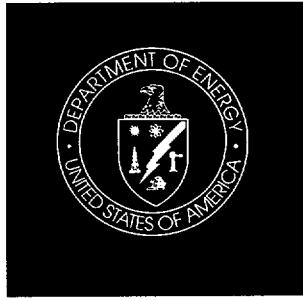
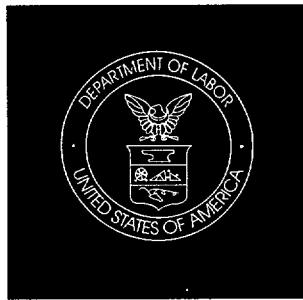




# Interagency Steering Committee on Radiation Standards



*2000 Annual Report*



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<p>Some publications in the NUREG series that are posted at NRC's Web site address <a href="http://www.nrc.gov/NRC/NUREGS/indexnum.html">www.nrc.gov/NRC/NUREGS/indexnum.html</a> are updated periodically and may differ from the last printed version. Although references to material found on a Web site bear the date the material was accessed, the material available on the date cited may subsequently be removed from the site.</p>	<p>The NUREG series comprises (1) technical and administrative reports and books prepared by the staff (NUREG-XXXX) or agency contractors (NUREG/CR-XXXX), (2) proceedings of conferences (NUREG/CP-XXXX), (3) reports resulting from international agreements (NUREG/IA-XXXX), (4) brochures (NUREG/BR-XXXX), and (5) compilations of legal decisions and orders of the Commission and Atomic and Safety Licensing Boards and of Directors' decisions under Section 2.206 of NRC's regulations (NUREG-0750).</p>

**INTERAGENCY STEERING COMMITTEE ON  
RADIATION STANDARDS**

**2000 ANNUAL REPORT**

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## **FOREWORD**

The Interagency Steering Committee on Radiation Standards (ISCORS) prepared this annual report for ISCORS member agencies as a means of documenting the ISCORS calendar year 2000 activities and accomplishments and plans for calendar year 2001. We wish to thank the ISCORS members for their participation and contributions to the many topics discussed over the past year regarding radiation issues important to (1) the public, (2) federal, state, and local agencies, and (3) national and international communities. In addition, we extend our compliments to all of the subcommittee chairpersons and their members for significant support and accomplishments within the past year on numerous radiation issues, and for developing useful information, examples of which are located at the new ISCORS website ([www.ISCORS.org](http://www.ISCORS.org)). The subcommittees outlined an aggressive list of challenges for 2001 and the full committee looks forward to receiving subcommittee recommendations on the specific topics each is addressing.

The full ISCORS met in March, June, September, and December 2000. The June 2000 meeting was open to the public for observation. At each full committee meeting, the subcommittees reported on their yearly activities and progress. The full committee also reviewed and received focused presentations on a wide variety of special topics, some of which included the following:

- the National Research Council's Report, "Long Term Institutional Management of U.S. DOE Legacy Waste Sites' Institutional Controls";
- the General Accounting Office's (GAO) audit report, "Radiation Standards: Scientific Basis Inconclusive, and EPA and NRC Disagreement Continues";
- the U.S. Nuclear Regulatory Commission's (NRC) decommissioning program status and its report, NUREG-1727, "NMSS Decommissioning Standard Review Plan";
- low dose radiation research efforts by DOE and U.S. Department of Health and Human Services (DHHS);
- the National Academy of Sciences' (NAS) study on "Improving Practices for Regulating and Managing Low-Activity Radioactive Waste";
- the U.S. Environmental Protection Agency's Superfund program guidance for using NRC's regulations for uranium mill tailings cleanup.

Over the past few years, the full ISCORS committee has established a strong intragovernmental working relationship that benefits each member agency and significantly aids in identifying topics of interest to each agency. For both member representatives and the public, the ISCORS process and access to information are made visible by the annual report. We appreciate comments on this annual report and expect that it will be used as a reference for overview of committee activities. You may send comments on the report to Mr. James Kennedy or Ms. Susanne Woods (U.S. NRC, Mail Stop T-7J8 Washington, DC 20555), or Mr. Behram Shroff (U.S. EPA, Office of Radiation and Indoor Air (6608J), 1200 Pennsylvania Avenue, NW, Washington, DC 20460).

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## **HISTORICAL INFORMATION**

The Interagency Steering Committee on Radiation Standards (ISCORS) was formed in response to October 27, 1994, letters from Senator John Glenn to the U. S. Nuclear Regulatory Commission (NRC); the U.S. Environmental Protection Agency (EPA); and the Office of Science and Technology Policy (OSTP). In his letter, Senator Glenn charged EPA and NRC, in coordination with the Committee on Interagency Radiation Research and Policy Coordination (CIRRPC), to develop a plan for a "path forward" to address the inconsistencies, gaps, and overlaps in current radiation protection standards. ISCORS is one of the committees OSTP recommended for achieving the goals of the now defunct CIRRPC. The objectives of the ISCORS include the following: (1) facilitating a consensus on acceptable levels of radiation risk to the public and workers; (2) promoting consistent risk-assessment and risk-management approaches in setting and implementing standards for occupational and public protection from ionizing radiation; (3) promoting completeness and coherence of federal standards for radiation protection; and (4) identifying interagency issues and coordinating their resolution.

Since its inception, NRC and EPA have co-chaired the ISCORS. The current co-chairs are John T. Greeves, NRC, and Frank Marcinowski, EPA. In addition to NRC and EPA, ISCORS membership also includes senior managers from other federal agencies: U.S. Department of Defense (DOD); U.S. Department of Energy (DOE); U.S. Department of Labor Occupational Safety and Health Administration (OSHA); U.S. Department of Transportation (DOT); and U.S. Department of Health and Human Services (DHHS). Representatives of the Office of Management and Budget (OMB), OSTP, and various states are observers at meetings. Committee meetings involve pre-decisional intragovernmental discussions and, as such, are not normally open for observation by members of the public or media. However, summary meeting notes are available in the NRC Public Document Room and at the ISCORS website ([www.ISCORS.org](http://www.ISCORS.org)). The Committee does not act as a decision-making body. Instead, it provides recommendations and summaries of its activities on specific issues to both the heads of member agencies, and to OMB and OSTP, via an annual report. The Committee meets approximately once each calendar quarter. The first meeting was held on April 5, 1995.

The full ISCORS committee has established subcommittees, as needed, to conduct its technical work (e.g., to address specific issues of concern or significant interest). ISCORS has formed the following subcommittees: Clean-up; Mixed Waste; Recycle; Risk Harmonization; Sewage Sludge; Naturally Occurring Radioactive Materials (NORM); and Federal Guidance. The subcommittee activity section of this report summarizes the activities of each subcommittee. No new subcommittees were formed in 2000.

## **LIST OF ISCORS PLANNED ACTIVITIES IN 2000**

This listing provides a quick reference to activities. The summary sections in this report or the ISCORS website ([www.ISCOR.org](http://www.ISCOR.org)) provide further information.

### **Clean-up Subcommittee (C. Trottier)**

1. Continue development of environmental modeling document.

### **Mixed Waste Subcommittee (G. Vazquez)**

1. Hold discussions and exchanges on current mixed-waste initiatives and issues.
2. Provide input to resolving any issues with the DOE Radiological Control Criteria (RCC) and complete any final review or analysis of the RCC as needed.
3. Provide input to Conference of Radiation Control Program Directors (CRCPD) reviews and workshops on the RCC concept.

### **Recycle Subcommittee (R. Meck)**

1. Monitor the status of clearance and import controls among national agencies and international organizations.
2. Develop and finalize normalized dose tables for specific materials as needed.

### **Risk Harmonization Subcommittee (E. Regnier)**

1. Write narrative for institutional controls tables.
2. Include Resource Conservation and Recovery Act (RCRA) on institutional control tables.
3. Develop a fact sheet examining statutory requirements for "optimization."
4. Provide recommendations on the Environmental Law Institute/John Hopkins Phase II study as needed.

### **Sewage Sludge Subcommittee (R. Bastian/R. Hogan)**

1. Issue updated "Joint NRC/EPA Guidance Document for POTWs," for review /comment.
2. Complete peer review input on dose modeling effort.
3. Complete dose modeling effort.
4. Complete publicly-owned treatment works (POTW) sample collection and analysis.
5. Complete public review of second-draft of guidance document.

### **NORM Subcommittee (L. Setlow)**

1. Discuss the EPA report to Congress on response to the National Academy of Science study of the EPA technologically enhanced naturally occurring radioactive material (TENORM) guidance.
2. Review and comment on the EPA technical report on uranium mining TENORM.
3. Coordinate activities with ISCORS Sewage Sludge Subcommittee.
4. Evaluate the need to update existing regulations/standards affecting TENORM in coordination with the ISCORS Federal Guidance Subcommittee.
5. Consider a recommendation to OSHA to update its standard to adopt NRC 10 CFR Part 20.

### **Federal Guidance Subcommittee (J. Rosenberg)**

1. Produce final revised Protective Action Guide manual.
2. Initiate White Paper on New Dosimetric Methods.
3. Produce Federal Guidance for the General Public. Establish and implement a process for moving forward to develop an updated federal guidance document for the general public.
4. Develop a methodology of approximating the risk indicated by a dose assessment in cases where a full risk analysis is not practicable.

# **SUMMARY OF SUBCOMMITTEE ACCOMPLISHMENTS IN 2000 AND PLANNED ACTIVITIES IN 2001**

Further information about subcommittees and more detailed information on subjects presented in this summary can be accessed at the ISCORS website ([www.ISCORS.org](http://www.ISCORS.org)). Abbreviations and acronyms can be found in the Glossary (Appendix B).

## **Clean-up Subcommittee Highlights**

Subcommittee Chair: Cheryl Trottier, NRC [(301) 415-6232]

*The Clean-up Subcommittee is evaluating radionuclide concentrations for screening decommissioning sites and is a forum for exchanging information and promoting partnerships addressing radiation clean-up standards and guidance.*

### **Accomplishments in Calender Year 2000 (CY 2000):**

#### **1. Draft Guidance on Computer Models for Site Clean-up and Related Decisions**

The subcommittee developed a draft document intended to provide a resource to radioactive material users who need information on how to select radiation dose and risk assessment computer models for use in site cleanup activities and decision making. The document is available on the ISCORS website for review.

The guidance document will be in the form of an “on-line catalog” via the Internet. The guidance will combine information developed by ISCORS member agencies regarding model selection criteria and address the capabilities of specific models.

#### **Planned Activities in CY 2001:**

1. Finalize a document intended to provide a resource to radioactive material users who need information on how to select radiation dose and risk assessment computer models for use in site cleanup activities and decision-making.
2. Format the guidance document on computer modeling as an “on-line catalog” that is accessible via the Internet.
3. Pilot the “on-line catalog” format, then include additional radiation dose and risk assessment models and a description of their capabilities.

## **Mixed Waste Subcommittee Highlights**

Subcommittee Chair: Gus Vazquez, DOE [(202) 586-7629]

*The Mixed Waste Subcommittee is a forum for exchanging information on mixed waste.*

### **Accomplishments in CY 2000:**

1. **EPA Initiatives** -Among the various agency mixed waste (i.e., waste comprised of both radioactive and RCRA hazardous material components) initiatives shared by the subcommittee members and briefed to the full ISCORS at its quarterly meetings, two

EPA initiatives were included: (1) EPA storage and disposal of commercial low-level mixed waste rulemaking; and (2) EPA Low-Activity (i.e., low radioactivity ) Mixed Waste Initiative. In addition to briefings on the plans and status of the initiatives, the members provided insights and technical suggestions to the EPA and shared related technical information.

2. DOE Radiological Control Criteria (RCC) -The subcommittee kept informed of the DOE approach for disposal of mixed waste in RCRA subtitle C (hazardous waste) facilities. This approach is similar to the EPA's second approach described above. The RCC approach is a framework for the disposal of certain DOE mixed wastes with low radioactivity concentrations. This treated waste would then be disposed of in a RCRA C-type disposal cell, rather than a mixed waste disposal cell. Consequently, implementation of this approach will eliminate dual regulation of the waste.

### **Planned Activities in CY 2001:**

1. Continue to provide advice as needed on implementation or guidance for the EPA mixed waste rule published in May 2001.
2. Hold discussions and exchanges on current mixed waste initiatives and issues. Specifically, the subcommittee efforts will continue to focus on the coordination and sharing of technical information for use by member agencies and observers who address mixed waste issues.
3. Provide input toward resolving issues for the DOE Radiological Control Criteria (RCC) initiative that is focused on disposal of certain DOE mixed waste and complete any final review or analysis as needed.
4. Provide input to and help answer questions from the Conference of Radiation Control Program Directors (CRCPD) (i.e., directors of individual state or local radiation regulatory programs) reviews and workshops on the DOE RCC concept.

### **Recycle Subcommittee Highlights**

Subcommittee Chair: Robert A. Meck, NRC [(301) 415-6205]

The Recycle Subcommittee reviews issues on radiological control of materials.

### **Accomplishments in CY 2000:**

1. Federal Agency Activities and International Developments -The subcommittee kept abreast of federal agency activities and international developments. At NRC, development of technical information such as radiation dose assessments, inventory, and some cost estimates is continuing to address material and equipment that have very low levels of associated radioactivity and are candidates for clearance. The DOE suspended release of metals with radioactivity on the surface, and placed a moratorium on the release of metals with volumetric radioactivity (i.e., radioactivity that is distributed throughout the metal). EPA tabled rulemaking activities on clearance and will re-focus its efforts on the interception of imported goods that should be placed under radiological control. The International Atomic Energy Agency is continuing efforts to derive and publish clearance levels based on 10 :Sv/a (1 mrem/y).

2. **Inactive Status** -As proposed by the chair of the subcommittee, ISCORS agreed that the subcommittee be placed in an inactive status until it can be assigned a specific task. Additionally, ISCORS asked the subcommittee to continue to monitor international and national efforts on recycle and reuse, monitor the control of the orphan sources (i.e., radioactive sources with no apparent owner) program, and support the CRCPD with federal input on recycle, reuse, and orphan sources. A conference call every quarter among the subcommittee members was suggested as an efficient means of accomplishing these goals.

#### **Planned Activities in CY 2001:**

1. Remain in an inactive status until a specific task is identified by ISCORS.
2. Continue to monitor international and national efforts on recycle and reuse, monitor the control of the orphan sources (i.e., radioactive sources without an identifiable owner) program, and support the CRCPD with federal input on recycle, reuse, and orphan sources.

### **Risk Harmonization Subcommittee Highlights**

Subcommittee Chair: Edward Regnier, DOE [(202) 586-5027]

*The Risk Harmonization Subcommittee was initiated to review similarities and differences between NRC and EPA risk assessment and risk management approaches.*

#### **Accomplishments in CY 2000:**

1. **Presentation on Risk Harmonization** - The subcommittee arranged for a presentation to ISCORS by Dr. David Kocher entitled, "Consistent Regulation of Public Exposures to Radionuclides and Hazardous Chemicals: Keys to Risk Harmonization." The presentation emphasized several points: (1) the key to risk harmonization is the consistent application of as low as reasonably achievable exposures to all situations; (2) risk harmonization does not mean achieving consistency in numerical standards (limits or goals); (3) substantial differences in numerical standards for different exposure situations can be reasonable. The information presented will be used, for example, by the Federal Guidance Subcommittee during revision of guidance on radiation exposures to members of the general public.
2. **Optimization Task Group** -The subcommittee formed a task group to look at optimization (i.e., the practice of making decisions based on the practical considerations of ALARA) issues as they relate to risk harmonization. The Optimization Task Group will develop a table that describes statutory, regulatory, and other requirements for using cost-benefit analysis, ALARA, or related optimization considerations in setting standards.
3. **Institutional Controls Task Group** -The subcommittee also formed a task group to continue the ongoing effort addressing the use of institutional controls. The Institutional Control Task Group added the RCRA hazardous waste facility program to its tables of institutional controls. Additionally, the group conducted a poster session at the Waste Management 2000 conference on institutional controls in various federal programs and the

different roles they play in managing risk. Institutional controls may include land ownership, maintenance and monitoring, and well-documented information about the location of a site with residual radioactivity that is preserved for use by future generations.

#### **Planned Activities in CY 2001:**

1. Continue work on tables that explain the optimization requirements in each agency.
2. Provide a narrative to accompany the tables on institutional controls, and investigate if the CERCLA program can be an added resource.

#### **Sewage Sludge Subcommittee Highlights**

Subcommittee Co-chairs: Bob Bastian, EPA [(202) 260-7378]  
Rosemary Hogan, NRC [(301) 415-7484]

*The Sewage Sludge Subcommittee is conducting an NRC/EPA joint survey to collect information concerning radioactive materials in sewage sludge and ash from sewage treatment plants [referred to in industry as publicly owned treatment works (POTWs)]. This is a two part survey effort: (1) a survey questionnaire; and (2) a program to sample and analyze sewage sludge and incinerator ash. The result will be guidance documents and assistance with potential rulemaking decisions.*

#### **Accomplishments in CY 2000:**

1. Draft Sewage Sludge Dose Modeling Report -As part of the subcommittee efforts to revise its draft sewage sludge dose modeling report, "Radionuclides in Sewage Sludge Dose Assessment" (November 5, 2000), the Radiation Advisory Committee (RAC) of the EPA Science Advisory Board reviewed the document in December 2000. In general, the review results were positive and supportive of the subcommittee efforts to (1) revise the draft document, (2) use RESRAD computer modeling as the basis, and (3) conduct sensitivity and uncertainty analyses using Monte Carlo methods (a type of probability analysis that analyzes various scenarios) with consideration of relevant correlations. The need for documenting all procedures and assumptions was emphasized.

The final RAC report addressing the draft document is expected to be made available by midyear 2001. The subcommittee plans to use the NRC Advisory Committee on Nuclear Waste for the review of the final dose modeling document.

2. Sampling Phase of the Sewage Sludge Survey -The sample collection phase of the sludge survey was completed. Sewage sludge and ash samples from more than 300 POTWs were received as a part of the survey. The results of the sample analyses are being compiled in a database, after being reviewed by the subcommittee.
3. Meeting with the Association of Metropolitan Sewerage Agencies -This meeting was arranged for the subcommittee to learn more about the National Biosolids Partnership independent modeling activities for comparison to and use during the ISCORS efforts.

4. Revised Draft Guidance on Radioactive Materials in Sewage Sludge and Ash at Publicly Owned Treatment Works -The June 2000 draft document was issued for public comment. The document was developed using topical areas provided as input from various publicly owned treatment works. The subcommittee will continue to accept comments until it issues the final document.

#### **Planned Activities in CY 2001:**

1. Incorporate, as appropriate, the EPA Science Advisory Board RAC report on the subcommittee draft dose modeling report, "Radionuclides in Sewage Sludge Dose Assessment" (November 5, 2000). Complete and issue the revised dose modeling report.
2. Complete the database compilation of sample analysis results, after review by the subcommittee. Summarize the data using the categories identified in the survey questionnaire (during the first phase of the survey), such as geographic location, type of sewage treatment, size of facility and flow rate. Issue a completed sewage survey data report and results summary.
3. Finalize and issue the POTW guidance document.

#### **NORM Subcommittee Highlights**

Subcommittee Chair: Loren Setlow, EPA [(202) 564-9445]

*The NORM Subcommittee mission is to ensure effective communication and coordination among member agencies involved with regulatory, oversight, and disposal issues for NORM wastes, and products containing NORM.*

#### **Accomplishments in CY 2000:**

1. NORM Forum Activities -The subcommittee provided a forum for exchanging information on current agency activities, proposed regulations, new reports, as well as on planned international meetings at which NORM issues were to be discussed.
2. Briefings on Major Informational Areas -Member agencies were briefed on (1) the CRCPD Part N Implementation Plan, (2) NRC decisions on source materials containing less than <0.05 percent uranium and thorium, and (3) NRC decisions for uranium/thorium mineral extraction and processing operations.
3. National Academy of Sciences Recommendations on TENORM -Member agencies were provided information on and copies of the EPA Report to Congress that responds to the National Academy of Sciences recommendations on TENORM (Technologically Enhanced Naturally Occurring Radioactive Materials). [TENORM is a term applied to radioactive material that is produced when human activity, such as uranium mining or water treatment, concentrates or increases human or environmental exposure to radionuclides that occur naturally in mineral ores, solids, water, or other natural materials.]
4. DOT Regulations -The subcommittee discussed the DOT request for comments to update transport regulations in consideration of revised international radiation standards.

5. Briefings to Member Agencies -Briefings on (1) the status of the ISCORS Sewage Sludge POTW survey and radiological analyses, and (2) the EPA Colorado Plateau uranium mine sites Geographic Information System.
6. ISCORS Federal Guidance Subcommittee Guidance -The subcommittee held discussions on the Federal Guidance Subcommittee efforts to develop new draft guidance addressing exposures to members of the public.

#### **Planned Activities in CY 2001:**

1. Provide input to ongoing projects of the ISCORS Sewage Sludge Subcommittee, and the Federal Guidance Subcommittee.
2. Review and comment on the EPA draft Technical Report on Uranium Mining TENORM.
3. Complete a paper on NORM/TENORM that identifies different agency responsibilities for these materials.
4. Consider a recommendation to OSHA to update its standard to adopt 10 CFR Part 20 (NRC).

### **Federal Guidance Subcommittee Highlights**

Subcommittee Chair: Julie Rosenberg, EPA [(202) 564-9154]

*This subcommittee works with EPA to produce Federal Guidance, including Presidential Guidance and technical reports, that supports the development of consistent national radiation protection standards and implementing guidance. The subcommittee serves as the forum for coordination among federal and state government agencies interested in any or all aspects of Federal Guidance. The forum ensures that all agencies have opportunities for input before and during development of the Federal Guidance.*

#### **Accomplishments in CY 2000:**

1. White Paper on New Dosimetric Methods –Technical analysis was completed by the subcommittee. This paper will address whether Federal agencies should adopt the newer International Commission on Radiation Protection (ICRP) recommendations for dosimetric systems contained in ICRP 60/66/68. Currently, earlier ICRP reports (26/30) are used. During the last year, Oak Ridge National Laboratory prepared a report for EPA entitled, “Dosimetric Significance of the ICRP’s Updated Recommendations, 1989-Present, and Implications for Federal Guidance.” The report highlights the effects caused by these differences, particularly changes in the dose and risk coefficients. A group of Federal Guidance Subcommittee members began reviewing the report for discussion with the full subcommittee on (1) decisions about what, if anything, should be done toward adopting the newer ICRP recommendations and (2) both the related technical changes and regulatory implications.

2. Protective Action Guides (PAGs), as provided in the EPA "Manual of Protective Action Guides and Protective Actions for Nuclear Incidents" -This manual and the PAG criteria for responding to nuclear incidents (involving releases or potential releases of specified quantities of radioactive material) are being revised by an interagency team that is specifically responsible for federal emergency response planning and is separate from ISCORS. Issuance of this document is still pending. The subcommittee efforts are focused on whether or not to recommend to the full ISCORS that the final document be adopted as Federal Guidance for general application by all ISCORS agencies.
3. Federal Guidance on Radiation Exposures to Individual Members of the General Public -Specifically, the subcommittee focus is the establishment and implementation of a process for moving forward to develop and update Federal Guidance (i.e., a consensus document from the Federal government) for application to members of the general public. In CY 2000, the subcommittee identified and discussed key issues and agreed on a potential path forward to address fundamental principles. Additionally, the subcommittee began drafting an outline that was subsequently developed into a draft guidance document. Finally, the Chair of the subcommittee wrote a letter explaining this guidance effort to the Health Physics Society, which was subsequently published in the Health Physics Society's Newsletter in January 2001.

The approach that is being considered by the subcommittee focuses on "optimization." In other words, the practice of making decisions based on the practical considerations of ALARA principles. The existing limit, issued in 1960, is a 500-millirem (i.e., 5-millisievert) dose per year to a member of the general public. Compared to the knowledge existing when this limit was first proposed, current efforts can substantially lower exposures by recognizing and using the strides made in both the science of radiation dose analysis and the understanding of associated risks.
4. Risk-Dose Methodology -DOE asked the subcommittee to recommend a simplified method for estimating excess cancer risk when only the total dose is known (i.e., when radionuclide-specific information is not available). EPA staff prepared a draft approach that can be used to make qualitative comparisons of risk. This approach uses a conservative dose conversion factor that is based on the risk from uniform external irradiation of an average member of the population by gamma radiation. Although this approach is not acceptable for determining compliance with risk-based standards, it can be used for the kinds of qualitative comparisons that DOE is interested in. A final version of the method, with appropriate caveats, is awaiting review by the subcommittee before general distribution.
5. Ecological Risk -Although the subcommittee did not have a CY 2000 goal related to ecological risk (i.e., risk to plants and animals from radiation exposure), the subcommittee kept abreast of DOE progress in this area by receiving presentations during the year.

### **Planned Activities in CY 2001:**

1. Complete review of the Oak Ridge National Laboratory prepared report for EPA entitled, "Dosimetric Significance of the ICRP's Updated Recommendations, 1989-Present, and Implications for Federal Guidance," and related analyses of economic and regulatory implications to provide recommendations to the full ISCORS regarding the adoption of ICRP 60/66/68.
2. Upon submittal of the revised Protective Action Guides (PAGs), as provided in the EPA "Manual of Protective Action Guides and Protective Actions for Nuclear Incidents," review the PAG criteria and make a recommendation to the full ISCORS on whether to issue the product as federal guidance.
3. Complete the draft federal guidance on radiation exposures to individual members of the general public and revise the document based on review comments from the full ISCORS.
4. Complete review of the risk-dose methodology that was developed in CY 2000 for estimating excess cancer risk and making qualitative risk comparisons in situations where radionuclide-specific information is not available and only the total radiation dose is known.
5. Continue as a forum for discussing issues related to ecological risk and reviewing material addressing this subject during the coming year.

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Subcommittee members complete reviews on specific issues to bring to the full ISCORS membership for consideration and decisions.

### **CLEANUP SUBCOMMITTEE**

ORGANIZATIONS	MEMBERS	
NRC	Cheryl Trottier, Chair	(301) 415-6232
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DOE	Andrew Wallo Stephen Domotor	
DOL/OSHA States	Chia Chen Debra McBaugh, Washington	

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Institutional Controls Workgroup		
NRC	James Kennedy	
EPA	Ernesto Brown	
DOE	Colleen Ostrowski	

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## NORM SUBCOMMITTEE

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OSHA/DOL	Chia Chen
DOD	Captain David Farrand
	Captain Julie Coleman
DHHS	Commander Shawn Googins
States	Thomas Hill, Georgia

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DOE	Steve Domotor Diane Larsen Hal Peterson Andy Wallo	
DOT	Fred Ferate	
DHHS	Bruce Wachholz	
OSHA/DOL	Chia Chen	
DOD	Mike Shaeffer	
States	Cynthia Cardwell, Texas	

## **APPENDIX A**

### **ISCORS Charter**

**CHARTER FOR  
INTERAGENCY STEERING COMMITTEE ON RADIATION STANDARDS**

**Purpose of Committee**

The purpose of this committee is to foster early resolution and coordination of regulatory issues associated with radiation standards.

**Membership**

1. Agencies represented on the committee include the U.S. Environmental Protection Agency, U.S. Nuclear Regulatory Commission, U.S. Department of Energy, U.S. Department of Defense, U.S. Department of Transportation, the Occupational Safety and Health Administration of the U.S. Department of Labor, the U.S. Department of Health and Human Services, and any successor agencies.
2. The Office of Science and Technology Policy and the Office of Management and Budget will be invited as observers at meetings because of their responsibilities for coordination of science policy and regulation policy, respectively.
3. The committee will be co-chaired by the EPA and NRC representatives for the first two years, after which the committee will determine whether the chairmanship should be rotated among additional agencies, or whether the chairmanship should be held by a single agency.
4. Other departments and agencies will be invited to participate in forming consensus for specific issues as voting members when their interests and responsibilities are involved.

**Objectives**

The objectives of the committee include the following:

1. Facilitate a consensus on allowable levels of radiation risk to the public and workers.
2. Promote consistent and scientifically sound risk assessment and risk management approaches in setting and implementing standards for occupational and public protection from ionizing radiation.
3. Promote completeness and coherence of Federal standards for radiation protection.
4. Identify interagency radiation protection issues and coordinate their resolution.

**Implementation**

The committee will conduct its activities in accordance with the attached understandings and procedures.

UNDERSTANDINGS AND PROCEDURES FOR  
THE INTERAGENCY STEERING COMMITTEE ON RADIATION STANDARDS

Participation

1. Various offices and agencies within each agency may participate in the committee meetings. Each agency will develop a unified position and present that position at committee meetings. Each agency representative is responsible for developing their coordinated agency position in preparation for reaching committee consensus.
2. Agencies will be represented at the meetings by senior level, career government employees, who are engaged in policy matters for the agency.
3. Official agency representatives will be identified in writing to the co-chairpersons by the Assistant Administrator, Secretary, or Commissioner, as appropriate.
4. Committee meetings involve pre-decisional intragovernmental discussions and, as such, are not open for observation by members of the public or media.
5. The committee may, from time to time, revise the charter based on the consensus views of the committee, including such items as membership, responsibility for chairing the committee, and objectives.

Decisions

1. The committee has not been delegated any authorities established by law, regulation, Executive Order, or other administrative mechanism to act in lieu of formal agency action. The objectives of the committee are described in the committee charter.
2. The committee will make every effort to base decisions on consensus. Consensus reflects acceptance among the voting agencies.
3. Each agency will have a single vote in reaching consensus on specific issues. If a consensus cannot be reached, committee recommendations will reflect the lack thereof and include the opportunity for agencies to attach minority views to any documentation of the recommendations.
4. Recommendations on specific issues will be provided to the heads of member agencies, OMB, and OSTP.

Meetings

1. Responsibility for hosting the meetings will rotate among the agencies. The host agency is responsible for developing a mutually agreeable meeting date and time, informing the agencies at least two weeks in advance of the

meeting date, distributing a draft agenda for the meeting, arranging for a meeting facility, and documenting and distributing summary meeting notes.

2. Summary meeting notes will be provided by the host agency to designated representatives of each of the member agencies, OMB, OSTP, and, as appropriate, Congressional contacts and other groups. The host agency will distribute draft notes within one week of the committee meeting and final meeting notes at least two weeks before the next committee meeting. NRC will also place a copy of the summary meeting notes in the Public Document Room.
3. The committee will establish a plan for approximately a six-month period. Specific agendas will be developed for each meeting based on the general plan.
4. The committee will meet approximately once each calendar quarter, with more frequent meetings, as needed to address specific issues.

**Subcommittees**

1. The committee may create subcommittees to focus on specific issues or activities (e.g., recycling criteria, risk harmonization, cleanup standards). Subcommittees will follow the same understandings and procedures as the full committee.
2. Subcommittees will meet at a frequency and location as determined necessary by the subcommittee.

FOR THE U.S. NUCLEAR REGULATORY COMMISSION,

Hugh L. Thompson  
Hugh L. Thompson, Jr.  
Deputy Executive Director for  
Nuclear Materials Safety,  
Safeguards and Operations Support

12-18-95

Date

FOR THE U.S. ENVIRONMENTAL PROTECTION AGENCY,

Mary Nichols  
Mary Nichols  
Assistant Administrator  
Office of Air and Radiation

1-16-96

Date

FOR THE U.S. DEPARTMENT OF ENERGY,

Tara O'Toole  
Tara O'Toole, M.D., M.P.H.  
Assistant Secretary for  
Environment, Safety and  
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2/4/96

Date

FOR THE U.S. DEPARTMENT OF DEFENSE,

Paul Kaminski  
Paul G. Kaminski  
Under Secretary of Defense  
(Acquisition & Technology)

JUL 12 1996

Date

FOR THE U.S. DEPARTMENT OF TRANSPORTATION,

D. K. Sharma  
Dr. Dharmendra K. Sharma  
Administrator  
Research and Special Programs  
Administration

OCT 24 1996

Date

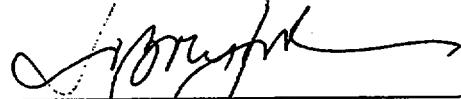
FOR THE U.S. DEPARTMENT OF LABOR,

Greg Watchman  
Greg Watchman  
Acting Assistant Secretary for  
Occupational Safety and  
Health Administration

3/21/97

Date

FOR THE US DEPARTMENT OF HEALTH AND HUMAN SERVICES



Jo Ivey Boufford, M.D.  
Acting Assistant Secretary for Health

5-16-97  
Date

## **APPENDIX B**

### Glossary

## **Glossary**

### **Acronym List**

ALARA	As low as is reasonably achievable (radiation dose)
AMSA/WEF	American Metropolitan Sewage Association/ Water Environmental Federation
ANSI	American National Standards Institute
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CIRRPC	Committee for Interagency Radiation Research and Policy Coordination
CRCPD	Conference of Radiation Control Program Directors
DHHS	Department of Health and Human Services
DOE	Department of Energy
DOT	Department of Transportation
ELI	Environmental Law Institute
EPA	Environmental Protection Agency
IAEA	International Atomic Energy Agency
ICRP	International Commission on Radiation Protection
ISCORS	Interagency Steering Committee on Radiation Standards
NAS	National Academy of Sciences
NCRP	National Council on Radiation Protection and Measurements
NORM	Naturally Occurring Radioactive Material
NRC	Nuclear Regulatory Commission
OMB	Office of Management and Budget
OSHA	Occupational Safety and Health Administration, Department of Labor
OSTP	Office of Science and Technology Policy
PAG	Protective Action Guides
POTW	Publicly-Owned Treatment Works
RCC	Radiological Control Criteria
RCRA	Resources Conservation and Recovery Act
TENORM	Technologically Enhanced Naturally Occurring Radioactive Material

### **Radiation Unit Abbreviations**

mrem/y	millirem per year
Sv/a	Sievert per annum

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(See instructions on the reverse)

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2000 Annual Report

5. AUTHOR(S)

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8. PERFORMING ORGANIZATION - NAME AND ADDRESS (If NRC, provide Division, Office or Region, U.S. Nuclear Regulatory Commission, and mailing address; if contractor, provide name and mailing address.)

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9. SPONSORING ORGANIZATION - NAME AND ADDRESS (If NRC, type "Same as above"; if contractor, provide NRC Division, Office or Region, U.S. Nuclear Regulatory Commission, and mailing address.)

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10. SUPPLEMENTARY NOTES

11. ABSTRACT (200 words or less)

The Interagency Steering Committee on Radiation Standards (ISCORS) prepared this annual report for ISCORS member agencies, to document ISCORS' year 2000 activities, and plans for the year 2001. The report identifies both past accomplishments and goals for the future. The objectives of ISCORS include: (1) facilitating a consensus on acceptable levels of radiation risk to the public and workers; (2) promoting consistent risk assessment and risk management approaches in setting and implementing standards for occupational and public protection from ionizing radiation; (3) promoting completeness and coherence of Federal standards for radiation protection; and (4) identifying interagency issues and coordinating their resolution.

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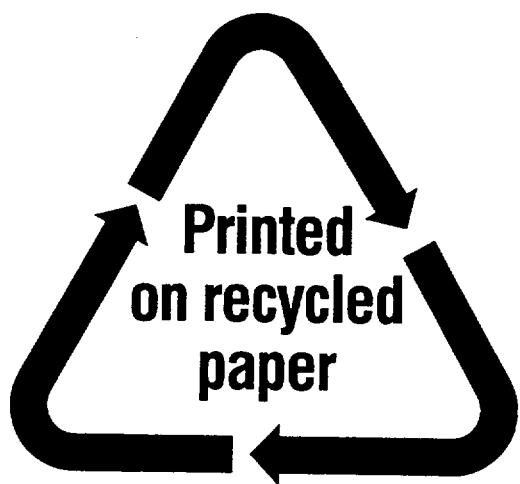
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