

August 30, 2007

MEMORANDUM TO: Those on the Enclosed List

FROM: Keith I. McConnell, Deputy Director **/RA/**
Decommissioning Directorate
Division of Waste Management
and Environmental Protection
Office of Federal and State Materials
and Environmental Management Programs

SUBJECT: GUIDANCE ON IMPLEMENTATION OF THE MEMORANDUM OF
UNDERSTANDING BETWEEN THE UNITED NUCLEAR REGULATORY
COMMISSION AND THE UNITED STATES ENVIRONMENTAL
PROTECTION AGENCY ON CONSULTATION AND FINALITY OF
DECOMMISSIONING AND DECONTAMINATION OF CONTAMINATED
SITES

The following guidance is being transmitted to the decommissioning staff to provide a consistent approach for determining when, in the course of decommissioning a facility, consultation is required between the United States Nuclear Regulatory Commission (NRC) and the United States Environmental Protection Agency (EPA) under the 2002 "Memorandum of Understanding (MOU) on Consultation and Finality of Decommissioning and Decontamination of Contaminated Sites."

The NRC/EPA MOU Communication Plan (ADAMS Accession Number ML071150072) establishes the process for exchanging site-specific information during decommissioning activities. NRC consults with EPA, when certain conditions are met during the course of decommissioning.

The enclosed guidance specifies the technical approach for determining if a site being considered for release for unrestricted use (under 10 CFR 20.1402) requires consultation with EPA. Consultation at both levels (i.e., Level 1 and Level 2) is required for sites that will be released with restrictions (under 10 CFR 20.1403), as well as sites that will be released using alternate criteria (under 10 CFR 20.1404).

CONTACT: Rafael L. Rodriguez, FSME/DWMEP
(301) 415-0193

In addition to the guidance, Enclosure 2 provides standard language that the technical staff should include whenever consultation with EPA under the MOU is, and is not, required. Such language should be included in the communication to the licensee informing them about the approval of their site-specific decommissioning plan or license termination plan, and their final status survey reports.

Technical staff and Branch Chiefs are expected to become familiar with the attached guidance and standard language. Our Operating procedures manual is being updated to reflect this guidance.

Questions regarding the MOU and this guidance should be directed to Rafael L. Rodriguez.

Enclosures:

1. Guidance to determine whether consultation is required for a decommissioning site
2. Standard Language
3. Multiple addressee list

Multiple addressees

-2-

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Technical staff and Branch Chiefs are expected to become familiar with the attached guidance and standard language. Our Operating procedures manual is being updated to reflect this guidance.

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Guidance to determine if consultation under the NRC/EPA MOU is required for a site that will be released without restrictions

Once the NRC staff has determined that the decommissioning plan or license termination plan proposed by the licensee is acceptable for technical review, the cleanup levels will be compared against the trigger levels for soil in the NRC/EPA MOU, or the EPA Maximum Contaminant Levels found in 40 CFR 141.15 and 141.16 using the approach discussed below.

Radionuclides not included in the NRC/EPA MOU are considered outside of the scope of the MOU.

Level 1 Consultation-Soil:

a) For Ra-226, Th-232, or total uranium, compare the level against the appropriate value in Table 1 in the MOU.

b) For all other radionuclides, use the sum-of-fraction approach. The number in the numerator is the derived concentration guideline or concentration of the radionuclide in the soil. The number in the denominator will be the applicable trigger value in Table 1 of the MOU. For example:

$$\sum \frac{C_{H-3}}{\{H-3\}_{SOIL}} + \frac{C_{C-14}}{\{C-14\}_{SOIL}} \leq 1$$

“+ D” nomenclature in Table 1 of the MOU means that some progeny radionuclides are included and assumed to be in secular equilibrium with the parent radionuclide. Such nomenclature only includes the progeny down to the next radionuclide of the chain that is in the MOU.

Level 1 Consultation-Groundwater:

For a specific radionuclide, the combination of the **proposed cleanup level + the natural relevant background** should be directly compared against the applicable MCL.

- Beta/gamma-emitting radionuclides - The average annual concentration of radionuclides shall not result in an annual dose equivalent to the total body or any internal organ greater than 4 mrem/yr.
- Radium 226 and Radium 228 combined - The total concentration, including background, for Ra-226 and Ra-228 cannot exceed 5pCi/L (0.185Bq/L).
- Alpha-emitting radionuclides - The total gross-alpha particle activity (including Radium-226 but excluding radon and uranium) cannot exceed 15 pCi/L (0.555 Bq/L).
- Uranium - The total concentration of uranium, including background, cannot exceed 30 µg/L.

Level 2 Consultation-Soil:

The protocol to be used for a Level 2 consultation will be the same as that employed for a Level 1 consultation, except that the measured values for soil in the Final Status Survey Reports should be used instead of the proposed cleanup levels.

NOTE: In accordance with the Multi-Agency Radiation Survey and Site Manual (MARSSIM), the data collected during final status surveys for a particular radionuclide at a specific survey unit can be averaged over that particular unit. For more information, please refer to Chapter 8 of MARSSIM.

Level 2 Consultation-Groundwater:

The protocol used for a Level 2 consultation will be almost identical to that employed for a Level 1 consultation. For a Level 2 consultation, the values for groundwater in the final status survey reports should be used instead of the proposed cleanup levels. The project manager or technical reviewer should evaluate the average concentration of a contaminant in a specific well unit over a 12-month period against the applicable MCL. If the average for a specific well unit exceeds the applicable MCL, other techniques might be used including, but not limited to: trending analysis, aquifer-wide averaging, etc. Such techniques will be applied on a case-by-case basis.

STANDARD LANGUAGE TO BE USED WHEN THE NRC STAFF APPROVES A SITE-SPECIFIC DECOMMISSIONING PLAN, LICENSE TERMINATION PLAN, OR FINAL STATUS SURVEY REPORTS

- A) Whenever consultation under the MOU is not required, the following paragraph should be inserted in the transmittal letter to the licensee:

Letter documenting the 90-day acceptance review, as well as the letter approving a Decommissioning Plan or License Termination Plan:

- a) When the material is subject to NRC regulations:

The NRC staff reviewed the {*choose the applicable term: decommissioning plan or license termination plan*} and compared the licensee's proposed cleanup levels to the trigger values for soil and groundwater in the "Memorandum of Understanding (MOU) between the EPA and the NRC on Consultation and Finality on Decommissioning and Decontamination of Contaminated Sites." The staff concluded that the trigger values for soil and/or groundwater were not met or exceeded. Thus, in accordance with Section V.C.2 of the MOU, consultation is not required.

- b) When the material is not within the scope of the MOU:

The NRC staff reviewed the {*choose the applicable term: decommissioning plan or license termination plan*} and concluded that the radioactive material under the licensee's control is not within the scope of the MOU (e.g., radionuclides not listed in Table 1 of the MOU, diffuse naturally-occurring radioactive material). Therefore, the NRC staff concludes that consultation is not required.

Letter approving the Final Status Survey Reports:

- a) When the material is subject to NRC regulations:

The NRC staff reviewed the Final Status Survey Reports, and compared the residual contamination levels to the trigger values for soil and groundwater in the "Memorandum of Understanding (MOU) between the U.S. Environmental Protection Agency and the NRC on Consultation and Finality on Decommissioning and Decontamination of Contaminated Sites." The staff concluded that the trigger levels for soil and/or groundwater were not met or exceeded. Thus, in accordance with Section V.C.2 of the MOU, consultation is not required.

- b) When the material is not within the scope of the MOU:

The NRC staff reviewed the Final Status Survey Reports and concluded that the radioactive material under the licensee's control is not within the scope of the MOU (e.g., radionuclides not listed in Table 1 of the MOU, diffuse naturally-occurring radioactive material). Therefore, the NRC staff concludes that no consultation is required.

- B) Whenever consultation under the MOU is required, the following paragraph should be inserted in the transmittal letter to the licensee:

Letter documenting the 90-day acceptance review, as well as the letter approving a Decommissioning Plan or License Termination Plan:

The NRC staff reviewed the {*choose the applicable term: decommissioning plan or license termination plan*} and compared the licensee's proposed cleanup levels to the trigger values for soil and groundwater in the "Memorandum of Understanding (MOU) between the EPA and the NRC on Consultation and Finality on Decommissioning and Decontamination of Contaminated Sites." The staff concluded that the trigger values for soil and/or groundwater were met or exceeded. Thus, in accordance with Section V.C.2 of the MOU, consultation is required. The NRC staff will be contacting EPA in the near future and will inform you of the results of our consultation with EPA.

Letter approving the Final Status Survey Reports:

The NRC staff reviewed the Final Status Survey Reports, and compared the residual contamination levels to the trigger values for soil and groundwater in the "Memorandum of Understanding (MOU) between the U.S. Environmental Protection Agency and the NRC on Consultation and Finality on Decommissioning and Decontamination of Contaminated Sites." The staff concluded that the trigger levels for soil and groundwater were met or exceeded. Thus, in accordance with Section V.C.2 of the MOU, consultation is required. The NRC staff will be contacting EPA in the near future and will inform you of the results of our consultation with EPA.

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Bruce A. Watson, Acting Branch Chief
Reactor Decommissioning Branch
Decommissioning and Uranium Recovery
Licensing Directorate
Division of Waste Management
and Environmental Protection

Rebecca Tadesse, Branch Chief
Materials Decommissioning Branch
Decommissioning and Uranium Recovery
Licensing Directorate
Division of Waste Management
and Environmental Protection

Lydia W. Chang, Branch Chief
Special Projects Branch
Decommissioning and Uranium Recovery
Licensing Directorate
Division of Waste Management
and Environmental Protection

Raymond K. Lorson, Branch Chief
Decommissioning Branch
Division of Nuclear Material Safety
Region I

Patrick Loudon, Branch Chief
Decommissioning Branch
Division of Nuclear Material Safety
Region III

D. Blair Spitzberg, Branch Chief
Fuel Cycle and Decommissioning Branch
Division of Nuclear Material Safety
Region IV

Enclosure 3