

March 20, 2001

Dear members of the Interagency Steering Committee on Radiation Standards:

I am writing to invite you to attend the next meeting of the Interagency Steering Committee on Radiation Standards (ISCORS) to be held on March 22, 2001, from 1 PM to 5 PM. A draft agenda for the meeting is enclosed for your review. The meeting will be held at NRC Headquarters in Rockville, in One White Flint North Office Building, Room O-14-B-6. The building is located directly across from the exit of the White Flint Metro station, and is the NRC building closer to the metro. The purpose of the meeting is to discuss ongoing efforts on various topics on radiation protection and to discuss subcommittee actions. The minutes of the December 15, 2000, meeting are enclosed and will be available at the meeting.

I look forward to meeting you on March 22, 2001. If you have any questions, please call me at 301-415-7437, or Behram Shroff of EPA at 202-564-9707, email: [shroff.behram@epa.gov](mailto:shroff.behram@epa.gov).

Sincerely,

/s/  
original signed by

John T. Greeves, Director  
Division of Waste Management  
Office of Nuclear Material Safety  
and Safeguards

Enclosures:

1. Draft agenda for the March 22, 2001 meeting
2. December 15, 2000, ISCORS meeting summary

cc: See attached

cc: Frank Marcinowski, EPA/ORIA  
Mary E. Clark, EPA/ ORIA  
Keith Matthews, EPA/OGC  
Patrice Simms, EPA/OGC  
Larry Read, EPA/OERR  
Chuck Sands, EPA/OERR  
Bruce Means, EPA/OERR  
Michael Shapiro, EPA/OSWER  
Craig Hooks, EPA/OFFE  
David Levenstein, EPA/OFFE  
Cynthia Dougherty, EPA/OGWDW  
Bob Bastian, EPA/OSW  
Matt Hale, EPA/OSW  
Nancy Hunt, EPA/OSW  
Ernesto Brown, EPA/OSW  
Julie Rosenberg, EPA/ORIA  
Michael Boyd, EPA/ORIA  
C. Paperiello, NRC/DEDO  
Cheryl Trottier, NRC/RES  
Martin Virgilio, NRC/NMSS  
Margaret Federline, NRC/NMSS  
Donald Cool, NRC/NMSS  
Robert Meck, NRC/RES  
Rosemary Hogan, NRC/RES  
Thomas Essig, NRC/NMSS  
James Kennedy, NRC/NMSS  
Patricia Santiago, NRC/NMSS  
Michael Schaeffer, DOD, DTRA  
Col. Robert Cherry, DOD/DOA  
Andy Wallo, DOE/EH  
Ray Berube, DOE/EH  
Paul Seligman, DOE/EH  
Mark Frei, DOE/EM  
James Fiore, DOE/EM  
Jim Owendoff, DOE/EM  
David Huizenga, DOE/EM  
James Antizzo, DOE/EM  
Colleen Ostrowski, DOE/EH  
Marthe Kent, DOL/OSHA  
Chia Chen, DOL/OSHA  
Bill Perry, DOL/OSHA  
Robert McGuire, DOT  
Fred Ferate, DOT/MS DHM-23  
Dr. Bruce Wachholz, DHHS/NCI  
Phil Frappaollo, DHHS/FDA  
Amy Farrell, OMB  
Pat Gallagher, OSTP  
Jill Lipoti, NJDEP  
Steve Collins, IDNS

## **AGENDA**

### **INTERAGENCY STEERING COMMITTEE ON RADIATION STANDARDS**

Thursday, March 22, 2001

1:00 PM - 5:00 PM

U.S. Nuclear Regulatory Commission

Room O-14-B-6

11555 Rockville Pike

Rockville, MD

301-415-7000

(White Flint Metro Station)

**Introductions:** (1:00 - 1:10 p.m.) - John Greeves/Frank Marcinowski. Introduction of principal meeting attendees

**Annual Report** (1:10-1:15)–Status and plans–J. Kennedy, B. Shroff

**Subcommittee Progress Reports** (1:15 - 2:30 p.m.)

1. Federal Guidance–Julie Rosenberg
2. Cleanup–Cheryl Trottier
3. Mixed Waste–Gus Vasquez
4. Recycle–Bob Meck
5. Risk Harmonization–Ed Regnier
6. Sewage Sludge/Ash–Robert Bastian/Rosemary Hogan
7. NORM–Loren Setlow

**Agenda Items:** (2:30 - 4:30 p.m)

- 2:30 - 3:15 NAS' Board on Radioactive Waste Management activities–Kevin Crowley, NAS
- Low-activity waste study
  - Long-term stewardship studies
  - Harmonization of chemical and radioactive materials
  - Clearance
  - Study of “end-points” for remediation and waste disposal in Russia
  - Geologic disposal study
- 3:15 - 3:40 MARMOD, Andrew Sowder, EPA
- 3:40 - 4:00 MARLAP, Ben Hull, EPA
- 4:00 - 4:15 Domestic and International Meetings
- IAEA Waste Standards Safety Committee, Vienna, April 2-6, 2001
  - NAS Board on Radioactive Waste Management meeting on long-term stewardship of sites–April 3, 2001
- 4:15 - 4:30 Administrative

**Enclosure 1**

**Action Items/Next Steps (4:30-4:45)**

8. Review of action items
9. Date/time/place of next meeting
10. Topics for next meeting

## **INTERAGENCY STEERING COMMITTEE ON RADIATION STANDARDS MEETING SUMMARY**

Date: December 15, 2000

Time: 9:00 A.M. -- 12:00 P.M.

Location: U.S. Department of Energy HQ, Forrestal Building, Room 5E-069

Agenda: Attachment 1

Attendees: Attachment 2

### **Meeting Summary:**

John Greeves, NRC, and Frank Marcinowski, EPA, welcomed attendees to the meeting of the Interagency Steering Committee on Radiation Standards (ISCORS).

At the September meeting, the ISCORS decided to hear reports from the Subcommittees at the beginning of the meeting and to provide direction to them for the upcoming year. Each Subcommittee made a presentation on accomplishments in 2000 and goals for 2001, and received feedback from the ISCORS on their planned work. The following is a summary of the discussion for each Subcommittee:

### Federal Guidance

Mike Boyd of EPA made the presentation on behalf of the Subcommittee. In the last year, the Subcommittee made the following progress in meeting the goals from the start of the year:

- White Paper on new Dosimetric Methods—This paper will address whether Federal agencies should adopt the newer International Commission on Radiation Protection 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 is reviewing the report and will discuss it with the full Subcommittee to decide what, if anything, should be done toward adopting the newer ICRP recommendations.
- Protective Action Guide (PAG)—This document has not been issued, thus the Subcommittee did not yet consider revising the PAG manual. The document is now going through interagency review and will likely come to the FG Subcommittee to consider whether to issue it as Federal Guidance in early 2001.

**Enclosure 2**

- Produce Federal Guidance to the General Public--Establish and implement the process for moving forward to develop and updated Federal Guidance for the General Public. The Subcommittee identified and discussed key issues, agreed on a potential path forward on fundamental principles, and began drafting an outline in CY 2000. In 2001, the Subcommittee will prepare a detailed annotated outline for the full ISCORS' consideration, and complete a draft following feedback on the annotated outline from ISCORS. The approach that is being considered by the Subcommittee focuses on "optimization," or the lowering of exposures below a dose limit based on ALARA ( As Low as Reasonably Achievable) considerations.
- Develop Risk-Dose methodology--The Subcommittee developed in CY 2000 a methodology for approximating risk indicated by dose assessments in cases where a full risk assessment is not possible.
- Ecological Risk--although the Subcommittee had no goal for CY 2000 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. The Subcommittee will continue as a forum for discussing issues and reviewing material in the coming year.

Mike Boyd noted that Julie Rosenberg, Chair of the FG Subcommittee, had written the following letter to the Health Physics Society (HPS), which was published in the January 2001 edition:

" We noted with interest the HPS position statement on Ionizing Radiation Safety Standards for the General Public in the October, 2000 HPS Newsletter. The U.S. Environmental Protection Agency, Nuclear Regulatory Commission, Department of Energy, other Federal Agencies and representatives of states have been working together for this past year to issue an updated Federal Guidance for the General Public. Since EPA withdrew the version of the Federal Guidance that had been issued as a proposal in 1994, our group is taking a fresh look at the issues and is directly addressing concerns that surfaced through that process. The goal of our effort is to provide the public and regulated community with a consensus document from the Federal government on principles for protecting the public from unnecessary exposure to ionizing radiation. The collaboration is taking place in the Federal Guidance Subcommittee to the ISCORS."

### Cleanup

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

The final document will be in the form of an "on-line catalog" via the Internet. It will combine information that has been developed by ISCORS member agencies regarding model selection criteria, and on the capabilities of specific models.

Cheryl Trottier of NRC reported that the Subcommittee believed that a rudimentary cost benefit analysis is needed for the MARMOD effort to determine if it is worthwhile. EPA will make a

presentation at the next ISCORS meeting on what is projected for resources to develop MARMOD and the benefits. MARSSIM and MARLAP have both required considerable resources to develop.

Finally, it was agreed by ISCORS members that a representative from the U.S. Army Corps of Engineers should be appointed to the Subcommittee. Mike Schaeffer of DOD will follow up with the Corps.

### Mixed Waste

In CY 2000, the Subcommittee members shared information on the status of their various agency initiatives, and briefed the ISCORS at its quarterly meetings. The major Agency initiatives included: (1) EPA's storage and disposal of commercial mixed waste rulemaking, and its extension of the policy of lower enforcement priority for storage of untreatable mixed waste; and (2) EPA's low-activity mixed waste initiative. In addition to briefings on plans and status of the initiative, the members provided insights and technical suggestions to the EPA and shared related technical information. The Subcommittee also kept informed regarding DOE's Radiological Control Criteria (RCC) approach for disposal of mixed waste in RCRA subtitle C (hazardous waste) facilities.

For the CY 2001, the Mixed Waste Subcommittee will:

- Provide advice as needed on implementation or guidance for EPA's mixed waste rule to be published in the spring 2001.
- Hold discussions and exchanges on current mixed waste initiatives and issues.
- Provide input to resolving Radiological Control Criteria issues and complete any final review or analysis as needed.
- Provide input to the Conference of Radiation Control Program Directors (CRCPD) reviews and workshops on the Radiological Control Criteria concept.

### Recycle

During the year, the Subcommittee kept abreast of Federal agency activities and international developments. At NRC, development of technical information such as dose assessments, inventory, and some cost estimates are continuing. The DOE has suspended release of metals with radioactivity on the surface, and has placed a moratorium on the release of metals with volumetric radioactivity. EPA has 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 microSv/a (1 mrem/y).

Bob Meck, the chair of the Subcommittee, proposed to ISCORS that the Subcommittee be placed in an inactive status until ISCORS has a specific task for them. ISCORS agreed, and asked that the Subcommittee continue to monitor international efforts on recycle and reuse, monitor the control of orphan sources program and the pilot 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.

### Risk Harmonization

The Subcommittee had a number of accomplishments during CY 2000:

- Members of the Institutional Control working group of the Subcommittee conducted a poster session at Waste Management 2000 on institutional controls in various Federal programs and the different roles they play in managing risk.
- The Subcommittee arranged for Dr. David Kocher to make a presentation to ISCORS entitled, "Consistent Regulation of Public Exposures to Radionuclides and Hazardous Chemicals: Keys to Risk Harmonization." Dr. Kocher argues that the key to risk harmonization is the consistent application of ALARA principles to all exposure situations, that risk harmonization does not mean achieving consistency in numerical standards (limits or goals), and that substantial differences in numerical standards for different exposure situations can be reasonable. The Federal Guidance Subcommittee is pursuing an emphasis on ALARA in revising the Federal Guidance for the General Public, in part as a result of this presentation.
- The subcommittee formed a task group to look at optimization issues as they relate to risk harmonization (e.g., what is required by limits versus what is achieved through ALARA) and one to continue the ongoing effort on use of institutional controls (IC). The Optimization group will develop a table that describes statutory, regulatory, and other requirements for using benefit-cost analysis, ALARA, or related optimization considerations in setting standards.
- The Institutional Control group, in addition to its members participating in WM 2000, also added the RCRA hazardous waste facility program to its tables of institutional controls.

For 2001, the Subcommittee will continue work on tables explaining the optimization requirements in each Agency, provide a narrative to accompany the tables on institutional controls, and investigate if the CERCLA program can be added.

### Sewage Sludge Subcommittee

Bob Bastian of EPA reported that the EPA Science Advisory Board's Radiation Advisory Committee's advisory review of the *Draft Sewage Sludge Dose Modeling Report* was held on 12-14 December 2000, and that a public review Draft SAB Advisory Report on the document should be made public for comment by the end of Jan'01. He and others from the Subcommittee noted that the review sessions were quite positive and supportive of the Subcommittee's efforts to revise the draft document, use RESRAD as the basis of modeling, conduct sensitivity and uncertainty analyses using Monte Carlo analyses with consideration of correlations, although they noted the need for thoroughly documenting all procedures and assumptions. He also noted that the EPA/SAB RAC would not be in a position to conduct a final Dose Modeling Document review due to other commitments and that the Subcommittee planned to use NRC's Advisory Committee on Nuclear Waste (ACNW) for the review of the final document.



The sampling effort phase of the sludge survey has now been completed. Sewage sludge samples have been received from a total of 322 facilities as a part of the survey. The results of the sample analyses are being compiled in a database once fully QA/QC'd and reviewed by the Subcommittee.

The Sludge Subcommittee had a number of accomplishments in CY 2000:

- Met with AMSA (Association of Metropolitan Sewerage Agencies) to learn about the National Biosolids Partnership's independent modeling activities.
- Issued the *Revised Draft June 2000 Guidance on Radioactive Materials in Sewage Sludge and Ash at Publicly Owned Treatment Works* for public comment. The Subcommittee will continue to accept comments submitted on this document until it issues the final document.
- Described its activities in a public meeting of ISCORS in June 2000.
- Developed a survey database and initial data analysis plan. Completed draft Dose Modeling Report (*Radionuclides in Sewage Sludge Dose Assessment*; November 5, 2000) that was provided to the EPA Science Advisory Board, Radiation Advisory Committee (RAC) for consultation in and for advisory review during December 2000. This report was also placed on the ISCORS web site for public comment.
- Completed sample collection phase of the survey. A survey database to log and organize the survey questionnaire and analysis data was established and an initial data analysis plan was developed. Samples from 322 facilities were received for analysis. Sample analysis, QA/QC, and data review will continue into Summer 2001.

For the year 2001, the Subcommittee plans the following work:

- Receive EPA Science Advisory Board/RAC review of the draft dose modeling effort.
- Issue Survey data report and results summary.
- Issue Final Dose Modeling Document.
- Hold another public meeting on Subcommittee activities and findings.
- Issue final Guidance Document for publicly owned treatment works.

#### Naturally Occurring Radioactive Materials (NORM)

The NORM Subcommittee had the following accomplishments in CY 2000:

- Provided a forum for exchanging information on current agency activities, proposed regulations, new reports, as well as planned international meetings at which NORM issues were to be discussed.
- Gave member agencies first hand opportunities to be briefed on the CRCPD Part N Implementation Plan, NRC Commission decisions on source materials containing less than <0.05% uranium and thorium, and for uranium/thorium mineral extraction and processing

operations.

- Provided member agencies with information on, and copies of, EPA's response to the National Academy of Sciences' recommendations on TENORM (Technologically Enhanced Naturally Occurring Uranium) .
- Discussed the Department of Transportation's request for comments to update transport regulations in consideration of revised international radiation standards.
- Provided member agencies with briefings on the status of ISCORS Sewage Sludge POTW survey and radiological analyses, and EPA's Colorado Plateau uranium mine sites GIS.
- Discussed the status of ISCORS Federal Guidance Subcommittee efforts to develop new draft guidance for the public.

The Subcommittee plans the following for CY 2001:

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

## **Other Agenda Items**

### DOE Long-Term Stewardship Program:

Mr. Steven Livingstone of DOE's Office of Environmental Management provided an overview of the DOE Long-Term Stewardship program. DOE has recognized the need for a long-term stewardship program to ensure that sites that cannot be released for unrestricted use are properly controlled in the future. DOE has a number of initiatives underway to address this topic, including a Report to Congress analyzing DOE's existing and anticipated stewardship obligations at its sites (subsequently issued on January 19, 2001), and a Long-Term Stewardship Study that has been prepared as part of a settlement agreement between DOE, the Natural Resources Defense Council, and 38 other plaintiffs.

### DOE Recycle Policy—comments received during the public comment period that closed on December 4, 2000.

Mr. Hal Peterson of DOE described public comments on DOE's proposed changes to its release of scrap metal for recycling. Previous policy was that surface activity for release had to be below specifications in DOE Order 5400.5, "Radiation Protection of the Public and the Environment." Volumetric release levels required case-by-case approval by the Assistant Secretary for Environment, Safety and Health. On January 12, 2000, the DOE Secretary announced a moratorium on the release of volumetrically contaminated metals into general commerce. This was a temporary measure so that alternatives could be evaluated and to give time to NRC to make a

decision on national standards. On July 13, 2000, the Secretary announced continuance of the moratorium until procedures were in place to ensure adequate compliance monitoring. The Secretary also announced four actions: improvement on information and control of inventories; improvement of DOE's recycle criteria and monitoring; expansion of internal recycling and reuse; and accelerated recovery of sealed sources. These proposed changes were issued in the Federal Register for public comment in the fall. Mr. Peterson summarized the public comments, which were mixed.

#### International Radioactive Source Management Committee (IRSM)

Mr. Frank Marcinowski of EPA stated that the International Radioactive Source Management Committee, a U.S. government group headed by the Department of State, has not had any activity recently because of budget restrictions. Work is not likely to be revived. International Atomic Energy Agency (IAEA) efforts to control sources are ongoing, however.

#### Domestic/International Meetings

The National Academy of Sciences (National Research Council, Board on Radioactive Waste Management) held a planning meeting for a potential study to examine risk harmonization for chemicals and radioactive materials on November 28, 2000. Several of the participants in the ISCORS meeting participated in that meeting. NAS hopes to initiate such a study at some time in the future, after funding is obtained.. NAS is also conducting a study for NRC on clearance. The first meeting was to be held in January 2001.

#### National Council on Radiation Protection

Mr. Charles Meinhold of NCRP provided an overview of NCRP activities, and looks forward to working with ISCORS in the future. ISCORS and Mr. Meinhold agreed that the two organizations should meet, as part of a regular ISCORS meeting, shortly after the NCRP annual report has been issued. ISCORS members stated that NCRP reports in progress are valuable for risk harmonization efforts and encouraged NCRP to complete them as soon as possible.

#### Administrative:

1. E-mail distribution of announcements and minutes to ISCORS members has been working satisfactorily and will continue.
2. Many inputs have been received on CY 2000 annual report, but not all. Inputs for CY 2000 accomplishments and CY 2001 goals should be sent to Behram Shroff of EPA or Jim Kennedy of NRC.

#### Action Items:

1. DOD to determine if Army Corps of Engineers can join/attend ISCORS.
2. NCRP will brief ISCORS again after it issues its next annual report (next year)

#### Potential Agenda Topics for Next Meeting:

1. MARMOD presentation by EPA staff.
2. Sewage sludge subcommittee to present dose modeling results if available.

Next Meeting:

The date, time, and location for the next ISCORS meeting are:

DATE: Thursday, March 22, 2001

TIME: 1:00 - 5:00 PM

LOCATION: U.S. Nuclear Regulatory Commission, One White Flint, Room O-14-B-6

## **AGENDA**

### **INTERAGENCY STEERING COMMITTEE ON RADIATION STANDARDS**

Friday, December 15, 2000

9:00 AM-12:00 noon

U.S. Department of Energy

Room 5E-069

Independence Avenue

Washington, D.C.

(Orange/Blue Lines: Smithsonian Metro Station)

**Introductions:** (9:00 - 9:10 p.m.) - John Greeves/Frank Marcinowski. Introduction of principal meeting attendees

**Subcommittee Progress Reports (including CY 2000 Accomplishments and CY 2001 Goals)**  
(9.10 - 10:10 p.m.)

3. Federal Guidance (including special presentation on approaches for revising Federal Guidance for General Public)
4. Cleanup
5. Mixed Waste
6. Recycle\*
7. Risk Harmonization
8. Sewage Sludge/Ash
9. NORM

\* Does ISCORS have specific tasks for this subcommittee?

**Agenda Items:** (10:10 - 12:00 noon)

10:10-10.30 Update on DOE Long-Term Stewardship activities. Steven Livingstone, DOE.

10.30-10.50 DOE Recycle Policy—comments received during public comment period that closes December 4. Hal Peterson, DOE.

10.50-11.00 IRSM status report, Frank Marcinowski, EPA

11.00-11.15 Domestic and International Meetings

NAS Risk Harmonization meeting, 11/28 (summary by those who attended)

NAS Low-Activity Waste Study (Kennedy)

IAEA Uranium Conference (Setlow)

NAS Yucca Mountain meeting—12/14

NAS Clearance meeting—1/3/01

11.15-11.20 Administrative

Feedback on use of email for notification (Kennedy, Shroff)  
2000 Annual Report—coordinators to prepare report by 1/30/2001

11.20-11.50 NCRP Reorganization and Strategic Planning. Charles Meinhold, President,  
National Council on Radiation Protection (NCRP)

**Action Items/Next Steps (11:50 - 12:00 noon)**

10. Review of action items
11. Date/time/place of next meeting
12. Topics for next meeting

**Special Presentation (after regular meeting of ISCORS)**

Briefing by Dr. Michael Ryan on NCRP Radioactive Waste Activities and on the production and reprocessing facility at Mayak in Siberia.

# ISCORS MEETING, DECEMBER 15, 2000

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