UNITED STATES
NUCLEAR REGULATORY COMMISSION
ADVISORY COMMITTEE ON NUCLEAR WASTE
WASHINGTON, D.C. 20555-0001

November 5, 2005

MEMORANDUM TO: ACNW Members
ACNW Staff

FROM: Michele S. Kelton
Technical Secretary, ACNW

SUBJECT: CERTIFIED MINUTES OF THE 161ST MEETING OF THE ADVISORY COMMITTEE ON NUCLEAR WASTE (ACNW) JULY 19–21, 2005

The proposed minutes of the subject meeting have been certified as the official record of the proceedings for that meeting.

Attachment:
Certified Minutes of the161st Meeting
July 19–21, 2005

cc: A. Bates, SECY (O-16C1)
S. Jones, NMSS (T-8A23)
J. Dixon-Herrity, EDO (O-16E15)

UNITED STATES
NUCLEAR REGULATORY COMMISSION
ADVISORY COMMITTEE ON NUCLEAR WASTE
WASHINGTON, D.C. 20555-0001

MEMORANDUM TO: Sharon Steele, Team Lead
Advisory Committee on Nuclear Waste

FROM: Michael T. Ryan, Chairman
Advisory Committee on Nuclear Waste

SUBJECT: PROPOSED MINUTES OF THE 161ST MEETING OF THE ADVISORY COMMITTEE ON NUCLEAR WASTE (ACNW) JULY 19–21, 2005

I certify that, based on my review of these minutes[1], and to the best of my knowledge and belief, I have observed no substantive errors or omissions in the record of this proceeding subject to the comments noted below.

Comments:

Michael T. Ryan, Chairman

11/5/05
Date

(1) Minutes of the 161st ACNW meeting held on July 19-21, 2005, dated November 4, 2005

UNITED STATES
NUCLEAR REGULATORY COMMISSION
ADVISORY COMMITTEE ON NUCLEAR WASTE
WASHINGTON, D.C. 20555-0001

November 4, 2005

MEMORANDUM TO: Michael T. Ryan, Chairman
Advisory Committee on Nuclear Waste

FROM: Michele S. Kelton, Technical Secretary
Advisory Committee on Nuclear Waste

SUBJECT: PROPOSED MINUTES OF THE 161ST MEETING OF THE ADVISORY COMMITTEE ON NUCLEAR WASTE (ACNW) JULY 19–21, 2005

Enclosed are the proposed minutes of the 161st meeting of the ACNW. This draft is being provided to give you an opportunity to review the record of this meeting and provide comments. Your comments will be incorporated into the final certified set of minutes as appropriate. Please provide your corrections and comments to me.

Please note that these minutes are being issued in two parts: (1) main body (working copy form) and (2) appendices. The appendices are being sent only to those members who have requested them.

A copy of the certified minutes with appendices will be forwarded to each member.

Enclosure: As stated

cc w/o Encl. 2: ACNW Members
ACNW Staff
J. Larkins, ACRS/ACNW

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APPENDICES

CERTIFIED
11/5/2005
By MICHAEL T. RYAN

Issued: 11/04/05

CERTIFIED MINUTES OF THE 161ST MEETING OF THE ADVISORY COMMITTEE ON NUCLEAR WASTE JULY 19–21, 2005

The U.S. Nuclear Regulatory Commission (NRC) Advisory Committee on Nuclear Waste (ACNW or the Committee) held its 161st meeting July 19–21, 2005, at Two White Flint North, 11545 Rockville Pike, Rockville, Maryland. The ACNW published a notice of this meeting in the *Federal Register* on July 1, 2005 (70 FR 31546) (Appendix A). This meeting served as a forum for attendees to discuss and take appropriate action on the items in the agenda (Appendix B). The entire meeting was open to public attendance.

A transcript of selected portions of the meeting is available in the NRC's Public Document Room at One White Flint North, Room 1F19, 11555 Rockville Pike, Rockville, Maryland. Copies of the transcript are available for purchase from Neal R. Gross and Company, Inc., 1323 Rhode Island Avenue, NW., Washington, DC 20005. Transcripts may also be downloaded from, or reviewed on, the Internet at http://www.nrc.gov/reading-rm/doc-collections/acnw/tr/ at no cost.

ACNW Members, Michael T. Ryan (ACNW Chairman), Allen G. Croff (ACNW Vice Chairman), James H. Clarke, William J. Hinze, and Ruth Weiner attended this meeting. For a list of other attendees, see Appendix C.

I. CHAIRMAN'S REPORT (OPEN)

[Dr. John Larkins was the Designated Federal Official for this part of the meeting.]

Dr. Michael Ryan, ACNW Chairman, convened the meeting at 10:30 a.m. and briefly reviewed the agenda. He stated that the meeting was being conducted in conformance with the Federal Advisory Committee Act. Dr. Ryan asked members of the public who were present and had something to say to inform the ACNW staff so that time could be allocated for them to speak.

II. DEVELOPMENT OF RISK-INFORMED REGULATIONS IN THE NRC AND THEIR APPLICATION TO THE NONREACTOR ACTIVITIES (OPEN)

[John Flack was the Designated Federal Official for this part of the meeting.]

A. The Evolution of Risk-Informed Regulations

Ashok Thadani, Deputy Executive Director, ACRS/ACNW gave a brief history of the development of risk-informed regulations in the NRC. F. R. Farmer was the first to propose using PRA for regulatory purpose in a paper published in 1967. The first significant PRA application to a reactor was the WASH-1400 study. The WASH 1400 study and the many requirements that

resulted from the Three Mile Island (TMI) accident set the stage for PRA application to the nuclear industry in the U.S. Subsequent PRA initiatives led to the development of the Commission's safety goals and the backfit rule which were needed to stem the tide of the many requirements that followed in response to the TMI accident. Mr. Thadani discussed the advantages of using PRA. The method enabled an integrated and systematic examination of design and operations features and provided a process for evaluating uncertainties in regulatory decisionmaking activities. Mr. Thadani said the obstacles to the use of PRA information were that PRA was unsuited for dealing with contributors to risk such as sabotage and human errors of commission, that the results varied with the assumptions, and that the staff lacked expertise in and acceptance of its use.

Mr. Thadani discussed early applications of PRA to reactor regulation. He mentioned the Safety Goal Policy Statement, the safety goal screening criteria, the Indian Point and Zion studies, and the application to pressurized thermal shock, anticipated transients without scram, and station blackout. He described improvements in PRA scope and quality necessary to address technical and policy issues and NRC research to improve the technical basis for quantitative risk analyses.

Mr. Thadani said the evolution of PRA from generic applications to plant-specific application involved the development of licensee and NRC staff guidance in the form of regulatory guides, and standard review plans to address technical specification changes, graded quality assurance, in-service inspection, and the maintenance rule. He noted the development of core damage frequency and large early release frequency as subsidiary objectives and the issuance of Regulatory Guide1.174. He said that risk information issued in the Reactor Oversight Process to identify inspection areas, evaluate inspection findings, and for event followup. In conclusion, he discussed current NRC risk-informed regulation initiatives and initiatives that support training and risk communications. He emphasized that the NRC is committed to increasing the use of PRA technology and that the approach demanded a strong technical bases to support the bottom line, which is nuclear safety. Mr. John Garrick, a former member of the ACNW, said that the nuclear industry's contribution to PRA development was often overlooked, for example the Zion and Indian Point PRAs.

B. Risk-Informing Nonreactor Regulatory Activities

John Flack, Senior Level Advisor to the ACRS/ACNW, talked about the development of new and improved methods and regulatory tools in nonreactor regulatory areas. He said the PRA Policy Statement recognized that there may be situations where it may not be cost-effective to use PRA. He said that how effectiveness is determined was a key question in the evolution of risk-informed regulations for nonreactor applications.

Mr. Flack discussed general uses of PRA and how PRA is being used in specific applications to establish design goals and targets. He noted the similarities and differences between reactor and nonreactor PRA applications. Reactor applications involve low-likelihood large-consequence events in areas with high population densities, whereas nonreactor applications involve more diverse conditions, higher frequency events, much smaller populations, and worker risk. Mr. Flack described the safety cornerstone approach for reactors and said a similar approach could be used for nonreactor applications. He discussed the most significant applications of PRA to reactors and potential applications to nonreactor facilities. He said realistic assessments

and the use of risk insights could improve the regulatory process for material licensees and allow the agency to allocate resources more efficiently. He talked about the principles of risk-informed integrated decisionmaking and briefly described what PRA models will need to do to support regulatory decisionmaking. He said the challenges associated with institutionalizing the use of PRA in the regulatory process included startup costs and community acceptance, and perception of risk-based (versus risk-informed) decisionmaking. He mentioned taking findings out of context an issue that needed to be considered when documenting PRA results and findings.

Mr. Flack summarized the ACNW risk-informed initiatives described in the Committee's current Action Plan and key recommendations from previous Committee letters. He compared these initiatives to the ongoing NMSS risk-informed activities contained in SECY-05-0068 (updated Risk-Informed Regulation Implementation Plan). He said three significant NMSS activities were responsive to ACNW recommendations: (1) Framework for Incorporating Risk Information into the NMSS Regulatory Process, (2) Risk Guidelines for Material and Waste, and (3) Systematic Decisionmaking Process Development. He said all three were being rolled up into one document entitled "Risk-Informed Decisionmaking for Nuclear Materials and Waste Application." The Committee will request that NMSS make the document publicly available so that ACNW can begin the formal review.

Mr. Flack identified ways to enhance the risk-informed regulatory process, including consideration of an interoffice technical advisory group (TAG) to identify areas that can be risk-informed. He discussed whether safety goals should be developed for the nonreactor regulatory activities and whether a safety cornerstone approach should be developed for nonreactor regulatory activities analogous to the approach currently being used in the Reactor Oversight Process. Mr. Flack concluded with several items for Committee consideration as the NRC moves forward in risk-informing nonreactor activities (assessing stakeholder interest, advising the Commission on best candidates to risk inform, reinforcing previous ACNW recommendations, and the value of performing pilot studies).

III. ACNW'S MAY 2005 VISIT TO JAPAN FOLLOWUP (OPEN)

[Neil Coleman was the Designated Federal Official for this part of the meeting.]

During May 14-21, Chairman Ryan, Vice Chairman Croff, and Member Clarke took part in technical exchange with nuclear regulators and officials in Japan. They also toured a high-level waste demonstration site in Horonobe and visited the nuclear complexes of Rokkasho-mura, and Tokai-Mura. ACNW staffer Neil Coleman accompanied the members.

Highlights of this trip were discussed at the July ACNW meeting. These highlights included Japanese efforts to define categories of nuclear waste, Japanese attempts to locate a high-level waste (HLW) repository site, Japan's development of two HLW demonstration projects, waste package design, HLW storage, preparations for reprocessing HLW, and low-level waste handling and disposal.

One issue the Japanese have been dealing with is precisely defining the boundaries between very low-activity waste, low-activity waste, low-level waste, higher activity low-level waste, and high level waste. Vice Chairman Croff noted that the Japanese are developing disposal sites

and developing acceptance criteria for the sites and then that class of waste will be disposed of there.

Chairman Ryan discussed the high-level waste disposal study area at Horonobe on Hokkaido Island. A written agreement with the local people guarantees that this study will not become a high-level waste site for Japan. The Japanese government submitted more than 3000 information packets to communities and community leadership groups to seek a volunteer site for a HLW repository. One community considered the possibility but eventually withdrew from consideration. At present there are no potential HLW repository sites.

Chairman Ryan noted that the HLW reprocessing plant at Rokkasho-mura is very close to operation. At the time of the ACNW visit the Japanese were still doing "cold" uranium testing for the facility as part of the equipment and software testing shakedowns. The reprocessing technology is based on the Purex process. They have spent fuel on site ready for reprocessing. The ACNW visitors got to briefly see the spent fuel pool. Since the power reactors in Japan are located on the coasts, nuclear fuel (new and spent) is transported by ship to and from Rokkasho. This is a very efficient operation. The local seaport is a short distance from the facility. Waste and fuel are transported by truck over a sole-use road built for this purpose.

The fuel fabrication plant is up and running and they plan to start constructing a MOX plant in about 3 years. The low-level waste site at Rokkasho-mura has been up and running for more than a decade. The low-level waste is handled remotely from the time it arrives, until it goes to the disposal facility.

Also at Rokkasho-mura is an intermediate depth disposal study tunnel with a design intended for higher level low-level waste. The Japanese apparently intend to minimize the intruder scenario by disposing of the waste tens of meters deeper than for low-level waste. This tunnel is a sloping tunnel that you could drive a van into. The tunnel opens up into a very large disposal chamber. The disposal chamber was being actively excavated while ACNW was visiting.

The visitor center at Rokkasho was an excellent facility with great audio-visual presentations. Approximately 100,000 people visit the center each year. This outreach program brings in busloads of people, including school children and senior citizen groups, almost every day.

One of the highlights of the Tokai-mura visit was the geoscience laboratory. A design for HLW disposal that is being considered is to surround the waste packages with bentonite, which is a swelling clay with very low permeability. This design also has favorable seismic properties because in the event of a fault movement the waste package is free to rotate to a degree within the surrounding bentonite, avoiding shear failure. The bentonite rather than the waste package undergoes deformation. Radionuclide migration rates through the bentonite have been systematically studied and modeled. The research facility has also done state-of-the art fracture flow experiments. The Japanese research has studied design of every phase from waste package performance through all the components of the engineered and natural systems of a repository. The waste package itself will consist of glass logs (from reprocessed HLW) about a meter high encased in metallic containers, for which various designs are being considered.

The Japanese were very interested in the role of the ACNW at NRC. The visiting members gave them a CD with past ACNW letters and Chairman Ryan gave talks at several locations on

the role of ACNW. He discussed the great value of this kind of interaction. Dr. Larkins suggested inviting the Japanese, the French, and the Swedes to the U.S. for a technical exchange with ACNW in 2006 or 2007.

Neil Coleman noted for the record our appreciation for the work by Dr. Yoshio Murao and Dr. Ando of the Nuclear Safety Commission of Japan. Their coordination made it possible for the ACNW travelers to visit many facilities in Japan in a very short time.

Details of this trip to Japan have been documented in a trip report [Accession No. ML0520003450]. This trip provided a valuable exchange of technical and regulatory information concerning fuel cycle and waste disposal issues. Given the pace of program advancement in Japan, ACNW recommends and encourages similar NRC exchanges in the future, both in the U. S. and in Japan.

IV. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION'S (OSHA'S') REQUEST FOR INFORMATION ON IONIZING RADIATION (OPEN)

[Sharon Steele was the Designated Federal Official for this part of the meeting.]

Chairman Ryan discussed the Occupational Safety and Health Administration's (OSHA's) request for information. OSHA was apparently concerned in that workers would be exposed and perhaps not properly monitored or cared for. It was not clear from OSHA's questions what problem it was attempting to address. Dr. Ryan said that the Committee considered the regulatory infrastructure of the Atomic Energy Act (AEA) and the responsibilities of the Nuclear Regulatory Commission (NRC), the Environmental Protection Agency (EPA), OSHA, and the States. The Committee also considered the role of consensus standard organizations on radiation protection, Agreement State programs, and agency's memoranda of understanding on the states' role in regulating non-AEA materials.

Dr. Ryan read a draft Committee letter responding to OSHA's request and the Committee voted to send it to the Commission. The letter listed various sources of data on occupational exposure to ionizing radiation and concluded that existing radiation safety programs and the current regulatory infrastructure provide adequate radiation protection to workers.

Ralph Anderson of the Nuclear Energy Institute (NEI) gave his organization's view on worker radiation safety in the nuclear industry. He provided data on measurable worker dose in the nuclear power industry. The data indicated a clear trend in worker dose reduction since 1984, which NEI credited to robust "as low as reasonably achievable" (ALARA) programs and a protective regulatory framework.

V. ACNW LOW-LEVEL RADIOACTIVE WASTE (LLW) MANAGEMENT PAPER: DRAFT NO. 2 (OPEN)

[Sharon Steele was the Designated Federal Official for this part of the meeting.]

The ACNW staff proposed to slightly revise the scope of the proposed paper. The Committee did not comment since it had not had enough time to complete the review of the new information.

Alan Pasternak of the Cal Rad Forum participated by telephone. He urged the Committee to expand the scope of the LLW paper to include what he described as the failure of States to address the Low-Level Waste Policy Act, as amended, and the failure of to provide adequate LLW storage capacity.

The Committee and staff will continue to review and refine the white paper.

VI. STAFF BRIEFING ON INTERNATIONAL ATOMIC ENERGY AGENCY (IAEA) REQUIREMENTS DOCUMENT DS-154: DESIGN AND OPERATION OF FACILITIES FOR GEOLOGICAL DISPOSAL OF RADIOACTIVE WASTE (OPEN)

[Michael Lee was the Designated Federal Official for this part of the meeting.]

The International Atomic Energy Agency (IAEA) has a standing committee concerned with the safe management of long-lived radioactive wastes. This Committee, the Waste Safety Standards Advisory Committee (WASSAC), is developing a set of safety requirements for planning, designing, operating, and closing a geologic repository. Recently, the WASSAC completed an initial draft of a safety guide on "Design and Operation of Facilities for Geological Disposal of Radioactive Waste," or DS-334. DS-334 provides general guidance to policy makers, regulators, and operators on the development and regulatory control of this type of facility. Supporting DS-334 is another IAEA/WASSAC safety requirements document—DS-154, "Geological Disposal of Radioactive Waste." This companion document describes specific safety objectives for both the pre- and post-closure phases of repository operations.

During this meeting, the NRC staff gave a information briefing on the latest version of DS-154. Speaking for the NRC staff, Timothy McCartin gave a general overview of the guidance document. The current revision is undergoing internal IAEA review before to release to IAEA member countries for approval and is not publicly available. He said that because of the relative maturity of the domestic high-level waste disposal program, the United States (specifically the NRC) has played leadership role in the development of DS-154. In particular, the NRC staff participates in WASSAC activities to (a) ensure compatibility of its NRC's regulatory programs with international standard-setting efforts; and (b) improve public confidence in NRC's programs.

Mr. McCartin said DS-154 outlines general safety goals to protect human health and the environment. These safety goals would apply to both the pre- and post-closure phases of repository operations and are intended to protect repository workers as well as members of the public. To ensure worker and public safety, DS-154 outlines the principles of an overall safety strategy to ensure that any repository, once constructed, will perform as intended. For example,

during repository operations, the limit on radiation doses (or risk) to workers would be 50 mSv in any one year and 20 mSv/year averaged over 5 years. The dose to an average member would be 1 mSv/year. During the post-closure phase, DS-154 recommends that doses to an average member of the public not exceed 1 mSv/year from all sources, with a dose limit of 0.3 mSv/year attributed to the repository. DS-154 does not specify a duration for the post-closure period of regulatory compliance; that decision is left to the IAEA member countries. Mr. McCartin expressed the view that within DS-154, there is the recognition of the broadening effect of uncertainties of various types on longer timescale performance projections.

Mr. McCartin said the draft safety requirements found in DS-154 are intended as a somewhat "flexible regulatory/administrative framework" for member counties to consider as they develop and implement their HLW repository programs. In this regard, Mr. McCartin said the staff has taken the position that the draft safety requirements in DS-154 are generally consistent with NRC's site-specific repository regulations in 10 CFR Part 63. Once approved by the IAEA, the Department of State will coordinate the final review by the NRC, the U.S. Environmental Protection Agency, and the U.S. Department of Energy.

During and after his presentation, Mr. McCartin responded to a few questions (mostly for clarification) and brief comments from some of the ACNW Members and their invited expert, Dr. B. John Garrick, Chairman of the Nuclear Waste Technical Review Board.

VII. REVIEW OF GENERIC WASTE-RELATED RESEARCH IN THE OFFICE OF NUCLEAR REGULATORY RESEARCH (RES) (OPEN)

[Richard Savio was the Designated Federal Official for this part of the meeting.]

William Ott, RES, gave an overview of RES-sponsored research on waste-safety. The research discussed was generally in support of the NRC's decommissioning activities. Dr. Ott described these research programs, recent work products, and cooperative agreements with other Federal agencies. Dr. Ott also proposed a schedule for future interaction with the ACNW.

The research initially focused on generic environmental transport issues such as infiltration, barrier performance, flow, sorption, and the treatment of uncertainty. These RES-sponsored programs do not address topics that are specific to the proposed Yucca Mountain repository (volcanism, elevated temperature geochemistry, etc.). Cooperative agreements with other research organizations are used to address a wide range of research topics within a limited budget. The topics addressed in these programs were primarily generated in user needs requests. The major projects are as follows:

1. Flow models

   - [field studies of] groundwater recharge (ARS)
   - groundwater modeling technical support (COE)
   - parameter, conceptual, and scenario uncertainties (PNNL)
   - model abstraction (ARS)

2. Barrier performance

   - long-term concrete performance (NIST)
   - performance of infills and backfills (NIST)
   - performance of engineered barriers (NAS)
   - performance of nonconcrete barriers (COE)

3. Source characterization

   - MARSAME development and MARSSIM maintenance (EPA)
   - Bayesian subsurface survey methods (Univ. of Tennessee)

4. Reactive transport models

   - sorption modeling databases (USGS)
   - radionuclide sorption in soils (SNL)

5. Transport calculations

   - probabilistic RESRAD-OFFSITE development (Argonne National Laboratory)
   - FRAMES software development (Pacific Northwest National Laboratory)

6. Groundwater monitoring

   - integrated groundwater monitoring strategies (AES)

7. Dose assessment

   - radionuclide pathway and uptake evaluation (Pacific Northwest National Laboratory)

Dr. Ott proposed a number of future interactions with the ACNW to facilitate ACNW input into this RES research. Dr. Ott's proposals will be discussed by the ACNW and utilized in the ACNW's planning. Specifically, his proposals are as follows:

1. Fall 2005—Detailed briefing on reactive transport research

   - USGS work on Generalized Composite Model
   - SNL work on sorption mechanisms and modifications to FRAMES to allow more realistic treatment of sorption
   - Insights from the most recent MOU workshop on reactive transport
   - Results of OECD/NEA Phase 2 Sorption Project

2. Fall 2005—Briefing on SADA 4.1

3. Winter 2006—Briefing on FRAMES2

4. Spring 2006—Briefing on results of research on the performance of concrete barriers and infills and backfills

5. Fall 2006—Briefing on results of integrated monitoring project

VIII. OFFICE OF NUCLEAR REGULATORY RESEARCH WHITE PAPER ON COLLECTIVE DOSE (OPEN)

(Neil Coleman was the Designated Federal Official for this part of the meeting.]

The Committee was briefed by and held discussions with representatives of the Office of Research regarding development of a draft white paper on the staff's proposed uses of collective dose in making regulatory decisions. The Committee has been concerned that calculating very small doses to large numbers of people is not a true measure of risk and may not even be a useful surrogate measure of risk.

Dr. Brock qualitatively defined collective dose as the sum of individual doses received in a given period by a specified population from exposure to a specified source of radiation. Collective dose has been used retrospectively to look at doses that have already occurred. Dr. Brock's ACNW talk focused more on looking at future doses to populations at risk. This is much more difficult because the population is not always well defined spatially or temporally.

The staff described the following options for using collective dose in NRC's regulatory work:

- Truncate individual doses at a nominal value.
  Advantage: This would address the concern of large collective doses derived from many small individual doses over very large populations.

  Disadvantage: It may be difficult to justify the value selected at which truncation occurs.

- Do not use collective dose for populations where almost everyone is estimated to receive a lifetime dose of less than 10 rem beyond natural sources (formal position of the Health Physics Society).

  Advantage: The health risks implied by a collective dose calculation would be less uncertain if almost all the individuals had doses of at least 10 rem per lifetime, addressing the concern about overaggregating many small, individual doses over large populations.

  Disadvantage: From NRC's perspective, it would be challenging to account for the medical exposures which are not tracked at NRC) that would need to be considered in determining lifetime exposures.

- Calculate individual doses for members of a critical group, and do not calculate a collective dose.

  Advantage: This is consistent with NRC's license termination rule and the philosophy of focusing radiation protection on the individual; EPA uses a similar approach to manage carcinogen risk in several regulatory areas.

  Disadvantage: This approach would complicate regulatory analysis and the development of new rules; it would be difficult to develop a cost-benefit metric using an individual dose emphasis, (Chairman Ryan commented that this should be considered a challenge, not a disadvantage).

- Use a hypothetical Commission-approved criterion to judge the significance of a collective dose calculation.

  Advantage: This approach seems to be gaining international support.

  Disadvantage: A minor but theoretical disadvantage is that you could still exceed the nominal 100 person rem per year with some 1 mrem per year individual doses if you're looking at a practice that involves very large populations.

The staff also discussed comparing the collective radiation dose to background radiation for the same population and using safety goals which would expand the use of the reactor safety goal/quantitative health objectives for latent cancer fatalities. This is 0.1 percent of the sum of cancer fatality risks from other causes.

Chairman Ryan said the very small doses being discussed are not meaningful because they are usually dwarfed by medical exposures, background radiation exposure, and uncertainties in doses calculated from sources of interest. He suggested that quantitative tests be used to show whether sufficient statistical power exists to interpret collective dose in light of these uncertainties.

Dr. Brock said this is probably a good idea but it would be difficult to accomplish.

The Committee plans to draft a letter to the Commission for review and finalization at an upcoming ACNW meeting.

IX. Election of ACNW Officers

The Committee reelected Michael T. Ryan and Allen G. Croff to the positions of Chairman and Vice Chairman, respectively, of the ACNW for a 1-year term ending June 30, 2006.

The meeting was adjourned at 12 p.m. on July 21, 2005.

Signed in Washington, DC, this 24th day of June, 2005.

Cathy Kazanowski,

Chief, Division of Management Systems, Bureau of Labor Statistics.

[FR Doc. 05–13416 Filed 7–7–05; 8:45 am]

BILLING CODE 4510–28–P

NUCLEAR REGULATORY COMMISSION

Agency Information Collection Activities: Submission for the Office of Management and Budget (OMB) Review; Comment Request

AGENCY: U.S. Nuclear Regulatory Commission (NRC).

ACTION: Notice of the OMB review of information collection and solicitation of public comment.

SUMMARY: The NRC has recently submitted to OMB for review the following proposal for the collection of information under the provisions of the Paperwork Reduction Act of 1995 (44 U.S.C. Chapter 35). The NRC hereby informs potential respondents that an agency may not conduct or sponsor, and that a person is not required to respond to, a collection of information unless it displays a current valid OMB control number.

1. *Type of submission, new, revision, or extension:* Revision.

2. *The title of the information collection:* 10 CFR part 32—Specific Domestic Licenses to Manufacture or Transfer Certain Items Containing Byproduct Material.

3. *The form number if applicable:* NRC Form 653, 653A,and 653B, "Transfers of Industrial Devices Report."

4. *How often the collection is required:* There is a one-time submittal of information to receive a license. Renewal applications are submitted every 10 years. In addition, recordkeeping must be performed on an on-going basis, and reports of transfer of byproduct material must be reported every 5 years, and in a few cases, every year.

5. *Who will be required or asked to report:* All specific licensees who manufacture or initially transfer items containing byproduct material for sale or distribution to general licensees or persons exempt from licensing.

6. *An estimate of the number of responses:* 4147 (650 responses + 275 recordkeepers for NRC licensees and 2522 responses + 700 recordkeepers for Agreement State licensees).

7. *The estimated number of annual respondents:* 975 (275 NRC licensees and 700 Agreement State licensees).

8. *An estimate of the number of hours needed annually to complete the requirement or request:* 135,741 (36,623 hours for NRC licensees [5,225 hours reporting, or an average of 8 hours per response + 31,398 hours recordkeeping, or 114 hours per recordkeeper] and 99,118 hours for Agreement State licensees [20,863 hours reporting, or an average of 8.3 hours per response + 78,255 hours recordkeeping, or an average of 112 hours per recordkeeper]).

9. *An indication of whether Section 3507(d), Pub. L. 104–13 applies:* Not applicable.

10. Abstract: 10 CFR part 32 establishes requirements for specific licenses for the introduction of byproduct material into products or materials and transfer of the products or materials to general licensees or persons exempt from licensing. It also prescribes requirements governing holders of the specific licenses. Some of the requirements are for information which must be submitted in an application for a specific license, records which must be kept, reports which must be submitted, and information which must be forwarded to general licensees and persons exempt from licensing. In addition, 10 CFR part 32 prescribes requirements for the issuance of certificates of registration (concerning radiation safety information about a product) to manufacturers or initial transferors of sealed sources and devices. Submission or retention of the information is mandatory for persons subject to the 10 CFR part 32 requirements. The information is used by NRC to make licensing and other regulatory determinations concerning the use of radioactive byproduct material in products and devices.

A copy of the final supporting statement may be viewed free of charge at the NRC Public Document Room, One White Flint North, 11555 Rockville Pike, Room O–1 F23, Rockville, MD 20852. OMB clearance requests are available at the NRC Worldwide Web site: *http://www.nrc.gov/public-involve/doc-comment/omb/index.html.* The document will be available on the NRC home page site for 60 days after the signature date of this notice.

Comments and questions should be directed to the OMB reviewer listed below by August 8, 2005. Comments received after this date will be considered if it is practical to do so, but assurance of consideration cannot be given to comments received after this date. John Asalone, Office of Information and Regulatory Affairs (3150–0001), NEOB–10202, Office of Management and Budget, Washington, DC 20503.

Comments can also be e-mailed to *John_A._Asalone@omb.eop.gov* or submitted by telephone at (202) 395–4650.

The NRC Clearance Officer is Brenda Jo. Shelton, (301) 415–7233.

Dated at Rockville, Maryland, this 30th day of June, 2005.

For the Nuclear Regulatory Commission.

Beth C. St. Mary,

Acting NRC Clearance Officer, Office of Information Services.

[FR Doc. E5–3601 Filed 7–7–05; 8:45 am]

BILLING CODE 7590–01–P

NUCLEAR REGULATORY COMMISSION

Advisory Committee on Nuclear Waste; Notice of Meeting

The Advisory Committee on Nuclear Waste (ACNW) will hold its 161st meeting on July 19–21, 2005, Room T–2B3, Two White Flint North, 11545 Rockville Pike, Rockville, Maryland. The date of this meeting was previously published in the **Federal Register** on Wednesday, December 8, 2004 (69 FR 71084).

The schedule for this meeting is as follows:

Tuesday, July 19, 2005

10:15 a.m.–10:30 a.m.: Opening Statement (Open)—The ACNW Chairman will make opening remarks regarding the conduct of today's sessions.

10:30 a.m.–12 Noon: Preparation of ACNW Reports (Open)—The Committee will discuss potential letter reports on Stakeholder Views on Recommended Standards and Regulations for Yucca Mountain, April 2005 CNWRA Program Review and ACNW Decommissioning Working Group Meeting. Other potential letter reports may be discussed.

1:30 p.m.–3:30 p.m.: Development of Risk-Informed Regulations Within the NRC and Its Application to the Nonreactor Arena (Open)—The Committee will hear a briefing by the ACNW senior management and staff regarding the evolution of risk-informed regulations, and the difference between reactor and nonreactor applications.

3:30 p.m.–4 p.m.: ACNW 's April 2005 Visit to Japan Follow-Up (Open)—The Committee will hear a report from those Committee members who visited the Radioactive Waste Management Facilities in Japan.

4:15 p.m.–5:15 p.m.: Occupational Safety and Health Administration's (OSHA) Request for Additional Information on Ionizing Radiation (Open)—The Committee will hear the

staff's views on and provide comments on OSHA's May 2005 request for information regarding exposure of workers to ionizing radiation, its uses in different industries, health effects, and existing workplace control programs.

5:15 p.m.–5:45 p.m.: ACNW Low-Level Radioactive Waste Management Paper: Draft No. 2 (Open)—The Committee will discuss and comment on draft No. 2 of the white paper on low-level radioactive waste management issues.

Wednesday, July 20, 2005

9:30 a.m.–9:45 a.m.: Opening Remarks by the ACNW Chairman (Open)—The ACNW Chairman will begin the meeting with brief opening remarks, outline the topics to be discussed, and indicate items of interest.

9:45 a.m.–10:30 a.m.: Staff Briefing on International Atomic Energy Agency (IAEA) Requirements Document DS–154: Design and Operation of Facilities for Geological Disposal of Radioactive Waste (Open)—The Committee will hear a briefing by and hold discussions with representatives of the Office of Nuclear Material Safety and Safeguards (NMSS) regarding the IAEA document that is intended to provide guidance to policymakers, regulators, and operators concerned with the development and regulatory control of geologic disposal facilities for the management of long-lived radioactive waste.

10:45 a.m.–11:45 a.m.: Review of Generic Waste-Related Research in the Office of Nuclear Regulatory Research (RES) (Open)—The Committee will hear a briefing by and hold discussions with representatives of the Office of Nuclear Regulatory Research (RES) regarding the waste-related research programs sponsored by that office.

1 p.m.–2 p.m.: RES White Paper on Collective Dose (Open)—The Committee will hear a briefing by and hold discussions with representatives of the RES staff regarding development of a white paper that describes the use of collective dose in making regulatory decisions.

2 p.m.–4 p.m.: Continuation of Discussions of Possible Letters/Reports (Open)—The Committee will discuss prepared letters and determine whether letters would be written on topics discussed during the meeting.

4:30 p.m.–5:30 p.m.: Miscellaneous (Open)—The Committee will discuss matters related to the conduct of ACNW activities, and specific issues that were not completed during previous meetings, as time and availability of information permit. Discussions may include future Committee meetings.

Thursday, July 21, 2005

8:30 a.m.–12 Noon: Continuation of Discussion of Possible Letters/Reports (Open)—The Committee will discuss prepared letters and determine whether letters would be written on topics discussed during the meeting.

Procedures for the conduct of and participation in ACNW meetings were published in the **Federal Register** on October 18, 2004 (69 FR 61416). In accordance with these procedures, oral or written statements may be presented by members of the public. Electronic recordings will be permitted only during those portions of the meeting that are open to the public. Persons desiring to make oral statements should notify Ms. Sharon A. Steele, (Telephone (301) 415–6805), between 7:30 a.m. and 4 p.m. e.t., as far in advance as practicable so that appropriate arrangements can be made to schedule the necessary time during the meeting for such statements. Use of still, motion picture, and television cameras during this meeting will be limited to selected portions of the meeting as determined by the ACNW Chairman. Information regarding the time to be set aside for taking pictures may be obtained by contacting the ACNW office prior to the meeting. In view of the possibility that the schedule for ACNW meetings may be adjusted by the Chairman as necessary to facilitate the conduct of the meeting, persons planning to attend should notify Ms. Steele as to their particular needs.

Further information regarding topics to be discussed, whether the meeting has been canceled or rescheduled, the Chairman's ruling on requests for the opportunity to present oral statements and the time allotted, therefore can be obtained by contacting Ms. Steele.

ACNW meeting agenda, meeting transcripts, and letter reports are available through the NRC Public Document Room (PDR) at *pdr@nrc.gov*, or by calling the PDR at 1–800–397–4209, or from the Publicly Available Records System component of NRC's document system (ADAMS) which is accessible from the NRC Web site at *http://www.nrc.gov/reading-rm/adams.html* or *http://www.nrc.gov/reading-rm/doc-collections/* (ACRS & ACNW Mtg schedules/agendas).

Video Teleconferencing service is available for observing open sessions of ACNW meetings. Those wishing to use this service for observing ACNW meetings should contact Mr. Theron Brown, ACNW Audiovisual Technician (301) 415–8066), between 7:30 a.m. and 3:45 p.m. e.t., at least 10 days before the meeting to ensure the availability of this service. Individuals or organizations requesting this service will be responsible for telephone line charges and for providing the equipment and facilities that they use to establish the video teleconferencing link. The availability of video teleconferencing services is not guaranteed.

Dated: July 1, 2005

Andrew L. Bates,

Advisory Committee Management Officer.

[FR Doc. E5–3600 Filed 7–7–05; 8:45 am]

BILLING CODE 7590–01–P

NUCLEAR REGULATORY COMMISSION

Advisory Committee on Reactor Safeguards, Subcommittee Meeting on Thermal-Hydraulic Phenomena; Notice of Meeting

The ACRS Subcommittee on Thermal-Hydraulic Phenomena will hold a meeting on July 19–20, 2005, Room O–1G16, 11555 Rockville Pike, Rockville, Maryland.

The agenda for the subject meeting shall be as follows:

Tuesday, July 19, 2005—8:30 a.m. until the conclusion of business

Wednesday, July 20, 2005—8:30 a.m. until the conclusion of business

The Subcommittee will review the latest proposed staff revision to Regulatory Guide 1.82 related to ECCS Net Positive Suction Head. The staff will describe its plans to provide guidance related to containment overpressure credit. The staff will also present the results of ongoing research concerning interactions of reactor coolant with debris in the reactor containment sump. The Subcommittee will hear presentations by and hold discussions with representatives of the NRC staff, their contractors, and other interested persons regarding this matter. The Subcommittee will gather information, analyze relevant issues and facts, and formulate proposed positions and actions, as appropriate, for deliberation by the full Committee.

Members of the public desiring to provide oral statements and/or written comments should notify the Designated Federal Official, Mr. Ralph Caruso (Telephone: (301) 415–8065) five days prior to the meeting, if possible, so that appropriate arrangements can be made. Electronic recordings will be permitted.

Further information regarding this meeting can be obtained by contacting the Designated Federal Official between 7:30 a.m. and 4:15 p.m. (e.t.). Persons planning to attend this meeting are urged to contact the above named

APPENDIX B

UNITED STATES
NUCLEAR REGULATORY COMMISSION
ADVISORY COMMITTEE ON NUCLEAR WASTE
WASHINGTON, D.C. 20555-0001

July 1, 2005

AGENDA
161st ACNW MEETING
JULY 19-21, 2005

TUESDAY, JULY 19, 2005, CONFERENCE ROOM T-2B3, TWO WHITE FLINT NORTH, ROCKVILLE, MARYLAND

1)	~~10:15~~ - 10:30 A.M. 10:15	**Opening Remarks by the ACNW Chairman** (Open) (MTR/JTL) The Chairman will make opening remarks regarding the conduct of today's sessions.
2)	10:30 - ~~12:00~~ Noon 12:04	**Discussion of Prepared Letters/Reports** (Open) (All) The Committee will discuss prepared draft letters and reports on: 2.1) Stakeholder Views on Recommended Standards and Regulations for Yucca Mountain (WJH/MPL) No Letter 2.2) April 2005 CNWRA Program Review (RFW/RPS) 2.3) ACNW Decommissioning Working Group Meeting (JHC/RKM) 10:30 - 12:04
	12:04 **~~12:00~~ - 1:30 P.M.**	*****LUNCH*****
3)	1:30 - ~~3:30~~ P.M. 3:37	**Development of Risk-Informed Regulations Within the NRC and It's Application to the Nonreactor Arena** (Open) (MTR/ACT/JHF) The Committee will hear a briefing by the ACNW senior management and staff regarding the evolution of risk-informed regulations, and the difference between reactor and nonreactor applications.
4)	~~3:30~~ - 4:00 P.M. 3:37	**ACNW's April 2005 Visit to Japan Follow-up** (Open) (MTR/NMC) The Committee will hear a report from those Committee members who visited the Radioactive Waste Management Facilities in Japan.
	4:00 - 4:15 P.M.	*****BREAK*****
5)	~~4:15~~ - ~~5:15~~ P.M. 4:17 4:33	**Occupational Safety and Health Administration's (OSHA) Request For Additional Information on Ionizing Radiation** (Open) (MTR/SAS) The Committee will hear the staff's views on and provide comments on OSHA's May 2005 request for information regarding exposure of workers to ionizing radiation, its uses in different industries, health effects, and existing workplace control programs.

6) ~~5:15~~ - ~~5:45~~ P.M. **ACNW Low-Level Radioactive Waste Management Paper: Draft No. 2** (Open) (MTR/SAS)
The Committee will discuss and comment on draft No. 2 of the white paper on low-level radioactive waste management issues.

~~5:45~~ **P.M.** **Adjourn**

WEDNESDAY, JULY 20, 2005, CONFERENCE ROOM T-2B3, TWO WHITE FLINT NORTH, ROCKVILLE, MARYLAND

7) 9:30 - 9:45 A.M. **Opening Remarks by the ACNW Chairman** (Open) (MTR/JTL)
The Chairman will make opening remarks regarding the conduct of today's sessions.

8) 9:45 - ~~10:30~~ A.M. **Staff Briefing on International Atomic Energy Agency (IAEA) Requirements Document DS-154: Design and Operation of Facilities for Geological Disposal of Radioactive Waste** (Open) (MTR/MPL)
The Committee will hear a briefing by and hold discussions with representatives of the Office of Nuclear Material Safety and Safeguards (NMSS) regarding the IAEA document that is intended to provide guidance to policymakers, regulators, and operators concerned with the development and regulatory control of geologic disposal facilities for the management of long-lived radioactive waste.

~~10:30~~ - ~~10:45~~ **A.M.** ***BREAK***

9) ~~10:45~~ - ~~11:45~~ A.M. **Review of Generic Waste-Related Research in the Office of Nuclear Regulatory Research (RES)** (Open) (RFW/RPS)
The Committee will hear a briefing by and hold discussions with representatives of the Office of Nuclear Regulatory Research (RES) regarding the waste-related research programs sponsored by that office.

~~11:45~~ - **1:00 P.M.** ***LUNCH***

10) ~~1:00~~ - 2:00 P.M. **RES White Paper on Collective Dose** (Open) (MTR/NMC)
The Committee will hear a briefing by and hold discussions with representatives of the RES staff regarding development of a white paper that describes the use of collective dose in making regulatory decisions.

11) ~~2:00 - 4:00 P.M.~~ **Continuation of Discussions of Possible Letters/Reports** (Open) (All)
The Committee will discuss prepared and possible draft letters and reports:
- 11.1) Stakeholder Views on Recommended Standards and Regulations for Yucca Mountain (WJH/MPL)
- 11.2) April 2005 CNWRA Program Review (RFW/RPS)
- 11.3) ACNW Decommissioning Working Group Meeting (JHC/RKM)
- 11.4) ACNW April 2005 Visit to Japan
- 11.5) RES Generic Waste-Related Research (RFW/RPS)
- 11.6) RES White Paper on Collective Dose (MTR/NMC)
- 11.7) Risk Informing Nonreactor Activities (JHC/ACT/JHF)
- 11.8) OSHA's Request For Additional Information on Ionizing Radiation

4:15 - 4:30 P.M. ***BREAK***

12) ~~4:30 - 5:30 P.M.~~ **Miscellaneous** (Open)
The Committee will discuss matters related to the conduct of ACNW activities and specific issues that were not completed during previous meetings, as time and availability of information permit. Discussions may include future Committee meetings.

~~5:30 P.M.~~ **Adjourn**

THURSDAY, JULY 21, 2005, CONFERENCE ROOM T-2B3, TWO WHITE FLINT NORTH, ROCKVILLE, MARYLAND

13) 8:30 - ~~12:00 Noon~~ 10:42 **Continuation of Discussions of Possible Letters/Reports** (Open) (All)
The Committee will discuss prepared and possible draft letters and reports:
- 13.1) Stakeholder Views on Recommended Standards and Regulations for Yucca Mountain (WJH/MPL) deferred
- 13.2) April 2005 CNWRA Program Review (RFW/RPS)
- 13.3) ACNW Decommissioning Working Group Meeting (JHC/RKM)
- 13.4) ACNW April 2005 Visit to Japan
- 13.5) RES Generic Waste-Related Research (RFW/RPS)
- 13.6) RES White Paper on Collective Dose (MTR/NMC)
- 13.7) Risk Informing Nonreactor Activities (JHC/ACT/JHF) deferred
- 13.8) OSHA's Request For Additional Information on Ionizing Radiation

10:42 ~~12:00 Noon~~ **Adjourn**

10:00 – 10:42 Public comment by R. Anderson NEI

NOTES:

- Presentation time should not exceed 50 percent of the total time allocated for a specific item. The remaining 50 percent of the time is reserved for discussion.

- **Thirty (35) hard copies and one (1) electronic copy of the presentation materials should be provided to the ACNW.**

- ACNW meeting schedules are subject to change. Presentations may be canceled or rescheduled to another day. If such a change would result in significant inconvenience or hardship, be sure to verify the schedule with Ms. Sharon Steele at 301-415-6805 between 8:00 a.m. and 4:00 p.m. prior to the meeting.

APPENDIX C: MEETING ATTENDEES

161ST ACNW MEETING
JULY 19-21, 2005

ACNW MEMBERS	ACNW STAFF
Michael Ryan, Chairman	John Larkins
Allen Croff, Vice Chairman	Neil Coleman
James Clarke	John Flack
William Hinze	Michele Kelton
Ruth Weiner	Latif Hamdan
	Michael Lee
	Richard Major
	Richard Savio
	Sharon Steele
	Ashok Thadani

ATTENDEES FROM THE NUCLEAR REGULATORY COMMISSION

JULY 19, 2005

A. Fetter	NMSS
D. Schmidt	NMSS
R. Johnson	NMSS
D. Damon	NMSS
W. Smith	NMSS
J. Mitchell	RES
H. Astwood	OCMEM

JULY 20, 2005

P. Lyons	OCM
J. Piccone	OCMPL
A. Fetter	NMSS
P. Reed	RES
J. Rubenstone	NMSS
C. Grossman	NMSS
P. Justus	NMSS
R. Cady	RES
R. Assa	RES
T. Mo	RES
E. O'Donnell	RES
A. Schwartzman	RES
W. Ott	RES
J. Randall	RES
S. Bush-Goddard	RES
C. Trottier	RES
J. Philip	RES
V. Holahan	RES

APPENDIX C
161ST ACNW MEETING
JULY 19-21, 2005

ATTENDEES FROM THE NUCLEAR REGULATORY COMMISSION (CONT'D)

JULY 20, 2005 (Cont'd)

K. Alm-Lytz	NRR
T. Brock	STP

ATTENDEES FROM OTHER AGENCIES AND GENERAL PUBLIC

JULY 19, 2005

E. von Tiesenhausen	CCCP
D. Diadato	Nuclear Waste Technical Review Board
J. Russell	CNWRA
J. Kirkwood	BAH OCRWM
R. Summers	Self
N. Henderson	Bechtel SAIC Co.

via Telecon

Pasternak,	CALRAV Forum

JULY 20, 2005

N. Henderson	Bechtel SAIC Co.
B. Finch	DOE
J. Stamatakos	CNWRA
J. Kirkwood	BAH OCRWM
D. Diadato	Nuclear Waste Technical Review Board

JULY 21, 2005

R. Anderson	Nuclear Energy Institute
E. von Tiesenhausen	CCCP

APPENDIX D: FUTURE AGENDA

The Committee approved the following topics for discussion during its 162nd meeting, scheduled for August 2–4, 2005:

- Working Group on Waste Determinations
- Status of Repository Design Issues
- ACNW Low-Level Waste White Paper, Draft 3
- Preparation of ACNW Reports

APPENDIX E
LIST OF DOCUMENTS PROVIDED TO THE COMMITTEE

[Note: Some documents listed below may have been provided or prepared for Committee use only. These documents must be reviewed prior to release to the public.]

MEETING HANDOUTS

AGENDA ITEM NO.	DOCUMENTS
3	**Development of Risk-Informed Regulations Within the NRC and It's Application to the Nonreactor Arena**
	1. A. The Evolution of Risk-Regulations, presented by Ashok Thadani, ACRS/ACNW **[Viewgraphs]**
	B. Risk-Informing Nonreactor Regulatory Activities, presented by John Flack, ACRS/ACNW **[Viewgraphs]**
8	**Staff Briefing on International Atomic Energy Agency (IAEA) Requirements Documents DS-154: Design and Operation of Facilities for Geological Disposal of Radioactive Waste**
	2. Development of International Standards on Geological Disposal, presented by Tim McCartin, NMSS **[Viewgraphs[**
9	**Review of Generic Waste-Related Research in the Office of Nuclear Regulatory Research**
	3. Overview of Research in Support of Decommissioning Program, presented by William Ott, RES **[Viewgraphs]**
10	**RES White Paper on Collective Dose**
	4. Discussion on Collective Dose, presented by Terry Brock, RES **[Viewgraphs]**
12	**Miscellaneous**
	5. Nuclear Industry Performance: Worker Radiation Safety, presented by Ralph Anderson, NEI **[Viewgraphs]**

APPENDIX E
161ST ACNW MEETING
JULY 19-21, 2005

MEETING NOTEBOOK CONTENTS

TAB NUMBER	DOCUMENTS
	Agenda,161st ACNW Meeting, July 19–21, 2005, dated July 1, 2005
	Introductory Statement by ACNW Chairman, Tuesday, July 19, 2005, undated
	Items of Interest, undated
	Introductory Statement by ACNW Chairman, Wednesday, July 20, 2005, undated
	Color Code–ACNW Meeting, dated July 6, 2005
4	**ACNW's May 2005 Visit to Japan Follow-up**
	1. Concurrence version of Japan Trip Report
	2. Relative Roles of the NSC and the NRC
	3. Lessons Learned from the Falsification Case Involving Japanese Electric Power Companies, presentation by NSC Chairman
	4. NISA - Status Report on countermeasures against falsification related to inspection at nuclear power stations, December 2002
5	**Occupational Safety and Health Administration's (OSHA's) Request for Additional Information on Ionizing Radiation**
	5. Status Report
8	**Staff Briefing on International Atomic Energy Agency (IAEA) Requirements Documents DS-154: Design and Operation of Facilities for Geological Disposal of Radioactive Waste**
	6. Status Report

APPENDIX E
161ST ACNW MEETING
JULY 19-21, 2005

9 **Review of Generic Waste-Related Research in the Office of Nuclear Regulatory Research**

7. Status Report

8. Agenda

9. Letter dated May 5, 2004, from B. John Garrick, Chairman, ACNW, to The Honorable Nils J. Diaz, Chairman, NRC, Subject: Review and Evaluation of the U.S. Nuclear Regulatory Commission's Radionuclide Transport Waste Safety Research Program

10. Memorandum dated June 18, 2004, from Richard P. Savio, ACRS/ACNW, to ACNW Members, Subject: Analysis of the EDO Response to the May 5, 2004, ACNW Letter on the NRC Radionuclide Transport Waste Safety Research Program

10 **RES White Paper on Collective Dose**

11. Status Report

12. Paper by Roger Clarke, "Controllable Dose: A discussion on the control of individual doses from single source," dated October 1, 1998