AND STORAGE PACKAGES.
 DIVISION OF INDUSTRIAL & MEDICAL NUCLEAR SAFETY (POST 870729)
 NUREG/CR-6074 V03: SEALED SOURCE AND DEVICE DESIGN SAFETY TESTING. Technical Report On The Findings Of Task 4. Investigation Of A Failed Brachytherapy Needle Applicator.
 NUREG/CR-6528: ENVIRONMENTAL ASSESSMENT PROPOSED LICENSE RENEWAL OF NUCLEAR METALS, INC. CONCORD, MASSACHUSETTS.
 DIVISION OF FUEL CYCLE SAFETY & SAFEGUARDS (POST 930207)
 NUREG/CR-6481 V01: REVIEW OF MODELS USED FOR DETERMINING CONSEQUENCES OF UF(6) RELEASE. Development Of Model Evaluation Criteria.
 NUREG/CR-6481 V02: REVIEW OF MODELS USED FOR DETERMINING CONSEQUENCES OF UF(6) RELEASE. Model Evaluation Report.
 DIVISION OF WASTE MANAGEMENT (NMSS 940403)
 NUREG/CR-6505 V01: THE POTENTIAL FOR CRITICALITY FOLLOWING DISPOSAL OF URANIUM AT LOW-LEVEL WASTE FACILITIES. Uranium Blended With Soil.
 NUREG/CR-6513 N01: NRC HIGH-LEVEL RADIOACTIVE WASTE MANAGEMENT PROGRAM ANNUAL PROGRESS REPORT: FISCAL YEAR 1996.

EDO - OFFICE OF NUCLEAR REGULATORY RESEARCH (POST 820405)

OFFICE OF NUCLEAR REGULATORY RESEARCH (860720-941217)
 NUREG/CR-6530: DELIBERATE IGNITION OF HYDROGEN-AIR-STEAM MIXTURES IN CONDENSING STEAM ENVIRONMENTS.

DIVISION OF REGULATORY APPLICATIONS (870413-941217)
 NUREG/CR-6037: MEASUREMENT OF RESIDUAL RADIOACTIVE SURFACE CONTAMINATION BY 2-D LASER HEATED TLD.
 DIVISION OF ENGINEERING TECHNOLOGY (POST 941217)
 NUREG/CR-4219 V12 N2: HEAVY-SECTION STEEL TECHNOLOGY PROGRAM. Semiannual Progress Report For April 1995 Through September 1995.
 NUREG/CR-4219 V13 N1: HEAVY-SECTION STEEL TECHNOLOGY PROGRAM. Semiannual Progress Report For October 1995 - March 1996.
 NUREG/CR-4667 V22: ENVIRONMENTALLY ASSISTED CRACKING IN LIGHT WATER REACTORS. Semiannual Report, January 1996 - June 1996.
 NUREG/CR-4667 V23: ENVIRONMENTALLY ASSISTED CRACKING IN LIGHT WATER REACTORS. Semiannual Report, July-December 1996.
 NUREG/CR-5591 V07 N1: HEAVY-SECTION STEEL IRRADIATION PROGRAM. Semiannual Progress Report For October 1995 Through March 1996.
 NUREG/CR-5591 V07 N2: HEAVY-SECTION STEEL IRRADIATION PROGRAM. Semiannual Progress Report For April Through September 1996.
 NUREG/CR-6181 R01: A PILOT APPLICATION OF RISK-INFORMED METHODS TO ESTABLISH INSERVICE INSPECTION PRIORITIES FOR NUCLEAR COMPONENTS AT SURRY UNIT 1 NUCLEAR POWER STATION.
 NUREG/CR-6233 V02: STABILITY OF CRACKED PIPE UNDER SEISMIC/DYNAMIC DISPLACEMENT-CONTROLLED STRESSES. Subtask 1.2 Final Report.
 NUREG/CR-6233 V03: CRACK STABILITY IN A REPRESENTATIVE PIPING SYSTEM UNDER COMBINED INERTIAL AND SEISMIC/DYNAMIC DISPLACEMENT-CONTROLLED STRESSES. Subtask 1.3 Final Report.
 NUREG/CR-6233 V04: INTERNATIONAL PIPING INTEGRITY RESEARCH PROGRAM (IPIRG) PROGRAM. Program Final Report.
 NUREG/CR-6363: EFFECTS OF THERMAL AGING AND NEUTRON IRRADIATION ON THE MECHANICAL PROPERTIES OF THREE-WIRE STAINLESS STEEL WELD OVERLAY CLADDING.
 NUREG/CR-6370: BLOCKAGE 2.5 USER'S MANUAL.
 NUREG/CR-6371: BLOCKAGE 2.5 REFERENCE MANUAL.
 NUREG/CR-6372 V01: RECOMMENDATIONS FOR PROBABILISTIC SEISMIC HAZARD ANALYSIS: GUIDANCE ON UNCERTAINTY AND USE OF EXPERTS. Main Report.
 NUREG/CR-6372 V02: RECOMMENDATIONS FOR PROBABILISTIC SEISMIC HAZARD ANALYSIS: GUIDANCE ON UNCERTAINTY AND USE OF EXPERTS. Appendices.
 NUREG/CR-6379: AN IMPROVED CORRELATION PROCEDURE FOR SUBSIZE AND FULL-SIZE CHARPY IMPACT SPECIMEN DATA.
 NUREG/CR-6389: IPIRG-2 TASK 1 - PIPE SYSTEM EXPERIMENTS WITH CIRCUMFERENTIAL CRACKS IN STRAIGHT-PIPE LOCATIONS. Final Report. September 1991 - November 1995.
 NUREG/CR-6399: RESULTS OF CHARPY V-NOTCH IMPACT TESTING OF STRUCTURAL STEEL SPECIMENS IRRADIATED AT 30 DEGREES C TO 1 X 10¹⁶ NEUTRONS/CM² IN A COMMERCIAL REACTOR CAVITY.
 NUREG/CR-6426 V01: DUCTILE FRACTURE TOUGHNESS OF MODIFIED A 302 GRADE B PLATE MATERIALS. DATA ANALYSIS.
 NUREG/CR-6426 V02: DUCTILE FRACTURE TOUGHNESS OF MODIFIED A 302 GRADE B PLATE MATERIALS. Data Records.
 NUREG/CR-6433: CONTAINMENT PERFORMANCE OF PROTOTYPICAL REACTOR CONTAINMENTS SUBJECTED TO SEVERE ACCIDENT CONDITIONS.
 NUREG/CR-6446: FRACTURE TOUGHNESS EVALUATIONS OF TP304 STAINLESS STEEL PIPES.
 NUREG/CR-6448 V02: EVALUATION OF NATIONAL SEISMOGRAPH NETWORK DETECTION CAPABILITIES. Final Report.

- NUREG/CR-6452: THE SECOND INTERNATIONAL PIPING INTEGRITY RESEARCH GROUP (PIRG-2) PROGRAM.Final Report.
- NUREG/CR-6454: POOL CRITICAL ASSEMBLY PRESSURE VESSEL FACILITY BENCHMARK.
- NUREG/CR-6464: AN EVALUATION OF METHODOLOGY FOR SEISMIC QUALIFICATION OF EQUIPMENT,CABLE TRAYS, AND DUCTS IN ALWR PLANTS BY USE OF EXPERIENCE DATA.
- NUREG/CR-6478: MOTOR-OPERATED VALVE (MOV) ACTUATOR MOTOR AND GEARBOX TESTING.
- NUREG/CR-6486: ASSESSMENT OF MODULAR CONSTRUCTION FOR SAFETY-RELATED STRUCTURES AT ADVANCED NUCLEAR POWER PLANTS.
- NUREG/CR-6506: EMBRITTLEMENT DATA BASE, VERSION 1.
- NUREG/CR-6508: COMPONENT UNAVAILABILITY VERSUS INSERVICE TEST (IST) INTERVAL:EVALUATIONS OF COMPONENT AGING EFFECTS WITH APPLICATIONS TO CHECK VALVES.
- NUREG/CR-6511 V01: STEAM GENERATOR TUBE INTEGRITY PROGRAM.Semiannual Report, August 1995 - March 1996.
- NUREG/CR-6529: VALIDATION OF TECTONIC MODELS FOR AN INTRAPLATE SEISMIC ZONE,CHARLESTON,SOUTH CAROLINA WITH GPS GEODETIC DATA.
- NUREG/CR-6538: EVALUATION OF LOCA WITH DELAYED LOOP AND LOOP WITH DELAYED LOCA ACCIDENT SCENARIOS.
- NUREG/CR-6539: EFFECTS OF FLUORIDE AND OTHER HALOGEN IONS ON THE EXTERNAL STRESS CORROSION CRACKING OF TYPE 304 AUSTENITIC STAINLESS STEEL.
- NUREG/CR-6557: DEVELOPMENT OF THE MAGNESCOPE AS AN INSTRUMENT FOR IN SITU EVALUATION OF STEEL COMPONENTS OF NUCLEAR SYSTEMS.
- NUREG/CR-6563: LG EXCITATION, ATTENUATION, AND SOURCE SPECTRAL SCALING IN CENTRAL AND EASTERN NORTH AMERICA.
- NUREG/CR-6586: HORIZONTAL VELOCITIES IN THE CENTRAL AND EASTERN UNITED STATES FROM GPS SURVEYS DURING THE 1987-1996 INTERVAL.
- DIVISION OF REGULATORY APPLICATIONS (POST 941217)
- NUREG/CR-4012 V04: REPLACEMENT ENERGY COSTS FOR NUCLEAR ELECTRICITY-GENERATING UNITS IN THE UNITED STATES: 1997-2001.
- NUREG/CR-4409 V06: DATA BASE ON DOSE REDUCTION PROJECTS FOR NUCLEAR POWER PLANTS.
- NUREG/CR-4918 V10: CONTROL OF WATER INFILTRATION INTO NEAR SURFACE LOW-LEVEL WASTE DISPOSAL UNITS.Final Report On Field Experiments At A Humid Region Site,Beltsville,Maryland.
- NUREG/CR-5229 V09: FIELD LYSIMETER INVESTIGATIONS: LOW-LEVEL WASTE DATA BASE DEVELOPMENT PROGRAM FOR FISCAL YEAR 1996.Annual Report.
- NUREG/CR-6397: RADIATION SAFETY CONCERNS FOR PREGNANT OR BREAST-FEEDING PATIENTS.The Positions Of The NCRP And The ICRP.
- NUREG/CR-6404: AN EXPERIMENTAL SCALE-MODEL STUDY OF SEISMIC RESPONSE OF AN UNDERGROUND OPENING IN JOINTED ROCK MASS.
- NUREG/CR-6437: FLOW AND TRANSPORT AT THE LAS CRUCES TRENCH SITE: EXPERIMENT IIB.
- NUREG/CR-6451: A SAFETY AND REGULATORY ASSESSMENT OF GENERIC BWR AND PWR PERMANENTLY SHUTDOWN NUCLEAR POWER PLANTS.
- NUREG/CR-6459: FIELD STUDIES AT THE APACHE LEAP RESEARCH SITE IN SUPPORT OF ALTERNATIVE CONCEPTUAL MODELS.
- NUREG/CR-6493: DOSES TO THE HAND DURING THE ADMINISTRATION OF RADIOLABELED ANTIBODIES CONTAINING Y-90,TC-99M,I-131, AND LU-177.
- NUREG/CR-6497: DATA COLLECTION AND FIELD EXPERIMENTS AT THE APACHE LEAP RESEARCH SITE.May 1995 - 1996.
- NUREG/CR-6504 V01: AN UPDATED NUCLEAR CRITICALITY SLIDE RULE.Technical Basis.
- NUREG/CR-6514: ANALYSIS OF POTENTIAL SELF-GUARANTEE TESTS FOR DEMONSTRATING FINANCIAL ASSURANCE BY NON-PROFIT COLLEGES, UNIVERSITIES, AND HOSPITALS AND BY BUSINESS FIRMS THAT DO NOT ISSUE BONDS.
- NUREG/CR-6515: BLT-EC (BREACH, LEACH, AND TRANSPORT-EQUILIBRIUM CHEMISTRY) DATA INPUT GUIDE.A Computer Model For Simulating Release And Coupled Geochemical Transport Of Contaminants From A Subsurface Disposal Facility.
- NUREG/CR-6531: EFFECTS OF RADIOACTIVE HOT PARTICLES ON PIG SKIN.
- NUREG/CR-6535: DEVELOPMENT OF CONFORMAL RESPIRATOR MONITORING TECHNOLOGY.
- NUREG/CR-6565: UNCERTAINTY ANALYSES OF INFILTRATION AND SUBSURFACE FLOW AND TRANSPORT FOR SDMP SITES.
- NUREG/CR-6566: DESCRIPTION OF MULTIMEDIA ENVIRONMENTAL POLLUTANT ASSESSMENT SYSTEM (MEPAS) VERSION 3.2 MODIFICATION FOR THE NUCLEAR REGULATORY COMMISSION.
- NUREG/CR-6581: CONSIDERATIONS IN THE APPLICATION OF THE ELECTRONIC DOSIMETER TO DOSE OF RECORD.
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- NUREG/CR-6153: A SIMPLIFIED MODEL OF DECONTAMINATION BY BWR STEAM SUPPRESSION POOLS.
- NUREG/CR-6167: LATE-PHASE MELT PROGRESSION EXPERIMENT MP-2.Results And Analysis.
- NUREG/CR-6295: REASSESSMENT OF SELECTED FACTORS AFFECTING SITING OF NUCLEAR POWER PLANTS.
- NUREG/CR-6391: DETONATION CELL SIZE MEASUREMENTS IN HIGH-TEMPERATURE HYDROGEN-AIR-STEAM MIXTURES AT THE BNL HIGH-TEMPERATURE COMBUSTION FACILITY.
- NUREG/CR-6463 R01: REVIEW GUIDELINES FOR SOFTWARE LANGUAGES FOR USE IN NUCLEAR POWER PLANT SAFETY SYSTEMS.Final Report.
- NUREG/CR-6469: EXPERIMENTS TO INVESTIGATE DIRECT CONTAINMENT HEATING PHENOMENA WITH SCALED MODELS OF THE CALVERT CLIFFS NUCLEAR POWER PLANT.
- NUREG/CR-6474: PRELIMINARY PHENOMENA IDENTIFICATION AND RANKING TABLES (PIRT) FOR SBWR STARTUP STABILITY.
- NUREG/CR-6507: CRITICAL HEAT FLUX (CHF) PHENOMENON ON A DOWNWARD FACING CURVED SURFACE.
- NUREG/CR-6519: SCREENING REACTOR STEAM/WATER PIPING SYSTEMS FOR WATER HAMMER.
- NUREG/CR-6523 V01: PROBABILISTIC ACCIDENT CONSEQUENCE UNCERTAINTY ANALYSIS.Food Chain Uncertainty Assessment.Main Report.
- NUREG/CR-6523 V02: PROBABILISTIC ACCIDENT CONSEQUENCE UNCERTAINTY ANALYSIS. Food Chain Uncertainty Assessment.Appendices.
- NUREG/CR-6525: SECPOP90: SECTOR POPULATION, LAND FRAGMENTATION, AND ECONOMIC ESTIMATION PROGRAM.
- NUREG/CR-6526 V01: PROBABILISTIC ACCIDENT CONSEQUENCE UNCERTAINTY ANALYSIS. Uncertainty Assessment For Deposited Material And External Doses.Main Report.
- NUREG/CR-6526 V02: PROBABILISTIC ACCIDENT CONSEQUENCE UNCERTAINTY ANALYSIS. UNCERTAINTY ASSESSMENT FOR DEPOSITED MATERIAL AND EXTERNAL DOSES.Appendices.
- NUREG/CR-6527: FINAL RESULTS OF THE XR2-1 BWR METALLIC MELT RELOCATION EXPERIMENT.
- NUREG/CR-6533: CODE MANUAL FOR CONTAIN 2.0: A COMPUTER CODE FOR NUCLEAR REACTOR CONTAINMENT ANALYSIS.
- NUREG/CR-6534 V01: FRAPCON-3: MODIFICATIONS TO FUEL ROD MATERIAL PROPERTIES AND PERFORMANCE MODELS FOR HIGH-BURNUP APPLICATION.
- NUREG/CR-6541 R02: PHENOMENA IDENTIFICATION AND RANKING TABLES FOR WESTINGHOUSE AP600 SMALL BREAK LOSS-OF-COOLANT ACCIDENT, MAIN STEAM LINE BREAK, AND STEAM GENERATOR TUBE RUPTURE SCENARIOS.
- NUREG/CR-6543: EFFECTS OF SMOKE ON FUNCTIONAL CIRCUITS.
- NUREG/CR-6547: DOSFAC2 USER'S GUIDE.
- EDO - OFFICE OF NUCLEAR REACTOR REGULATION (POST 800428)**
- OFFICE OF NUCLEAR REACTOR REGULATION (POST 941001)
- NUREG/CR-6331 R01: ATMOSPHERIC RELATIVE CONCENTRATIONS IN BUILDING WAKES.
- NUREG/CR-6393: INTEGRATED SYSTEM VALIDATION: METHODOLOGY AND REVIEW CRITERIA.
- NUREG/CR-6400: HUMAN FACTORS ENGINEERING (HFE) INSIGHTS FOR ADVANCED REACTORS BASED UPON OPERATING EXPERIENCE.
- NUREG/CR-6414: PIPING BENCHMARK PROBLEMS FOR THE WESTINGHOUSE AP600 STANDARDIZED PLANT.
- NUREG/CR-6558: NRC ANTITRUST LICENSING ACTIONS, 1978-1996.

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This index lists, in alphabetical order, the contractors that prepared the NUREG/CR reports listed in this compilation. Listed below each contractor are the NUREG/CR numbers and titles of their reports. If further information is needed, refer to the main citation by the NUREG/CR number.

AEA TECHNOLOGY

- NUREG/CR-6526 V01: PROBABILISTIC ACCIDENT CONSEQUENCE UNCERTAINTY ANALYSIS. Uncertainty Assessment For Deposited Material And External Doses.Main Report.
- NUREG/CR-6526 V02: PROBABILISTIC ACCIDENT CONSEQUENCE UNCERTAINTY ANALYSIS. UNCERTAINTY ASSESSMENT FOR DEPOSITED MATERIAL AND EXTERNAL DOSES.Appendices.

ARGONNE NATIONAL LABORATORY

- NUREG/CP-0154: PROCEEDINGS OF THE CNRA/CSNI WORKSHOP ON STEAM GENERATOR TUBE INTEGRITY IN NUCLEAR POWER PLANTS.
- NUREG/CR-4012 V04: REPLACEMENT ENERGY COSTS FOR NUCLEAR ELECTRICITY-GENERATING UNITS IN THE UNITED STATES: 1997-2001.
- NUREG/CR-4667 V22: ENVIRONMENTALLY ASSISTED CRACKING IN LIGHT WATER REACTORS. Semiannual Report,January 1996 - June 1996.
- NUREG/CR-4667 V23: ENVIRONMENTALLY ASSISTED CRACKING IN LIGHT WATER REACTORS. Semiannual Report,July-December 1996.
- NUREG/CR-5229 V09: FIELD LYSIMETER INVESTIGATIONS: LOW-LEVEL WASTE DATA BASE DEVELOPMENT PROGRAM FOR FISCAL YEAR 1996.Annual Report.
- NUREG/CR-6511 V01: STEAM GENERATOR TUBE INTEGRITY PROGRAM.Semiannual Report, August 1995 - March 1996.

ARIZONA, UNIV. OF, TUCSON, AZ

- NUREG/CR-6437: FLOW AND TRANSPORT AT THE LAS CRUCES TRENCH SITE: EXPERIMENT IIB.
- NUREG/CR-6459: FIELD STUDIES AT THE APACHE LEAP RESEARCH SITE IN SUPPORT OF ALTERNATIVE CONCEPTUAL MODELS.
- NUREG/CR-6497: DATA COLLECTION AND FIELD EXPERIMENTS AT THE APACHE LEAP RESEARCH SITE.May 1995 - 1996.

BATTELLE MEMORIAL INSTITUTE, COLUMBUS LABORATORIES

- NUREG/CR-4667 V23: ENVIRONMENTALLY ASSISTED CRACKING IN LIGHT WATER REACTORS. Semiannual Report,July-December 1996.
- NUREG/CR-6233 V02: STABILITY OF CRACKED PIPE UNDER SEISMIC/DYNAMIC DISPLACEMENT-CONTROLLED STRESSES.Subtask 1.2 Final Report.
- NUREG/CR-6233 V03: CRACK STABILITY IN A REPRESENTATIVE PIPING SYSTEM UNDER COMBINED INERTIAL AND SEISMIC/DYNAMIC DISPLACEMENT-CONTROLLED STRESSES.Subtask 1.3 Final Report.
- NUREG/CR-6233 V04: INTERNATIONAL PIPING INTEGRITY RESEARCH PROGRAM (IPIRG) PROGRAM.Final Report.
- NUREG/CR-6389: IPIRG-2 TASK 1 - PIPE SYSTEM EXPERIMENTS WITH CIRCUMFERENTIAL CRACKS IN STRAIGHT-PIPE LOCATIONS.Final Report.September 1991 - November 1995.
- NUREG/CR-6446: FRACTURE TOUGHNESS EVALUATIONS OF TP304 STAINLESS STEEL PIPES.
- NUREG/CR-6452: THE SECOND INTERNATIONAL PIPING INTEGRITY RESEARCH GROUP (IPIRG-2) PROGRAM.Final Report.

BATTELLE MEMORIAL INSTITUTE, PACIFIC NORTHWEST NATIONAL LABORATORY

- NUREG/CR-6181 R01: A PILOT APPLICATION OF RISK-INFORMED METHODS TO ESTABLISH INSERVICE INSPECTION PRIORITIES FOR NUCLEAR COMPONENTS AT SURRY UNIT 1 NUCLEAR POWER STATION.
- NUREG/CR-6331 R01: ATMOSPHERIC RELATIVE CONCENTRATIONS IN BUILDING WAKES.
- NUREG/CR-6534 V01: FRAPCON-3: MODIFICATIONS TO FUEL ROD MATERIAL PROPERTIES AND PERFORMANCE MODELS FOR HIGH-BURNUP APPLICATION.
- NUREG/CR-6565: UNCERTAINTY ANALYSES OF INFILTRATION AND SUBSURFACE FLOW AND TRANSPORT FOR SDMP SITES.
- NUREG/CR-6566: DESCRIPTION OF MULTIMEDIA ENVIRONMENTAL POLLUTANT ASSESSMENT SYSTEM (MEPAS) VERSION 3.2 MODIFICATION FOR THE NUCLEAR REGULATORY COMMISSION.

BROOKHAVEN NATIONAL LABORATORY

- NUREG-1603 DRFT: INDIVIDUAL PLANT EXAMINATION DATABASE.User's Guide.
- NUREG/CP-0157 V01: PROCEEDINGS OF THE TWENTY-FOURTH WATER REACTOR SAFETY INFORMATION MEETING.Plenary Session, High Burnup Fuel, Containment And Structural Aging.
- NUREG/CP-0157 V02: PROCEEDINGS OF THE TWENTY-FOURTH WATER REACTOR SAFETY INFORMATION MEETING.Reactor Pressure Vessel Embrittlement And Thermal Annealing,Reactor Vessel Lower Head Integrity And Evaluation And Projection of Steam Generator tube....
- NUREG/CP-0157 V03: PROCEEDINGS OF THE TWENTY-FOURTH WATER REACTOR SAFETY INFORMATION MEETING.PRA And HRA, And Probabilistic Seismic Hazard Assessment And Seismic Siting Criteria.
- NUREG/CP-0161: TRANSACTIONS OF THE TWENTY-FIFTH WATER REACTOR SAFETY INFORMATION MEETING.
- NUREG/CR-4409 V06: DATA BASE ON DOSE REDUCTION PROJECTS FOR NUCLEAR POWER PLANTS.
- NUREG/CR-5229 V09: FIELD LYSIMETER INVESTIGATIONS: LOW-LEVEL WASTE DATA BASE DEVELOPMENT PROGRAM FOR FISCAL YEAR 1996.Annual Report.
- NUREG/CR-6295: REASSESSMENT OF SELECTED FACTORS AFFECTING SITING OF NUCLEAR POWER PLANTS.
- NUREG/CR-6391: DETONATION CELL SIZE MEASUREMENTS IN HIGH-TEMPERATURE HYDROGEN-AIR-STEAM MIXTURES AT THE BNL HIGH-TEMPERATURE COMBUSTION FACILITY.
- NUREG/CR-6393: INTEGRATED SYSTEM VALIDATION: METHODOLOGY AND REVIEW CRITERIA.
- NUREG/CR-6397: RADIATION SAFETY CONCERNS FOR PREGNANT OR BREAST-FEEDING PATIENTS.The Positions Of The NCRP And The ICRP.
- NUREG/CR-6400: HUMAN FACTORS ENGINEERING (HFE) INSIGHTS FOR ADVANCED REACTORS BASED UPON OPERATING EXPERIENCE.
- NUREG/CR-6414: PIPING BENCHMARK PROBLEMS FOR THE WESTINGHOUSE AP600 STANDARDIZED PLANT.
- NUREG/CR-6451: A SAFETY AND REGULATORY ASSESSMENT OF GENERIC BWR AND PWR PERMANENTLY SHUTDOWN NUCLEAR POWER PLANTS.
- NUREG/CR-6464: AN EVALUATION OF METHODOLOGY FOR SEISMIC QUALIFICATION OF EQUIPMENT,CABLE TRAYS, AND DUCTS IN ALWR PLANTS BY USE OF EXPERIENCE DATA.
- NUREG/CR-6474: PRELIMINARY PHENOMENA IDENTIFICATION AND RANKING TABLES (PIRT) FOR SBWR STARTUP STABILITY.
- NUREG/CR-6486: ASSESSMENT OF MODULAR CONSTRUCTION FOR SAFETY-RELATED STRUCTURES AT ADVANCED NUCLEAR POWER PLANTS.
- NUREG/CR-6493: DOSES TO THE HAND DURING THE ADMINISTRATION OF RADIOLABELED ANTIBODIES CONTAINING Y-90,TC-99M,I-131, AND LU-177.
- NUREG/CR-6515: BLT-EC (BREACH, LEACH, AND TRANSPORT-EQUILIBRIUM CHEMISTRY) DATA INPUT GUIDE.A Computer Model For Simulating Release And Coupled Geochemical Transport Of Contaminants From A Subsurface Disposal Facility.
- NUREG/CR-6531: EFFECTS OF RADIOACTIVE HOT PARTICLES ON PIG SKIN.
- NUREG/CR-6538: EVALUATION OF LOCA WITH DELAYED LOOP AND LOOP WITH DELAYED LOCA ACCIDENT SCENARIOS.

CALIFORNIA, UNIV. OF, LOS ANGELES, CA

- NUREG/CR-4918 V10: CONTROL OF WATER INFILTRATION INTO NEAR SURFACE LOW-LEVEL WASTE DISPOSAL UNITS.Final Report On Field Experiments At A Humid Region Site,Beltsville,Maryland.

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CENTER FOR NUCLEAR WASTE REGULATORY ANALYSES

NUREG/CR-6404: AN EXPERIMENTAL SCALE-MODEL STUDY OF SEISMIC RESPONSE OF AN UNDERGROUND OPENING IN JOINTED ROCK MASS.
NUREG/CR-6513 N01: NRC HIGH-LEVEL RADIOACTIVE WASTE MANAGEMENT PROGRAM ANNUAL PROGRESS REPORT: FISCAL YEAR 1996.

COMMERCE, DEPT. OF, NATIONAL OCEANIC & ATMOSPHERIC ADMINISTRATION

NUREG/CR-6586: HORIZONTAL VELOCITIES IN THE CENTRAL AND EASTERN UNITED STATES FROM GPS SURVEYS DURING THE 1987-1996 INTERVAL.

DELFT UNIVERSITY OF TECHNOLOGY

NUREG/CR-6523 V01: PROBABILISTIC ACCIDENT CONSEQUENCE UNCERTAINTY ANALYSIS. Food Chain Uncertainty Assessment. Main Report.
NUREG/CR-6523 V02: PROBABILISTIC ACCIDENT CONSEQUENCE UNCERTAINTY ANALYSIS. Food Chain Uncertainty Assessment. Appendices.

ECODYNAMICS RESEARCH ASSOCIATES, INC.,

NUREG/CR-6515: BLT-EC (BREACH, LEACH, AND TRANSPORT-EQUILIBRIUM CHEMISTRY) DATA INPUT GUIDE. A Computer Model For Simulating Release And Coupled Geochemical Transport Of Contaminants From A Subsurface Disposal Facility.

EQE ENGINEERING CONSULTANTS (FORMERLY EQE ENGINEERING, INC.)

NUREG/CR-6433: CONTAINMENT PERFORMANCE OF PROTOTYPICAL REACTOR CONTAINMENTS SUBJECTED TO SEVERE ACCIDENT CONDITIONS.

EVANSVILLE, UNIV. OF, EVANSVILLE, IN

NUREG/CR-6530: DELIBERATE IGNITION OF HYDROGEN-AIR-STEAM MIXTURES IN CONDENSING STEAM ENVIRONMENTS.

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NUREG/CP-0155: PROCEEDINGS OF THE SEMINAR ON LEAK BEFORE BREAK IN REACTOR PIPING AND VESSELS.

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NUREG/CP-0155: PROCEEDINGS OF THE SEMINAR ON LEAK BEFORE BREAK IN REACTOR PIPING AND VESSELS.

GRAM, INC.

NUREG/CR-6525: SECPOP90: SECTOR POPULATION, LAND FRACTION, AND ECONOMIC ESTIMATION PROGRAM.

HARVARD SCHOOL OF PUBLIC HEALTH, BOSTON, MA

NUREG/CP-0153: PROCEEDINGS OF THE 24TH DOE/NRC NUCLEAR AIR CLEANING AND TREATMENT CONFERENCE. Held in Portland, Oregon, July 15-18, 1996.

HAWAII, UNIV. OF, HILO, HI

NUREG/CR-6523 V01: PROBABILISTIC ACCIDENT CONSEQUENCE UNCERTAINTY ANALYSIS. Food Chain Uncertainty Assessment. Main Report.
NUREG/CR-6523 V02: PROBABILISTIC ACCIDENT CONSEQUENCE UNCERTAINTY ANALYSIS. Food Chain Uncertainty Assessment. Appendices.
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NUREG/CR-6514: ANALYSIS OF POTENTIAL SELF-GUARANTEE TESTS FOR DEMONSTRATING FINANCIAL ASSURANCE BY NON-PROFIT COLLEGES, UNIVERSITIES, AND HOSPITALS AND BY BUSINESS FIRMS THAT DO NOT ISSUE BONDS.

IDAHO NATIONAL ENGINEERING & ENVIRONMENTAL LABORATORY

NUREG/CR-5229 V09: FIELD LYSIMETER INVESTIGATIONS: LOW-LEVEL WASTE DATA BASE DEVELOPMENT PROGRAM FOR FISCAL YEAR 1996. Annual Report.
NUREG/CR-6456: REVIEW OF INDUSTRY EFFORTS TO MANAGE PRESSURIZED WATER REACTOR FEEDWATER NOZZLE, PIPING, AND FEEDING CRACKING AND WALL THINNING.
NUREG/CR-6478: MOTOR-OPERATED VALVE (MOV) ACTUATOR MOTOR AND GEARBOX TESTING.
NUREG/CR-6523 V01: PROBABILISTIC ACCIDENT CONSEQUENCE UNCERTAINTY ANALYSIS. Food Chain Uncertainty Assessment. Main Report.

NUREG/CR-6523 V02: PROBABILISTIC ACCIDENT CONSEQUENCE UNCERTAINTY ANALYSIS. Food Chain Uncertainty Assessment. Appendices.

NUREG/CR-6541 R02: PHENOMENA IDENTIFICATION AND RANKING TABLES FOR WESTINGHOUSE AP600 SMALL BREAK LOSS-OF-COOLANT ACCIDENT, MAIN STEAM LINE BREAK, AND STEAM GENERATOR TUBE RUPTURE SCENARIOS.

ILLINOIS, STATE OF

NUREG-1516: MANAGEMENT OF RADIOACTIVE MATERIAL SAFETY PROGRAMS AT MEDICAL FACILITIES. Final Report.

IOWA STATE UNIV., AMES, IA

NUREG/CR-6557: DEVELOPMENT OF THE MAGNESCOPE AS AN INSTRUMENT FOR IN SITU EVALUATION OF STEEL COMPONENTS OF NUCLEAR SYSTEMS.

KEITHLEY INSTRUMENTS, INC.

NUREG/CR-6037: MEASUREMENT OF RESIDUAL RADIOACTIVE SURFACE CONTAMINATION BY 2-D LASER HEATED TLD.

LAWRENCE LIVERMORE NATIONAL LABORATORY

NUREG/CR-6372 V01: RECOMMENDATIONS FOR PROBABILISTIC SEISMIC HAZARD ANALYSIS: GUIDANCE ON UNCERTAINTY AND USE OF EXPERTS. Main Report.
NUREG/CR-6372 V02: RECOMMENDATIONS FOR PROBABILISTIC SEISMIC HAZARD ANALYSIS: GUIDANCE ON UNCERTAINTY AND USE OF EXPERTS. Appendices.

LOMA LINDA UNIV., LOMA LINDA, CA

NUREG/CR-6531: EFFECTS OF RADIOACTIVE HOT PARTICLES ON PIG SKIN.

MARYLAND, UNIV. OF, COLLEGE PARK, MD

NUREG/CR-4918 V10: CONTROL OF WATER INFILTRATION INTO NEAR SURFACE LOW-LEVEL WASTE DISPOSAL UNITS. Final Report On Field Experiments At A Humid Region Site, Beltsville, Maryland.

MASSACHUSETTS INSTITUTE OF TECHNOLOGY, CAMBRIDGE, MA

NUREG/CR-6519: SCREENING REACTOR STEAM/WATER PIPING SYSTEMS FOR WATER HAMMER.

MINNESOTA, UNIV. OF, MINNEAPOLIS, MN

NUREG/CR-6493: DOSES TO THE HAND DURING THE ADMINISTRATION OF RADIOLABELED ANTIBODIES CONTAINING Y-90, TC-99m, I-131, AND LU-177.

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NUREG/CR-6526 V01: PROBABILISTIC ACCIDENT CONSEQUENCE UNCERTAINTY ANALYSIS. Uncertainty Assessment For Deposited Material And External Doses. Main Report.
NUREG/CR-6526 V02: PROBABILISTIC ACCIDENT CONSEQUENCE UNCERTAINTY ANALYSIS. UNCERTAINTY ASSESSMENT FOR DEPOSITED MATERIAL AND EXTERNAL DOSES. Appendices.

NEW MEXICO STATE UNIV., LAS CRUCES, NM

NUREG/CR-6437: FLOW AND TRANSPORT AT THE LAS CRUCES TRENCH SITE: EXPERIMENT IIB.

NEW MEXICO, UNIV. OF, ALBUQUERQUE, NM

NUREG/CR-6042 R01: PERSPECTIVES ON REACTOR SAFETY.
NUREG/CR-6523 V01: PROBABILISTIC ACCIDENT CONSEQUENCE UNCERTAINTY ANALYSIS. Food Chain Uncertainty Assessment. Main Report.
NUREG/CR-6523 V02: PROBABILISTIC ACCIDENT CONSEQUENCE UNCERTAINTY ANALYSIS. Food Chain Uncertainty Assessment. Appendices.

NORTH CAROLINA, STATE OF

NUREG-1556 V01: CONSOLIDATED GUIDANCE ABOUT MATERIALS LICENSES. Program-Specific Guidance About Portable Gauge Licenses. Final Report.

NUCLEAR POWER ENGINEERING CORP.

NUREG/CR-6391: DETONATION CELL SIZE MEASUREMENTS IN HIGH-TEMPERATURE HYDROGEN-AIR-STEAM MIXTURES AT THE BNL HIGH-TEMPERATURE COMBUSTION FACILITY.

OAK RIDGE NATIONAL LABORATORY

NUREG/CR-0200 R5V1P1: SCALE: A MODULAR CODE SYSTEM FOR PERFORMING STANDARDIZED COMPUTER ANALYSES FOR LICENSING EVALUATION. Control Modules C4, C6.

NUREG/CR-0200 R5V1P2: SCALE: A MODULAR CODE SYSTEM FOR PERFORMING STANDARDIZED COMPUTER ANALYSES FOR LICENSING EVALUATION. Control Modules S1 - H1.
 NUREG/CR-0200 R5V2P1: SCALE: A MODULAR CODE SYSTEM FOR PERFORMING STANDARDIZED COMPUTER ANALYSES FOR LICENSING EVALUATION. Functional Modules F1 - F8.
 NUREG/CR-0200 R5V2P2: SCALE: A MODULAR CODE SYSTEM FOR PERFORMING STANDARDIZED COMPUTER ANALYSES FOR LICENSING EVALUATION. Functional Modules F9 - F11.
 NUREG/CR-0200 R5V2P3: SCALE: A MODULAR CODE SYSTEM FOR PERFORMING STANDARDIZED COMPUTER ANALYSES FOR LICENSING EVALUATION. Functional Modules F16 - F17.
 NUREG/CR-0200 R5V3: SCALE: A MODULAR CODE SYSTEM FOR PERFORMING STANDARDIZED COMPUTER ANALYSES FOR LICENSING EVALUATION. Miscellaneous.
 NUREG/CR-4219 V12 N2: HEAVY-SECTION STEEL TECHNOLOGY PROGRAM. Semiannual Progress Report For April 1995 Through September 1995.
 NUREG/CR-4219 V13 N1: HEAVY-SECTION STEEL TECHNOLOGY PROGRAM. Semiannual Progress Report For October 1995 - March 1996.
 NUREG/CR-4674 V23: PRECURSORS TO POTENTIAL SEVERE CORE DAMAGE ACCIDENTS: 1995. A Status Report.
 NUREG/CR-5229 V09: FIELD LYSIMETER INVESTIGATIONS: LOW-LEVEL WASTE DATA BASE DEVELOPMENT PROGRAM FOR FISCAL YEAR 1996. Annual Report.
 NUREG/CR-5591 V07 N1: HEAVY-SECTION STEEL IRRADIATION PROGRAM. Semiannual Progress Report For October 1995 Through March 1996.
 NUREG/CR-5591 V07 N2: HEAVY-SECTION STEEL IRRADIATION PROGRAM. Semiannual Progress Report For April Through September 1996.
 NUREG/CR-5661: RECOMMENDATIONS FOR PREPARING THE CRITICALITY SAFETY EVALUATION OF TRANSPORTATION PACKAGES.
 NUREG/CR-6042 R01: PERSPECTIVES ON REACTOR SAFETY.
 NUREG/CR-6361: CRITICALITY BENCHMARK GUIDE FOR LIGHT-WATER-REACTOR FUEL IN TRANSPORTATION AND STORAGE PACKAGES.
 NUREG/CR-6363: EFFECTS OF THERMAL AGING AND NEUTRON IRRADIATION ON THE MECHANICAL PROPERTIES OF THREE-WIRE STAINLESS STEEL WELD OVERLAY CLADDING.
 NUREG/CR-6379: AN IMPROVED CORRELATION PROCEDURE FOR SUBSIZE AND FULL-SIZE CHARPY IMPACT SPECIMEN DATA.
 NUREG/CR-6399: RESULTS OF CHARPY V-NOTCH IMPACT TESTING OF STRUCTURAL STEEL SPECIMENS IRRADIATED AT 30 DEGREES C TO 1×10^{16} NEUTRONS/CM² IN A COMMERCIAL REACTOR CAVITY.
 NUREG/CR-6426 V01: DUCTILE FRACTURE TOUGHNESS OF MODIFIED A 302 GRADE B PLATE MATERIALS. DATA ANALYSIS.
 NUREG/CR-6426 V02: DUCTILE FRACTURE TOUGHNESS OF MODIFIED A 302 GRADE B PLATE MATERIALS. Data Records.
 NUREG/CR-6454: POOL CRITICAL ASSEMBLY PRESSURE VESSEL FACILITY BENCHMARK.
 NUREG/CR-6504 V01: AN UPDATED NUCLEAR CRITICALITY SLIDE RULE. Technical Basis.
 NUREG/CR-6505 V01: THE POTENTIAL FOR CRITICALITY FOLLOWING DISPOSAL OF URANIUM AT LOW-LEVEL WASTE FACILITIES. Uranium Blended With Soil.
 NUREG/CR-6506: EMBRITTLEMENT DATA BASE, VERSION 1.
 NUREG/CR-6508: COMPONENT UNAVAILABILITY VERSUS INSERVICE TEST (IST) INTERVAL: EVALUATIONS OF COMPONENT AGING EFFECTS WITH APPLICATIONS TO CHECK VALVES.
 NUREG/CR-6528: ENVIRONMENTAL ASSESSMENT PROPOSED LICENSE RENEWAL OF NUCLEAR METALS, INC. CONCORD, MASSACHUSETTS.
 NUREG/CR-6558: NRC ANTITRUST LICENSING ACTIONS, 1978-1996.

ORGANIZATION FOR ECONOMIC COOPERATION & DEVELOPMENT

NUREG/CP-0158: PROCEEDINGS OF THE OECD/CSNI SPECIALISTS MEETING ON BORON DILUTION REACTIVITY TRANSIENTS. Held in State College, Pennsylvania, USA, October 18-20, 1995.
 NUREG/CP-0159: PROCEEDINGS OF THE OECD/CSNI WORKSHOP ON TRANSIENT THERMAL-HYDRAULIC AND NEUTRONIC CODES REQUIREMENTS. Held in Annapolis, Maryland, USA, November 5-8, 1996.

PENNSYLVANIA STATE UNIV., UNIVERSITY PARK, PA

NUREG/CP-0158: PROCEEDINGS OF THE OECD/CSNI SPECIALISTS MEETING ON BORON DILUTION REACTIVITY TRANSIENTS. Held in State College, Pennsylvania, USA, October 18-20, 1995.
 NUREG/CR-6507: CRITICAL HEAT FLUX (CHF) PHENOMENON ON A DOWNWARD FACING CURVED SURFACE.

SANDIA NATIONAL LABORATORIES

NUREG/CR-4674 V24: PRECURSORS TO POTENTIAL SEVERE CORE DAMAGE ACCIDENTS: 1982-83. A Status Report.

NUREG/CR-6042 R01: PERSPECTIVES ON REACTOR SAFETY.
 NUREG/CR-6153: A SIMPLIFIED MODEL OF DECONTAMINATION BY BWR STEAM SUPPRESSION POOLS.
 NUREG/CR-6167: LATE-PHASE MELT PROGRESSION EXPERIMENT MP-2. Results And Analysis.
 NUREG/CR-6433: CONTAINMENT PERFORMANCE OF PROTOTYPICAL REACTOR CONTAINMENTS SUBJECTED TO SEVERE ACCIDENT CONDITIONS.
 NUREG/CR-6469: EXPERIMENTS TO INVESTIGATE DIRECT CONTAINMENT HEATING PHENOMENA WITH SCALED MODELS OF THE CALVERT CLIFFS NUCLEAR POWER PLANT.
 NUREG/CR-6523 V01: PROBABILISTIC ACCIDENT CONSEQUENCE UNCERTAINTY ANALYSIS. Food Chain Uncertainty Assessment. Main Report.
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 NUREG/CR-6525: SECCOP90: SECTOR POPULATION, LAND FRAGMENTATION, AND ECONOMIC ESTIMATION PROGRAM.
 NUREG/CR-6526 V01: PROBABILISTIC ACCIDENT CONSEQUENCE UNCERTAINTY ANALYSIS. Uncertainty Assessment For Deposited Material And External Doses. Main Report.
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 NUREG/CR-6527: FINAL RESULTS OF THE XR2-1 BWR METALLIC MELT RELOCATION EXPERIMENT.
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SARGENT & LUNDY, INC.

NUREG/CR-6433: CONTAINMENT PERFORMANCE OF PROTOTYPICAL REACTOR CONTAINMENTS SUBJECTED TO SEVERE ACCIDENT CONDITIONS.

SCIENCE & ENGINEERING ASSOCIATES, INC.

NUREG/CR-6370: BLOCKAGE 2.5 USER'S MANUAL.
 NUREG/CR-6371: BLOCKAGE 2.5 REFERENCE MANUAL.

SCIENCE APPLICATIONS INTERNATIONAL CORP. (FORMERLY SCIENCE APPLICATIONS,

NUREG-0713 V17: OCCUPATIONAL RADIATION EXPOSURE AT COMMERCIAL NUCLEAR POWER REACTORS AND OTHER FACILITIES, 1995. Twenty-Eighth Annual Report.
 NUREG/CR-4674 V23: PRECURSORS TO POTENTIAL SEVERE CORE DAMAGE ACCIDENTS: 1995. A Status Report.
 NUREG/CR-4674 V24: PRECURSORS TO POTENTIAL SEVERE CORE DAMAGE ACCIDENTS: 1982-83. A Status Report.
 NUREG/CR-6167: LATE-PHASE MELT PROGRESSION EXPERIMENT MP-2. Results And Analysis.
 NUREG/CR-6527: FINAL RESULTS OF THE XR2-1 BWR METALLIC MELT RELOCATION EXPERIMENT.

SCIENETECH, INC.

NUREG/CP-0159: PROCEEDINGS OF THE OECD/CSNI WORKSHOP ON TRANSIENT THERMAL-HYDRAULIC AND NEUTRONIC CODES REQUIREMENTS. Held in Annapolis, Maryland, USA, November 5-8, 1996.

SOFTWARE EDGE, INC.,

NUREG/CR-6370: BLOCKAGE 2.5 USER'S MANUAL.
 NUREG/CR-6371: BLOCKAGE 2.5 REFERENCE MANUAL.

SOHAR, INC.

NUREG/CR-6463 R01: REVIEW GUIDELINES FOR SOFTWARE LANGUAGES FOR USE IN NUCLEAR POWER PLANT SAFETY SYSTEMS. Final Report.

SOUTH CAROLINA, UNIV. OF, COLUMBIA, SC

NUREG/CR-6529: VALIDATION OF TECTONIC MODELS FOR AN INTRAPLATE SEISMIC ZONE, CHARLESTON, SOUTH CAROLINA WITH GPS GEODETIC DATA.

SOUTHWEST RESEARCH INSTITUTE

NUREG/CR-6074 V03: SEALED SOURCE AND DEVICE DESIGN SAFETY TESTING. Technical Report On The Findings Of Task 4. Investigation Of A Failed Brachytherapy Needle Applicator.

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ST. LOUIS UNIV., ST. LOUIS, MO

NUREG/CR-6563: LG EXCITATION, ATTENUATION, AND SOURCE SPECTRAL SCALING IN CENTRAL AND EASTERN NORTH AMERICA.

TECHNADYNE ENGINEERING CONSULTANTS, INC.

NUREG/CR-6547: DOSFAC2 USER'S GUIDE.

TRANSPORTATION, DEPT. OF

NUREG-1608 DRFT FC: CATEGORIZING AND TRANSPORTING LOW SPECIFIC ACTIVITY MATERIALS AND SURFACE CONTAMINATED OBJECTS.Draft Rept For Comment.

UNITED KINGDOM

NUREG/CR-6523 V01: PROBABILISTIC ACCIDENT CONSEQUENCE UNCERTAINTY ANALYSIS.Food Chain Uncertainty Assessment.Main Report.

NUREG/CR-6523 V02: PROBABILISTIC ACCIDENT CONSEQUENCE UNCERTAINTY ANALYSIS. Food Chain Uncertainty Assessment.Appendices.

NUREG/CR-6526 V01: PROBABILISTIC ACCIDENT CONSEQUENCE UNCERTAINTY ANALYSIS. Uncertainty Assessment For Deposited Material And External Doses.Main Report.

NUREG/CR-6526 V02: PROBABILISTIC ACCIDENT CONSEQUENCE UNCERTAINTY ANALYSIS. UNCERTAINTY ASSESSMENT FOR DEPOSITED MATERIAL AND EXTERNAL DOSES.Appendices.

International Organization Index

This index lists, in alphabetical order, the countries and performing organizations that prepared the NUREG/IA reports listed in this compilation. Listed below each country and performing organization are the NUREG/IA numbers and titles of their reports. If further information is needed, refer to the main citation by the NUREG/IA number.

There were no NUREG/IA reports published this year.

Licensed Facility Index

This index lists the facilities that were the subject of NRC staff or contractor reports. The facility names are arranged in alphabetical order. They are preceded by their Docket number and followed by the report number. If further information is needed, refer to the main citation by the NUREG number.

52-003	AP600 Standard Plant Design, Westinghouse Electric Corp.,	NUREG/CR-6414	Project-697	DOE Tritium Project	NUREG-1607
52-003	AP600 Standard Plant Design, Westinghouse Electric Corp.,	NUREG/CR-6541 R02	52-001	GE Advanced BWR Design, General Electric Co.,	NUREG-1503 S01
40-3453	Atlas Corp., Denver, CO,	NUREG-1532	40-8968	Hydro Resources, Inc., Dallas, TX,	NUREG-1508
50-317	Calvert Cliffs Nuclear Power Plant, Unit 1, Baltimore Gas & Electric	NUREG/CR-6469	50-297	North Carolina State Univ. PULSTAR Reactor	NUREG-1572
50-318	Calvert Cliffs Nuclear Power Plant, Unit 2, Baltimore Gas & Electric	NUREG/CR-6469	40-8866	Nuclear Metals, Inc., Concord, MA,	NUREG/CR-6528
			40-0672	Nuclear Metals, Inc., Concord, MA,	NUREG/CR-6528
			50-280	Surry Power Station, Unit 1, Virginia Electric & Power Co.	NUREG/CR-6181 R01
			52-002	System 80+ Standardized Nuclear Power Plant Des., Combustion Enginee	NUREG-1462 S01

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(See instructions on the reverse)

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L. L. Stevenson, Project Manager

11. ABSTRACT (200 words or less)

This journal includes all formal reports in the NUREG series prepared by the NRC staff and contractors; proceedings of conferences and workshops; as well as international agreement reports. The entries in this compilation are indexed for access by title and abstract, secondary report number, personal author, subject, NRC organization for staff and international agreements, contractor, international organization, and licensed facility.

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