

Quarterly Report on Progress Made on Pertinent Issues
Related to Control of Solid Materials
October - December 2001

Background

On March 23, 2000, the staff provided the Commission with a paper (SECY-00-0070) which provided information on public comments on the June 1999 Issues Paper, the status of technical analyses, and recommendations for proceeding on issues concerning the control of solid materials.

In an SRM, dated August 18, 2000, the Commission directed the staff to: (1) defer a final decision on whether to proceed with rulemaking; (2) proceed with a National Academies study on possible alternatives for release of slightly contaminated solid materials; (3) continue the development of technical information base necessary to support a Commission policy decision in this area; and (4) stay informed of international initiatives in this area, related U.S. Environmental Protection Agency (EPA) and Department of State (DOS) activities, and potential for import and trade issues. The SRM also indicated that, while the National Academies study was underway, the staff should provide quarterly reports to the Commission on progress made on all pertinent issues and, approximately three months after completion of the National Academies study, provide its recommendations on how best to proceed, as well as the status of the technical bases.

This quarterly report provides a summary of progress made on pertinent issues for the period October through December 2001. Four previous quarterly reports have been provided to the Commission in December 2000 and in March, July, and September 2001, which describe activities prior to October 2001. This report is organized numerically by the directions provided in the August 18, 2000, SRM. An integrated schedule of major milestones for the items listed below is provided as Table 1.

1. Actions related to rulemaking/regulatory activities

In accordance with the direction in the August 18, 2000, SRM, rulemaking efforts have been deferred; the staff will provide a paper to the Commission with recommendations on how best to proceed approximately three months after completion of the National Academies study (see Item #2). Activities during this past quarter include:

- The NRC website for this activity, <http://www.nrc.gov/NMSS/IMNS/controlsolids.html>, is not currently available on the public website. The internal website has been kept up to date, principally by placing previous quarterly reports on the website ten days after their submittal to the Commission.

2. Actions related to proceeding with National Academies study of alternatives

In accordance with the August 18, 2000, SRM, the National Academies is conducting a study on possible alternatives for release of slightly contaminated solid materials. The results of their study are due to the Commission in February 2002.

3. Continuing development of a technical information base

Consistent with the August 18, 2000, SRM, the staff is developing a technical information base to support a Commission policy decision in this area (see Table 1). Developing this information represents a cooperative effort among NMSS and RES staffs.

3a. Radiological Assessments for Clearance of Equipment and Materials from Nuclear Facilities (NUREG-1640)

In March 1999, NUREG-1640 was published for public comment. NUREG-1640 provides a methodology for estimating potential individual doses for steel, aluminum, copper and concrete based on the concentration of radionuclides on, or in, the solid material. Activities during this past quarter include:

- Additional information on inventory was obtained. A cooperative effort was undertaken with NEI to obtain data on inventory of metals and concrete in reactor and materials facilities. This information is being gathered in response to public comments on the draft NUREG-1640.

3b. Technical basis contract for inventory and doses

The scope of this contract is to develop information on inventory of solid material potentially available for release, associated collective doses, and potential for exposure to multiple sources. SC&A is the contractor for this effort. Activities during this past quarter include:

- As part of the effort noted in Item #3a, information was obtained to characterize materials other than those in NUREG-1640 that have very low, or no, activity and are potentially available for release to landfill disposal. These additional materials were identified by licensees in the Fall 1999 public meetings and in the March 2001 meeting with the National Academies and include routine trash, roofing, pavement, etc.
- A draft letter report on multiple exposure scenarios was received in November 2001 from the contractor and is being reviewed by the staff.

Due to the additional time needed to work with industry on gathering realistic inventory estimates, there is a potential for delay of up to 6 months in finalizing some technical bases documents. However, the staff will work with the contractor to obtain information necessary to support staff recommendations to the Commission.

3c. Development of dose models for soil reuse

The NRC staff is developing technical bases for estimating exposures from soil reuse as a result of potential licensee requests for release of soil. This effort includes an identification, under a contract with the National Agricultural Library, of information sources for developing the technical basis. Under this contract, draft NUREG-1725, "Human Interaction with Reused Soil: A Literature Search," was issued for public comment in June 2000. This effort also includes analyses, by the CNWRA, of potential exposures from possible reuse scenarios for soils released from NRC-licensed facilities.

Activities during this past quarter include:

- The final NUREG-1725, which incorporates additional information on potential pathways for human interaction with reused soil as well as public comment received on the draft NUREG, is in management review and is scheduled to be published in early 2002.
- The CNWRA submitted in November 2001, for NRC review, a draft letter report containing a preliminary dose analysis of potential soil reuse scenarios. A meeting with the CNWRA is scheduled for early January 2002 to review the results of the analyses as well as to discuss the relationship of the CNWRA analyses with the ISCORS sewage sludge dose modeling and license termination scenarios.

3d. Measurability/detectability

The NRC staff is developing technical bases concerning the ability to conduct radiation surveys of solid materials at levels near background. Coordinated contract support efforts, at Environmental Measurements Laboratory (EML) and Oak Ridge Institute for Science and Engineering (ORISE), are ongoing to provide a framework for the design and implementation of surveys for solid materials. The University of Tennessee, under contract to NRC, prepared a proof-of-concept report to test the subsurface measurement modeling developed by EML. Activities during this past quarter include:

- A draft report on protocols for surveys of solid materials is being revised by EML and ORISE based on staff review was received in January 2002 and due to be published as a draft NUREG in March 2002.
- ORISE is developing information on costs of surveys of solid materials based on the protocols developed in its draft letter report on survey protocols.

4. Other actions

4a. International initiatives

The staff has stayed informed of international initiatives in this area and potential for import and trade issues. Activities during this past quarter include:

- On December 3-7, the IAEA convened a consultants' meeting to develop a draft Safety Guide and associated supporting technical documents on specification of radionuclide content in commodities requiring regulation for purposes of radiological protection. The resulting documents will be the subject of a Technical Committee Meeting scheduled for February 18-22, 2002. Two NRC staff participated in the meeting. A quick look report from the meeting was submitted to the EDO on December 12, 2001. A complete trip report will follow.

4b. EPA/DOS activities

EPA has noted that it is focusing its efforts on orphan source issues and on the interception of imports with sufficient radioactive content to warrant regulatory control and that it does not have an active program to set clearance standards in the U.S.

4c. Department of Energy (DOE) activities

DOE, which has a large inventory of stored solid material having low amounts of radioactivity, participated at NRC's fall 1999 public meetings and as one of the stakeholders at the May 9, 2000, Commission meeting. During calendar year 2000, Secretary Richardson placed moratoriums on DOE's release of volumetrically contaminated metals and on release of scrap metal for recycling if contamination is detected using appropriate instrumentation.

On July 12, 2001, DOE published, for public comment, a notice of intent to prepare a programmatic environmental impact statement (PEIS) on alternatives for disposition of DOE scrap metals. DOE held public scoping meetings on the PEIS in July and August 2001, and announced in September 2001 that the public comment period was being extended until November 2001. Activities during this past quarter include:

- DOE held additional public scoping meetings on the PEIS in October 2001.
- The public comment period for the DOE notice of intent ended on November 9, 2001.

	1 st qtr 2001 January -March 2001	2 nd qtr 2001 April - June 2001	3 rd qtr 2001 July -September2001	4 th qtr 2001 October - December 2001	1 st qtr 2002 January - March 2002	2 nd qtr 2002 April -June 2002	Post 2 nd qtr 2002 past July 2002
1.Commission interface/ public input	Quarterly report - 3/01	Quarterly report - 7/01	Quarterly report - 9/01	Quarterly report - 12/01	Quarterly report - 4/02	SECY paper on NAS study results ~6/02 (~3 mo after NAS study)	SRM and next steps - TBD
2. NAS study	— 1 st Committee mtg & NRC briefing - 1/01 — 2 nd Committee mtg - 3/01	— NRC response to info request - 4/01 — 3 rd Committee mtg - 6/01	Committee review of working draft - 8/01		Complete report - 2/02		
3a. NUREG-1640			Award contract to finalize - 7/01			Final NUREG - 5/02	Supplement 1 on additional materials - 11/02
3b. Tech basis-Inventory		Letter report on available and needed data - 5/01	— Draft letter report on inventory - 7/01 — Letter rpt on literature on current practice that cause NARM/TENORM to enter commerce - 7/01 — Letter rpt on bkg level of radioactivity in various mats and eqmt - 7/01				Draft NUREG on inventory - 7/02
3b. Tech basis - collective doses and multiple exposures				Draft letter report on multiple exposures - 11/01			— Letter rpt on multiple exposure 9/02 — Draft letter rpt on collective doses 4/03

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3c. Soil - NUREG-1725	NAL focused search on parameters - 1/01			Draft report on final NUREG- 1725 - 11/01	Issue final NUREG-1725 - 1/02		
3c. Soil - Soil scenario analysis	CNWRA scoping contract - 2/01			Draft letter report on scenario analysis - 11/01		Letter rpt on soil doses - 6/02	
3d. Surveys - ORISE/EML			Letter rpt on survey analyses - 7/01		Draft NUREG on surveys - 3/02	Letter rpt on survey cost - 6/02	
4. Other							
4a. International Initiatives	IAEA TCM on Commodities, 2/01	— RASSC/WASSC mtg - 4/01 — IAEA consultants mtg - 5/01	IAEA consultants mtg - 7/01	— Consultant's meeting on commodities - 12/01	— Technical Comm. mtg- 2/02		
4b. EPA	Briefing of NAS - 1/01 IAEA mtg - 2/01		Update of report on metals recycling				
4c. DOE	Briefing of NAS - 1/01 Secretary memos on control of solid materials - 1/01		FRN on PEIS on control of solid material - 7/01 Scoping mtgs - 7/01-8/01	Scoping mtgs - 10/01 End comment period, 11/01			