

(STP-03-003, January 2003, Program, Controlled Release of Concrete)

January 15, 2003

ALL AGREEMENT STATES, MINNESOTA, PENNSYLVANIA, WISCONSIN

**UPDATE ON CASE-SPECIFIC LICENSING DECISIONS ON CONTROLLED RELEASE OF
CONCRETE FROM LICENSED FACILITIES (STP-03- 003)**

Enclosed for your information is a copy of a December 27, 2002 memorandum from Donald Cool, Director, Division of Industrial and Medical Nuclear Safety, Office of Nuclear Material Safety and Safeguards (IMNS/NMSS). This is an updated version of his July 27, 2001 memorandum on "...Case-Specific Licensing Decisions on Release of Soils from Licensed Facilities," sent to you by All Agreement States Letter [STP-01-081](#) dated November 28, 2001.

On August 7, 2000, William Kane, Director, NMSS, and Samuel Collins, Director, Office of Nuclear Reactor Regulation, sent a joint memorandum to Regional Administrators and Headquarters' licensing divisions to inform staff of the approach that should be used at the time for making decisions on specific licensing actions, as well as any generic requests, concerning release of solid materials. The memorandum noted that NRC staff should continue to evaluate licensee requests for release of solid materials on a case-by-case basis using existing guidance. On July 27, 2001, an update of this memorandum was issued by Donald Cool, Director, IMNS, to provide additional guidance on case-specific licensing decisions on release of soils from licensed facilities.

Consistent with the August 7, 2000 and July 21, 2001 memoranda, the staff developed the enclosed memorandum providing guidance on the disposition of concrete that should be used in review of retrospective and prospective cases involving concrete disposition.

This information is being made available to both NRC Regions and Agreement States as an additional tool for the review of cases involving soil disposition.

If you have any questions regarding this correspondence, please contact me at (301) 415-2325 or the individual named below.

POINT OF CONTACT: Osiris Siurano INTERNET: OSP@NRC.GOV
TELEPHONE: (301) 415-2307 FAX: (301) 415-3502

/RA/

Josephine M. Piccone, Deputy Director
Office of State and Tribal Programs

Enclosure:
As stated

December 27, 2002

MEMORANDUM TO: Those on the Attached List

FROM: Donald A. Cool, Director
Division of Industrial and **/RA/**
Medical Nuclear Safety, NMSS

SUBJECT: UPDATE ON CASE-SPECIFIC LICENSING DECISIONS ON
CONTROLLED RELEASE OF CONCRETE FROM LICENSED
FACILITIES

On August 7, 2000, William Kane, Director, NMSS, and Samuel Collins, Director, NRR, sent a joint memorandum (Attachment 1) to Regional Administrators and to headquarters licensing divisions to inform staff of the approach that should be used at this time for making decisions on specific licensing actions, as well as any generic requests, concerning release of solid materials. The memorandum noted that NRC staff should continue to evaluate licensee requests for release of solid materials on a case-by-case basis using existing guidance. On July 27, 2001, an update of this memorandum was issued by Donald Cool, Director, IMNS, to provide additional guidance on case-specific licensing decisions on release of soils from licensed facilities (Attachment 2).

NMSS and NRR staff continue to be involved in case-specific reviews regarding implementation of the guidance contained in the above memoranda, which has included several cases involving disposition of concrete at materials and reactor facilities undergoing decommissioning. Based on these reviews and consistent with the August 7, 2000 and July 21, 2001 memoranda, the staff developed the following guidance on the disposition of concrete that should be used in review of retrospective and prospective cases involving concrete disposition:

- 1) For retrospective cases - if offsite concrete releases have been identified, reviewed, and accepted in an approved decommissioning plan based on Site Decommissioning Management Plan (SDMP) Action Plan criteria, a 20.2002 disposal, a license termination plan, or other specific license condition, previously approved offsite concrete releases should be considered as final. However, if upon further review of information, it is estimated that offsite concrete releases could produce a dose of more than 0.1 rem (1 millisievert) in a year to individual members of the public under realistic conditions, further examination is recommended. The examination should be based on a case-specific dose assessment rather than a conservative screening assessment.

CONTACTS: Tony Huffert, NMSS/DWM
(301) 415-6416

Frank Cardile, NMSS/IMNS
(301) 415-6185

- 2) For prospective cases or cases that are not grand-fathered - where proposed offsite concrete releases are not covered under an existing decommissioning plan, 20.2002 disposal, license termination plan, or other specific license condition, controlled release of concrete with volumetric sources of contamination may be approved under a criterion of a "few mrem" (pursuant to a 20.2002 procedure, decommissioning plan, license termination plan, or other specific license amendment) rather than use of license termination criteria either in Subpart E of 10 CFR Part 20 or in the SDMP Action Plan. The following guidance is provided for these types of cases:
- a) Licensees should assess surficial contamination of concrete based on process knowledge and verified by appropriate core samples to confirm that the concrete does not contain contamination beyond a depth that can be measured by the instrumentation used for the survey. Survey instruments should be used that are appropriate for evaluating the radioactive contamination of interest and all accessible surfaces should be evaluated. The number of core samples and the method for determining the depth at which a survey instrument can measure below the surface of the concrete should be determined on a case-specific basis.
 - b) At materials sites, based on a licensee's determination that the concrete contains either surficial or volumetric contamination:
 - i) Disposition of concrete with surficial contamination should be evaluated using "Guidelines for Decontamination of Facilities and Equipment Prior to Release for Unrestricted Use or Termination of Licenses for Byproduct, Source, or Special Nuclear Material," dated April 1993, which is based on Fuel Cycle Policy and Guidance Directive 83-23. There is no upper limit on the amount of concrete with surficial contamination that can be released from a materials site if it meets criteria contained in the April 1993 guidance document.
 - ii) Disposition of concrete with volumetric contamination should be pursuant to 10 CFR 20.2002 procedures.
 - c) At reactor sites, clearance criteria for concrete with surficial or volumetric contamination should be evaluated using the existing "no-detectable" policy (see, for example, HPPO-71).
 - d) Surveys for the clearance of concrete with surficial contamination should be conducted before the concrete floor or wall is broken up. If the concrete wall or floor has been broken up, then it is considered a volumetric source of contamination and 10 CFR 20.2002 procedures should be followed.

- 3) If a licensee proposes to allow concrete with surficial or volumetric contamination to remain on site after license termination, the concrete should be evaluated as part of the licensee's overall decommissioning approach for license termination pursuant to CFR 20, Subpart E. 10

Requests for such approvals should be coordinated with the staff contacts provided in Attachment 3 on a case-by-case basis.

Attachments:

1. August 7, 2000, memorandum from William Kane, NMSS, and Samuel Collins, NRR
2. July 27, 2001, memorandum from Donald Cool, IMNS
3. List of NRC staff contacts

MEMORANDUM TO: Those on the Attached List

Addressees - Memorandum Dated December 27, 2002

SUBJECT: UPDATE OF THE AUGUST 7, 2000 MEMO FROM WILLIAM KANE, NMSS AND SAMUEL COLLINS, NRR - CASE-SPECIFIC LICENSING DECISIONS ON RELEASE OF SOIL MATERIALS FROM LICENSED FACILITIES

John W. Craig
Assistant for Operations

Joseph R. Gray, Associate General Counsel
for Licensing and Regulation
Office of the General Counsel

Ashok Thadani, Director
Office of Nuclear Regulatory Research

Paul H. Lohaus, Director
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Marc Dapas, Director
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Ken Brockman, Director
Division of Nuclear Materials Safety, Region IV

John T. Greeves, Director
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E. William Brach, Director
Spent Fuel Project Office, NMSS

Robert C. Pierson, Director
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Stuart Treby, Assistant General Counsel
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R. William Borchardt, Associate Director
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John A. Zwolinski, Director
Licensing Project Management, NRR

Christopher L. Grimes, Director
Policy and Rulemaking Branch, NRR

Cynthia A. Carpenter, Chief
Inspection Program Branch, NRR

Theodore R. Quay, Chief
Equipment and Human Performance Branch, NRR

Kathy Halvey Gibson, Chief
Emergency Preparedness
and Health Physics Section, NRR

ATTACHMENT 1

August 7, 2000

MEMORANDUM TO: Those on the Attached List

FROM: William F. Kane, Director
Office of Nuclear Material Safety
and Safeguards

Samuel J. Collins, Director /RA/ RPZ for
Office of Nuclear Reactor Regulation

SUBJECT: CASE-SPECIFIC LICENSING DECISIONS ON RELEASE OF
SOLID MATERIALS FROM LICENSED FACILITIES

The purpose of this memorandum is to inform staff within Headquarters and the Regional Offices of the approach that should be used at this time for making decisions on specific licensing actions, as well as any generic requests, concerning release of solid materials.

Existing NRC regulations do not contain generally applicable standards for the control of solid materials with relatively small amounts of radioactivity in, or on, materials and equipment. A paper has been provided to the Commission (SECY-00-0070) which recommends, in part, that a final decision be deferred on rulemaking on the control of solid materials, pending the outcome of a National Academy of Sciences study of alternatives. During this period, it is expected that licensees will continue to seek to release solid materials and that these will continue to be evaluated on a case-by-case basis using existing guidance, e.g. application of Regulatory Guide 1.86 and its equivalent, Fuel Cycle Policy and Guidance Directive FC 83-23, for materials licensees and Office of Inspection and Enforcement Circular 81-07 and Information Notices 85-92 and 88-22 for reactor facilities.

To ensure a consistent approach for controlling the release of solid materials, NRC reviews of licensee requests to release solid materials using criteria other than those in existing guidance are to be coordinated with NMSS or NRR Divisions. A list of staff contacts is provided in Attachment A. This approach will continue to remain in effect until Commission-directed studies, such as the NAS study, have been completed.

Attachment: As stated

CONTACT: Tony Huffert, NMSS/DWM
(301) 415-6416

MEMORANDUM TO: Those on the Attached List

Addressees - Memorandum Dated August 7, 2000

SUBJECT: CASE-SPECIFIC LICENSING DECISIONS ON RELEASE OF
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Luis A. Reyes, Administrator
Region II

James E. Dyer, Administrator
Region III

Ellis W. Merschoff, Administrator
Region IV

John Greeves, Director
Division of Waste Management, NMSS

William Brach, Director
Spent Fuel Project Office, NMSS

Donald Cool, Director
Division of Industrial and
Medical Nuclear Safety, NMSS

Mike Weber, Director
Division of Fuel Cycle Safety
and Safeguards, NMSS

Attachment A

List of NRC Staff Contacts for Requests Concerning the Release of Solid Materials

NRC Office	NRC Division	Name	Contact
Office of Nuclear Materials Safety and Safeguards	Division of Waste Management	Tony Huffert	Tel: 301-415-6416 Fax: 301-415-5398 email: amh1@nrc.gov Mail Stop: T8-F37
Office of Nuclear Materials Safety and Safeguards	Division of Industrial, Medical and Nuclear Safety	Frank Cardile	Tel: 301-415-6185 Fax: 301-415-5385 email: fpc@nrc.gov Mail Stop: T9-F31
Office of Nuclear Reactor Regulation	Division of Inspection Program Management	Steve Klementowicz	Tel: 301-415-1084 Fax: 301-415-2968 email: sxk@nrc.gov Mail Stop: 06-H16

ATTACHMENT 2

July 27, 2001

MEMORANDUM TO: Those on the Attached List

FROM: Donald A. Cool, Director
Division of Industrial and /RA/ SMF for
Medical Nuclear Safety, NMSS

SUBJECT: UPDATE OF THE AUGUST 7, 2000 MEMO FROM WILLIAM
KANE, NMSS AND SAMUEL COLLINS, NRR - CASE-SPECIFIC
LICENSING DECISIONS ON RELEASE OF SOILS FROM
LICENSED FACILITIES

On August 7, 2000, William Kane, Director, NMSS, and Samuel Collins, Director, NRR, sent a joint memorandum (Attachment 1) to Regional Administrators and to headquarters licensing divisions to inform staff of the approach that should be used at this time for making decisions on specific licensing actions, as well as any generic requests, concerning release of solid materials. The memorandum noted that, based on a prior staff recommendation, a decision on possible rulemaking on the control of solid materials had been deferred pending the outcome of a National Academies study on alternatives and that, in the interim, NRC staff should continue to evaluate licensee requests for release of solid materials on a case-by-case basis using existing guidance.

Since the issuance of the August 7, 2000, memorandum, NMSS and NRR staff have been involved in case-specific reviews regarding implementation of the guidance contained in that memorandum. Two recent cases involved staff review of soil disposition at two facilities licensed by NMSS that are currently undergoing decommissioning. Based on its review, the staff has determined that the following approaches are consistent with the August 7, 2000, memorandum and should be used in review of retrospective and prospective cases involving soil disposition:

- 1) For retrospective cases - if offsite soil releases have been identified, reviewed, and accepted in an approved- decommissioning plan based on Site Decommissioning Management Plan (SDMP) Action Plan criteria, a 20.2002 disposal, a license termination plan, or other specific license condition,
 - ! previously approved offsite soils releases should be considered as final, but further examination is recommended if offsite soil releases could produce a dose of more than 100 mrem/yr to a member of the public under realistic conditions. The examination should be based on a case-specific dose assessment rather than a conservative screening assessment.

CONTACT: Frank Cardile, NMSS/IMNS
(301) 415-6185

- 2) For prospective cases or cases that are not grand-fathered - where proposed offsite soils releases are not covered under an existing decommissioning plan, 20.2002 disposal, license termination plan, or other specific license condition,

! there may be approval under a criterion of a "few mrem" (pursuant to a 20.2002 procedure, decommissioning plan, license termination plan, or other specific license amendment) rather than use of license termination criteria either in Subpart E of 10 CFR Part 20 or in the SDMP Action Plan. Requests for such approvals should be coordinated with the staff contacts provided in Attachment 2 on a case-by-case basis.

As a separate matter, the Commission has chosen to address transfer of unimportant quantities of source material from facilities under 10 CFR 40.13(a) in an independent Commission-directed initiative on Part 40. The Commission provided direction to the staff on such transfers in Staff Requirements Memoranda dated March 9, 2000 and December 17, 1998. This direction remains in effect pending Commission decision on rulemaking on Part 40.

Attachments:

1. August 7, 2000, memorandum from William Kane, NMSS, and Samuel Collins, NRR
2. List of NRC staff contacts

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Dwight Chamberlain, Director
Division of Nuclear Materials Safety, Region IV

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Brian Sheron, Associate Director
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Jon Johnson, Associate Director
Inspection and Programs, NRR

John Zwolinski, Director
Licensing and Project Management, NRR

Christopher Grimes, Chief
License Renewal and Standardization Branch, NRR

Ledyard Marsh, Chief
Events Assessment, Generic Communications,
and Non-Power Reactors Branch, NRR

Cynthia Carpenter, Chief
Generic Issues, Environmental, Financial,
and Rulemaking Branch, NRR

Bruce Boger, Director
Inspection Program Branch, NRR

Glenn Tracy, Chief
Operator Licensing, Human Performance,
and Plant Support, NRR

Kathy Halvey Gibson, Chief
Emergency Preparedness
and Health Physics Section, NRR

ATTACHMENT 3

List of NRC Staff Contracts for Requests Concerning Release of Solid Materials

NRC Office	Name	Contact
NMSS/DWM	Tony Huffert	Tel: 301-415-6416 email: amh1@nrc.gov
NMSS/IMNS	Frank Cardile	Tel: 301-415-6185 email: fpc@nrc.gov
NMSS/FCSS	Julie Olivier	Tel: 301-415-7292 email: jao@nrc.gov
NRR	Steve Klementowicz	Tel: 301-415-1084 email: sxk@nrc.gov