

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.

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- 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 10 CFR 20, Subpart E.

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

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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

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