

October 26, 1999

MEMORANDUM TO: File

FROM: Duane Schmidt, Health Physicist  
Decommissioning Branch  
Division of Waste Management, NMSS

SUBJECT: SEWAGE SLUDGE SUBCOMMITTEE OF THE INTERAGENCY  
STEERING COMMITTEE ON RADIATION PROTECTION STANDARDS:  
SUMMARIES OF AUGUST AND SEPTEMBER 1999 SUBCOMMITTEE  
MEETINGS

Attached are recently developed documents related to the joint NRC and EPA survey of radioactivity in sewage sludge and ash. The Sewage Sludge Subcommittee of the Interagency Steering Committee on Radiation Protection Standards is assisting in the development of this joint NRC and EPA survey. The attached documents are summaries of the August 25, 1999, and September 14, 1999, meetings of the ISCORS Sewage Sludge Subcommittee. The Subcommittee developed these summaries and is placing them in the NRC's Public Document Room to make them available to the public.

Attachments:

1. Meeting summary for August 25, 1999
2. Meeting summary for September 14, 1999

CONTACT: Duane Schmidt, DWM/NMSS  
301-415-6919

**For PUBLIC:**

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DATE	10/25/99	10/25/99	

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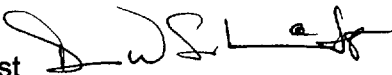
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UNITED STATES  
**NUCLEAR REGULATORY COMMISSION**  
WASHINGTON, D.C. 20555-0001

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## FINAL

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### ISCORS SEWAGE SLUDGE SUBCOMMITTEE MEETING SUMMARY

Date: August 25, 1999

Time: 0900-1230

Location: DOE/HQ  
Room 4F056  
Washington, DC

Attendees: DOE: Judy Odoulamy  
EPA: Robert Bastian, Dale Hoffmeyer, Behram Shroff, Mark Doehnert, Alan Rubin  
EPA/NAREL: Dave Saunders, Mary Wisdom  
NRC: Duane Schmidt  
NRC Contractor: Dale Condra  
DOD: Roy Lovett  
POTW: Thomas Lenhart

Agenda: General Issues  
ISCORS Website  
Survey  
- Public Report  
- Questionnaire  
- QAPP  
Guidance Document  
Dose Modeling

Summary:

#### GENERAL ISSUES

- Mary Thomas is out for 2 weeks or more following emergency surgery, but is already hooked up from home to track things at work
- Jim Bachmaier has been out sick for 2 days
- no additional changes were suggested to the minutes circulated by Mary Thomas for the minutes of the past two subcommittee meetings

- the next full ISCORS meeting is scheduled for September 23, 1999; Bob Bastian and Mary Thomas will brief ISCORS on the status of the Subcommittee activities

#### WEBSITE:

Duane Schmidt noted that while he and Mary Thomas decided not to raise the question about the potential for an ISCORS website at the last full ISCORS meeting (June 10, 1999) as had been planned, NRC has since proceeded to develop a proposed ISCORS website which John Greeves has already approved. Duane passed out copies of three pages that suggest the planned format of this ISCORS homepage. It was assumed the website would be discussed at the upcoming full ISCORS meeting on September 23, 1999, and that this site could likely be used for posting Subcommittee meeting minutes and products for public access.

#### SURVEY:

Public Report: Dale Hoffmeyer and Behram Schroff noted that the public report is now accessible on the EPA TENORM webpage at "<http://www.epa.gov/radiation/tenorm/docs/sludgereport.htm>" and Duane Schmidt noted that there is now a NRC link to the EPA web site.

The Subcommittee discussed the fate of the "errata" write-up that had been circulated to the Subcommittee members by Mary Thomas describing the high tritium values as false positives due to chemiluminescence, that the 135 pCi/g value for tritium should be 1.75, and the procedures that will be followed to avoid this in the future. It was agreed that the "errata" write-up should be used as an insert for the existing printed copies of the report, that it should be made available for download on the web page to explain the correction being made to the original document, and that the corrections to Tables 1 & 2 should be made to the on-line version of the report along with a notation to the cover page that the report was revised as of the date of the correction. Bob Bastian agreed to check with the EPA publications people and if necessary come up with some language to go along with the "errata" page for the warehouse people to help make sure it gets inserted into existing printed copies of the report.

Questionnaires: Duane Schmidt reported that as of August 25, 1999, 361 questionnaires had been returned and sent on to Los Alamos National Laboratory (LANL, NRC's contractor) for entry into the POTW database to facilitate selection for sampling, and that there were another 10 or so on Mary Thomas' desk waiting to be opened, etc. Duane handed out a very preliminary cut at presenting the questionnaire data for 34 of the POTWs that send in completed questionnaires. Various Subcommittee members expressed concerns regarding their ability to access and review the data being compiled by LANL, what type of analyses were being planned by NRC for LANL to run on the data, etc. It was agreed that more Subcommittee members need to become actively involved in planning what analyses are to be done by LANL and that a copy of the data dictionary for the database should be provided to the Subcommittee members. Following this was a discussion led by Bob Bastian regarding criteria for selecting the 300 POTWs to involve in the sampling portion of the survey. Some of the possible categories included POTWs with NRC and/or agreement state licensees, federal facilities, and major research or medical facilities; active incinerators; POTWs located in areas of elevated NORM, especially those receiving discharges from drinking water treatment facilities (ion exchange fluids, backwash water, drinking water residuals); POTWs serving Superfund Sites and handling landfill leachates; State and EPA Regional recommended facilities. It was agreed that the next Subcommittee meeting (set for September 14, 1999, and a follow-on meeting on

September 22, 1999, if needed) should focus on refining the selection criteria for the 300 POTWs to be sampled and to select the first 25 POTWs for sampling so the ORISE can send out the initial set of sampling kits before the end of September 1999. Duane Schmidt agreed to help get the information from LANL into a usable format to support that meeting.

QAPP: Mark Doehnert led a discussion about the need to have the Subcommittee approve the existing QAPP as of a specific date and that it can then be revised as necessary after that date to accommodate changes that occur during the survey effort. He also emphasized the need to develop a second part to the QAPP to address handling of the data by LANL, how LANL will interact with NAREL and ORISE, and with the Subcommittee, as well as what analyses of the data supplied by NAREL and ORISE that LANL will undertake. Duane Schmidt agreed to identify who Mary Wisdom from NAREL should interface with at LANL in helping to clarify how the labs will be interfacing with each other. Duane will also have Mary Thomas and Lee Abramson help clarify the actual activities to be undertaken by LANL for the Subcommittee.

#### GUIDANCE DOCUMENT:

Behram Shroff reported that the draft revised guidance document will be available from TechLaw by about September 15, 1999, for distribution to the Subcommittee members. He noted that funding for additional support by TechLaw for making further revisions to the document probably won't be available until January 2000, which will provide a reasonable amount of time for a good review of the revised document and for working out some of the issues associated with agency authorities for addressing radioactivity at the local and Federal levels.

#### DOSE MODELING:

Dale Hoffmeyer reported that a draft report on the status of the dose modeling effort should be available for the full Subcommittee by the end of September 1999. The report will be a "Modeling Protocol" background document (i.e., Technical Support Document [TSD]) to describe how the dose modeling workgroup plans to perform the dose modeling. The TSD will address what exposure scenarios and pathways will be used, what models will be run and by whom, how sensitivity and uncertainty issues will be addressed, etc. EPA/ORIA will also be developing a report following the Part 503 risk assessment scenarios in conjunction with their activities dealing with NORM issues. The draft TSD will be circulated for review to the Subcommittee. This draft document will be reviewed in detail by the Dose Modeling workgroup and will be revised, preferably in time for the next full ISCORS meeting (in December 1999). Dale indicated a need to try to come up with a term (e.g., screening values, threshold values, action levels, etc.) to describe what the guidance levels being identified by the dose modeling working groups should be called - a task that Bob Bastian indicated he would take a shot at. Tom Lenhart briefed the Subcommittee on the status of the AMSA/WEF dose modeling effort, the primary purpose of which is to determine what do the results of individual POTW sludge/ash radioisotope monitoring data mean to the POTW owner/operator. The Subcommittee discussed the possibility of conducting some type of peer review of the dose modeling work and agreed to explore various means for accomplishing such a review. Finally, Dale noted that more active participation by the NRC members of the work group is needed to avoid possible future complications as this effort moves forward.

**ACTION ITEMS:**

The "errata" sheet is to be used with the existing printed copies of the public document; otherwise the revised version of the document should be provided off the web site with the revision date noted.

Bob Bastian agreed to check with the EPA publications people and if necessary come up with some language to go along with the "errata" sheet.

Duane Schmidt agreed that NRC will help get the questionnaire information being compiled by LANL into an accessible and usable format to support the next meeting (September 14, 1999) on selection criteria and selection of the first 25 POTWs to be sampled.

Duane Schmidt agreed that NRC will identify who Mary Wisdom from NAREL should interface with at LANL in helping to clarify how the labs will be interfacing with each other. Duane will also have Mary Thomas and Lee Abramson help clarify the actual activities to be undertaken by LANL for the Subcommittee to support the efforts by the Subcommittee and to work with Jim Bachmaier and Mark Doehnert on updating the QAPP.

Behram Shroff will distribute the draft revised guidance document to the Subcommittee for comment when it is received from TechLaw in mid-September and will work with Loren Setlow on arrangements to assure continued contract support for future revisions to the document.

Dale Hoffmeyer will circulate copies of the draft "Modeling Protocol" background TSD document to the Subcommittee for comment and continue coordination of the dose modeling workgroup effort. The Subcommittee will explore various means of undertaking some type of peer review of the dose modeling work.

Bob Bastian and Mary Thomas will brief ISCORS at the September 23, 1999, meeting on the current status of the Subcommittee activities (over 360 questionnaire responses received to date, initial sampling kits to be sent out before the end of September 1999, revised guidance document, draft "Modeling Protocol" background TSD document), including raising the possibility of conducting peer review on the "Modeling Protocol" background TSD document.

Next Meeting Dates: September 14, 1999, 9-Noon at DOE and September 22, 1999, 9-Noon at DOE (if needed)

**FINAL**

[These ISCORS subcommittee meeting summaries result from interagency discussions. The Sewage Subcommittee is composed of representatives from the Environmental Protection Agency, the Nuclear Regulatory Commission, the Department of Defense, the Department of Energy, the State of New Jersey, and two Publicly Owned Treatment Works. The Subcommittee summaries have not been approved by the respective agencies and organizations and do not represent the official position of any participating organizations at this time.]

**ISCORS SEWAGE SLUDGE SUBCOMMITTEE MEETING SUMMARY**

Date: September 14, 1999

Time: 0900-1230

Location: DOE/HQ  
Room 4F056  
Washington, DC

Attendees: DOE: Judy Odoulamy  
EPA: Robert Bastian, Dale Hoffmeyer, Behram Shroff, Mark Doehnert  
EPA/NAREL: Dave Saunders, Mary Wisdom  
NRC: Mary Thomas  
NRC Contractor: Dale Condra  
DOD: Roy Lovett  
POTW: Thomas Lenhart

Agenda: General Issues  
Survey  
- Questionnaire  
- QAPP  
Guidance Document  
Dose Modeling

Summary:

**GENERAL ISSUES**

- Mary Thomas was back at full strength
- Jim Bachmaier is still out; he has been in the hospital for the past 2 weeks
- no additional changes were suggested to the minutes circulated by Bob Bastian on the past subcommittee meeting
- the next full ISCORS meeting is scheduled for September 23, 1999; Bob Bastian will brief ISCORS on the status of the Subcommittee activities, including the status of the full survey

effort, status of the dose modeling effort - including our desire to involve peer review of the protocol support document, and status of the second draft of the POTW guidance document

- It was agreed that a Subcommittee meeting tentatively scheduled for September 22, 1999, would not be needed

#### SURVEY:

Questionnaire: Mary Thomas reported that as of September 14, 1999, data from 352 questionnaires had been entered into the database being prepared by Los Alamos National Laboratory (LANL, NRC's contractor), and a total of over 400 questionnaires had been received. Mary had the latest version of the database on a laptop computer as well as original runs from the database based on size of POTWs, those with incinerators, and those that fit multiple categories previously identified by the Subcommittee. The bulk of the meeting was spent discussing the criteria for selecting the 300 POTWs from those returning completed questionnaires to be sampled and in selecting the initial group of 25 POTWs to be sent sampling kits by the end of September 1999. Mary Thomas agreed to work with LANL to get the information in the database into an accessible and usable format to support identification of the other 275 POTWs to be sampled. Mary Thomas agreed to work with LANL to get the names and addresses for the initial group of 25 POTWs to ORISE for use in sending out the initial set of sampling kits.

QAPP: Mark Doehnert led another discussion about the need for the Subcommittee to approve the existing QAPP as of a specific date, noting that it can then be revised as necessary after that date to accommodate changes that occur during the survey effort. Mary Wisdom agreed to make any final pending changes to the existing QAPP and get it out once more to the Subcommittee for a final review before our next meeting (planned for October 6, 1999) to help make this possible. Mark also emphasized the need to develop a second part to the QAPP to address handling of the data by LANL, how LANL will interact with NAREL and ORISE, and with the Subcommittee, as well as what analyses of the data supplied by NAREL and ORISE that LANL will undertake. Duane Schmidt had agreed at the last Subcommittee meeting to identify who Mary Wisdom from NAREL should interface with at LANL in helping to clarify how the labs will be interfacing with each other. Duane had also agreed to have Mary Thomas and Lee Abramson help clarify the actual activities to be undertaken by LANL for the Subcommittee.

#### GUIDANCE DOCUMENT:

Behram Shroff again reported that the draft revised guidance document will be available from TechLaw by about September 15, 1999, for distribution to the Subcommittee members for review. He again noted that funding for additional support by TechLaw for making further revisions to the document probably won't be available until January 2000, which will provide a reasonable amount of time for a good review of the revised document and for working out some of the issues associated with agency authorities for addressing radioactivity at the local and Federal levels.

#### DOSE MODELING:

Dale Hoffmeyer again reported that a draft report on the status of the dose modeling effort should be available for the full Subcommittee by the end of September 1999. The report will be a "Modeling Protocol" background document (i.e., Technical Support Document [TSD]) to



describe how the dose modeling workgroup plans to perform the dose modeling. The TSD will address what exposure scenarios and pathways will be used, what models will be run and by whom, how sensitivity and uncertainty issues will be addressed, etc. This draft document will be reviewed in detail by the Dose Modeling workgroup and will be revised, preferably in time for the next full ISCORS meeting (in December 1999).

**ACTION ITEMS:**

Mary Thomas agreed to work with LANL to get the names and addresses for the initial group of 25 POTWs to ORISE for use in sending out the initial set of sampling kits.

Mary Thomas agreed to work with LANL to get the information in the database into an accessible and usable format to support identification of the other 275 POTWs to be sampled.

Mary Wisdom agreed to make any final pending changes to the existing QAPP and get it out once more to the Subcommittee for a final review before our next meeting.

From the previous Subcommittee meeting, Duane Schmidt had agreed to identify who Mary Wisdom from NAREL should interface with at LANL in helping to clarify how the labs will be interfacing with each other. Duane had also agreed to have Mary Thomas and Lee Abramson help clarify the actual activities to be undertaken by LANL for the Subcommittee.

Behram Shroff will distribute the draft revised guidance document to the Subcommittee for comment when it is received from TechLaw in mid-September and will work with Loren Setlow on arrangements to assure continued contract support for future revisions to the document.

Dale Hoffmeyer will circulate copies of the draft "Modeling Protocol" background TSD document to the Subcommittee for comment and continue coordination of the dose modeling workgroup effort. The Subcommittee will explore various means of undertaking some type of peer review of the dose modeling work.

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Next Meeting Date: October 6, 1999, 9-Noon at DOE