

UNITED STATES
NUCLEAR REGULATORY COMMISSION
OFFICE OF NUCLEAR MATERIAL SAFETY AND SAFEGUARDS
WASHINGTON D.C. 20555-0001

September 14, 2006

**NRC REGULATORY ISSUE SUMMARY 2006-20
GUIDANCE FOR RECEIVING ENFORCEMENT DISCRETION WHEN
CONCENTRATING URANIUM AT COMMUNITY WATER SYSTEMS**

ADDRESSEES

All community water systems (CWSs), in U.S. Nuclear Regulatory Commission (NRC) non-Agreement States, that during the treatment of drinking water, may accumulate and concentrate naturally-occurring uranium in media, effluents, and other residuals, above 0.05 percent by weight. CWSs operating in Agreement States¹ should contact their State regulatory agency to determine what requirements apply to their operations.

INTENT

The NRC is issuing this regulatory issue summary (RIS), to inform addressees and other stakeholders of NRC's implementation of a policy of enforcement discretion for CWSs. Under this policy, CWSs, in non-Agreement States, that concentrate naturally-occurring uranium above 0.05 percent by weight in media, effluents, and other residuals during the treatment of drinking water will not be required to apply for a NRC specific license while they remain eligible for enforcement discretion.

BACKGROUND

In 1991, the U.S. Environmental Protection Agency (EPA) proposed changes to the current radionuclide standard for uranium in drinking water. On December 7, 2000 (65 *FR* 76707), the EPA issued new standards for the uranium content in drinking water. In the final rulemaking, EPA set a maximum contaminant level (MCL) of 30 micrograms per liter, equivalent to 30 parts per billion, for uranium in drinking water. EPA's detailed technical and legal basis supporting this level can be found on pages 76712-76716 of the December 7, 2000, final rule.

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¹An Agreement State is a State that has entered into an agreement with the U.S. Nuclear Regulatory Commission pursuant to Section 274b of the Atomic Energy Act, as amended, under which the NRC discontinues its Federal authority and the State assumes authority under State law for the regulation of certain radioactive materials. Therefore, this agreement allows the State to regulate the use of radioactive material within that State.

The Atomic Energy Act of 1954, as amended², provides the NRC with regulatory authority over source material (which includes uranium and thorium) after its removal from its place of deposit in nature. NRC has issued regulations for source material in Title 10, Code of Federal Regulations (10 CFR) Part 40, "Domestic Licensing of Source Material." Part 40 defines "source material," in part, as meaning uranium "in any physical or chemical form." In accordance with 10 CFR 40.13(a), the NRC regards uranium in any solution (e.g., water) in which the uranium is by weight less than one-twentieth of 1 percent (0.05 percent or 335 picocuries per gram for natural uranium) of the solution as an "unimportant quantity" of source material. Any CWS possessing such unimportant quantities of uranium would not need an NRC license under the 10 CFR 40.13(a) exemption. If a CWS possesses more than an unimportant quantity of uranium, but less than 15 pounds of uranium at any one time and less than 150 pounds of uranium in any one calendar year, the CWS may operate under the existing general license in 10 CFR 40.22, "Small quantities of source material." A CWS operating under the general license in 10 CFR 40.22 is not required to formally notify NRC that it is operating under the conditions of that general license.

Although some CWSs may be able to treat for uranium and remain within the conditions of 10 CFR 40.13(a) or 10 CFR 40.22, NRC expects many CWSs will possess uranium in quantities exceeding those limits. Without enforcement discretion, such CWSs located in non-Agreement States would be required to apply for specific NRC source material licenses to possess, process, and transfer the accumulated uranium, pursuant to 10 CFR 40.31 "Application for specific licenses."

Similarly, CWSs in Agreement States may also be required, under appropriate State regulations, to obtain a license for authorization to possess, process, and transfer the uranium at concentrations greater than 0.05 percent by weight.

Based on the expectation of relatively low impacts to public health and safety and the environment during normal operations, and because NRC recognizes that the cost of obtaining a specific license can be burdensome, NRC has begun a rulemaking to establish a new class of general licenses. This new general license will be specific to CWSs that concentrate uranium above 0.05 percent by weight, in response to meeting EPA's MCLs (including the inadvertent concentration of uranium while treating other contaminants in the water). The new general license will ensure that public health and safety and the environment remain adequately protected.

SUMMARY OF ISSUE

While a new general license for CWSs is being developed, CWSs in non-Agreement States, concentrating uranium above 0.05 percent by weight, will be allowed to operate under enforcement discretion. Absent enforcement discretion, such CWSs would have to apply for a

²The Energy Policy Act of 2005 expanded NRC's regulatory authority to include discrete sources of radium-226, but not diffuse sources of radium-226. Diffuse sources are considered to include radium-226 as it occurs in nature or as a result of other processes where radium-226 may be unintentionally concentrated (such as in residuals from the treatment of water to meet drinking water standards). Therefore, NRC does not regulate radium-226 at drinking water facilities.

specific NRC license as required by 10 CFR 40.31. Enforcement discretion exercised by NRC does not remove or modify any obligations for the CWS to meet the requirements of other regulatory agencies.

Requested Information

To be eligible for enforcement discretion³, the CWS operator must submit a notification to NRC stating an intent to operate under enforcement discretion. This notification must be submitted no later than 30 days after the CWS operator becomes aware that the concentration of the source material possessed by the CWS exceeds 0.05 percent by weight, and the quantity of source material possessed by the CWS exceeds more than 15 pounds of uranium at any one time or more than 150 pounds in any one calendar year. The notification must include the facility name and address, owner of the facility, and form of the effluent, media, or residual that exceeds 0.05 percent by weight. The notification shall also identify a point of contact, including a mailing address, telephone number, and e-mail address (if available).

The notification may be sent as written correspondence to:

RIS 06-020, Project Manager
ATTN: Intent to Operate per RIS 06-020
U.S. Nuclear Regulatory Commission
Mail Stop: T8-F3
Washington, D.C. 20555-0001

or by sending an e-mail with the requested information to: 2006UraniumRIS@nrc.gov

Conditions for Enforcement Discretion⁴

In addition to notifying the NRC of its intent to operate under enforcement discretion, the CWS must comply with the following conditions to be eligible for enforcement discretion:

1. Records

The CWS will retain the following records for three years after the transfer or disposal of material containing uranium:

- (A) Amount of uranium transferred from the CWS site;

³Compliance with the conditions in this RIS is not mandatory unless the CWS notifies NRC of its intent to operate under enforcement discretion. However, if the CWS does not meet these conditions, concentrates uranium to levels greater than 0.05 percent, and exceeds the general license conditions in 10 CFR 40.22, enforcement discretion will not be exercised, the CWS may be issued a notice of violation and be subject to civil penalties, and the CWS will be required to apply for a specific license in accordance with 10 CFR 40.31.

⁴Although NRC plans to use conditions discussed in this RIS in the development of the new general license, it should be noted that the final rule for the new general license may contain conditions that are different, or additional to those discussed in this RIS.

- (B) To whom it was transferred; and
- (C) Average concentration of uranium in each shipment.

2. Storage, Transfer, and Disposal

When filter media (or other materials, such as sludge) contain greater than 0.05 percent by weight of uranium, and are no longer actively used by the CWS to meet EPA's uranium MCL, the material containing the uranium is to be transported from the CWS in accordance with applicable Department of Transportation regulations. Transfer of the material containing the uranium must be as follows:

- (A) To a facility authorized to possess the source material (e.g., a person authorized by a license for possession of uranium issued by NRC or an NRC Agreement State); or
- (B) For disposal at a facility authorized to accept radioactive material of the form and type generated by the CWS.

While awaiting transfer, the material containing the uranium must be stored in a manner that will not allow for the release of the uranium or unnecessarily expose the CWS workers. Materials containing uranium, at concentrations greater than 0.05 percent, and that are no longer actively being used as part of the drinking water treatment process, must be removed from the CWS within 90 days from the time they were removed from service. In addition, while in storage, the material containing the uranium must be kept in an area that provides containment (e.g., a catch basin) in case of a spill.

3. Processing Restrictions

The CWS shall implement new procedures, or use existing procedures for hazardous chemicals to allow employees to safely handle and operate equipment used to process or contain the uranium, concentrated greater than 0.05 percent by weight, during normal operations. These procedures should limit the possibility that employees are able to inhale or ingest the uranium.

Enforcement discretion only applies to those activities required to meet EPA's MCL. Additional intentional concentration, or processing of the uranium captured on the filter media, after removal from the drinking water treatment process, is not permitted under this policy of enforcement discretion, and shall only be done in accordance with a specific license issued by NRC, or an Agreement State.

Backwashing, or other procedures required for normal operation of the filter media, is permitted as long as the uranium is captured, stored, and transferred, as appropriate, in accordance with the transfer procedures in Section 2, "Storage, Transfer, and Disposal," above. If allowed by local pretreatment permits, discharge of residuals containing uranium to sanitary sewers must be below the lesser of any local regulations, permit requirements, or 3 picocuries of uranium per milliliter.

A CWS operating under this policy of enforcement discretion may not intentionally dilute the uranium after it is concentrated, except as part of normal operation of its equipment (e.g., backwashing).

4. Off-Normal Operations

A CWS must have written procedures to mitigate the impacts of a spill, or other accident involving the concentrated uranium. The facility must immediately take action to clean-up or mitigate the impacts of a spill or accident in accordance with its procedures, and provide written notification to the NRC (to the address above to which the original notification was sent) within 30 days of the incident. Spilled materials, containing uranium removed from drinking water, must not be allowed to adversely affect the surrounding environment or CWS workers, or be allowed to re-enter the water treatment system.

5. Posting and Labeling

A CWS operating under enforcement discretion must ensure that the equipment containing uranium, in concentrations greater than 0.05 percent by weight, is clearly labeled and must provide sufficient information (such as the radionuclide present or "Caution - Radioactive Materials") to permit individuals handling or using the containers, or working in the vicinity of the containers, to take precautions or minimize exposures. Areas, such as sludge ponds, containing the uranium in concentrations greater than 0.05 percent by weight, should be posted with a conspicuous sign or signs bearing the radiation symbol and the words "CAUTION, RADIOACTIVE MATERIALS."

6. Criteria for Terminating Operation Under Enforcement Discretion

Enforcement discretion will apply until either:

- (A) NRC amends its regulations to create a new general license for CWSs, or decides to no longer pursue a new regulation;
- (B) The CWS obtains a specific license from the NRC or an Agreement State; or
- (C) The CWS ceases operations. If this is the case, it shall decommission/decontaminate the facility in accordance with 10 CFR Part 20, Subpart E, "Radiological Criteria for License Termination."

Enforcement discretion may be rescinded if the CWS is not meeting the above objectives, or in NRC's opinion, the CWS cannot operate safely under the enforcement discretion policy.

If the NRC modifies or ceases its policy of enforcement discretion, the NRC will appropriately modify or rescind the RIS, and will notify all affected CWSs of such changes.

7. Enforcement Guidance

Enforcement guidance has been developed and is located on NRC's web site at <http://www.nrc.gov/reading-rm/basic-ref/enf-man/app-a.html>.

FEDERAL REGISTER NOTIFICATION

A notice of this RIS was published in the Federal Register on September 21, 2006. This RIS pertains to all CWSs in non-Agreement States that may accumulate and concentrate uranium above 0.05 percent by weight from the treatment of drinking water.

CONGRESSIONAL REVIEW ACT

The NRC has determined that this action is not subject to the Congressional Review Act.

PAPERWORK REDUCTION ACT STATEMENT

This RIS contains information collections that are subject to the Paperwork Reduction Act of 1995 (44 U.S.C. 3501, et seq.). These information collections were approved by the Office of Management and Budget, approval number 3150-0020, which expires on 8/31/09 and approval number 3150-0011, which expires in 2/28/07.

The burden to the public for these voluntary information collections is estimated to average 20 hour per response (under 3150-0011), including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the information collection. In addition, the annual burden to the public is estimated to be an average 5 hours per respondent (under 3150-0020) for recordkeeping and maintaining procedures. Send comments regarding this burden estimate or any other aspect of these information collections, including suggestions for reducing the burden, to the Records and FOIA/Privacy Services Branch (T-5 F52), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by Internet electronic mail to INFCOLLECTS@NRC.GOV; and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202, (3150-0011 and 3150-0020), Office of Management and Budget, Washington, DC 20503.

PUBLIC PROTECTION NOTIFICATION

If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct nor sponsor, and a person is not required to respond to, the information collection.

CONTACT

If you have any questions about this summary, please contact one of the individuals listed below or the appropriate regional office.

_____/RA/

Charles L. Miller, Director
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Technical contacts:

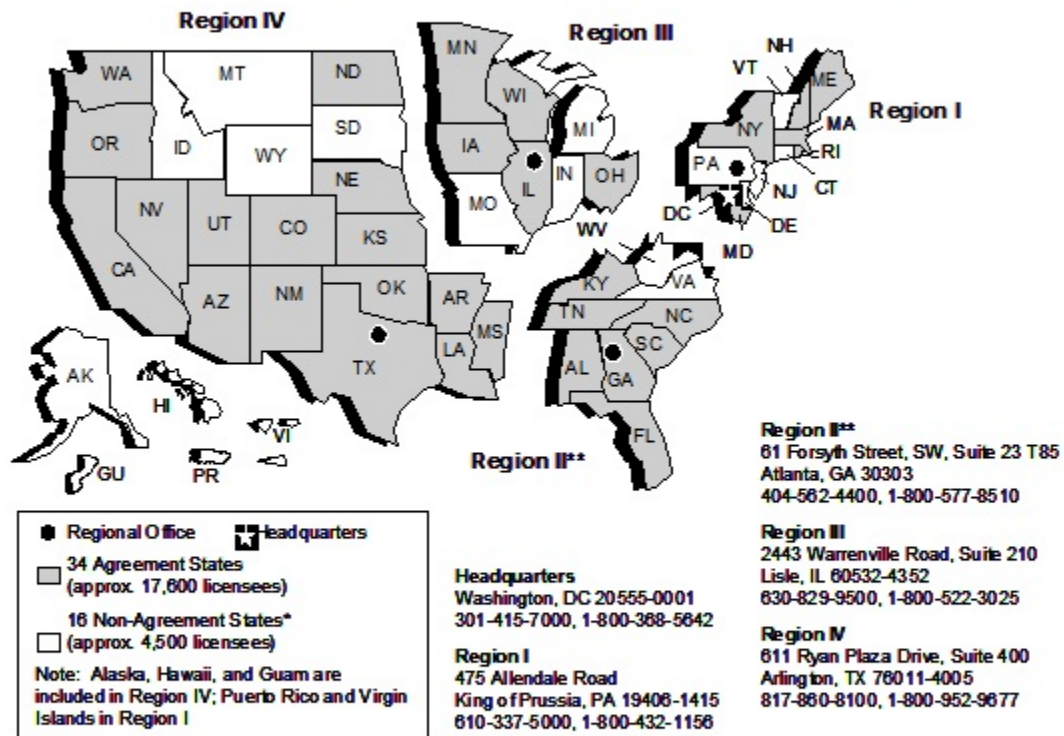
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Enclosure:

1. Locations of NRC Offices and Agreement States
2. List of Recently Issued Generic Communications

Locations of NRC Offices and Agreement States



* The 16 Non-Agreement States include three States that have filed letters of intent: Pennsylvania, New Jersey, and Virginia.
 ** All applicants for materials licenses located in Region I's geographical area must send their applications to Region I.

Recently Issued NMSS Generic Communications

Date	GC No.	Subject	Addressees
07/20/06	RIS-06-11	Requesting Quality Assurance Program Approval Renewals Online by Electronic Information Exchange	All 10 CFR Part 71 quality assurance program and certificate holders.
04/23/06	RIS-06-10	Use of Concentration Control for Criticality Safety	All licensees authorized to possess a critical mass of special nuclear material.
01/26/06	RIS-02-15, Rev. 1	NRC Approval of Commercial Data Encryption Products For the Electronic Transmission Of Safeguards Information	All authorized recipients and holders of sensitive unclassified safeguards information (SGI).
01/24/06	RIS-06-01	Expiration Date for NRC-Approved Spent Fuel Transportation Routes	The U.S. Nuclear Regulatory Commission (NRC) licensees who transport, or deliver to a carrier for transport, irradiated reactor fuel (spent nuclear fuel (SNF)).
01/13/06	RIS-05-27, Rev. 1	NRC Timeliness Goals, Prioritization of Incoming License Applications and Voluntary Submittal of Schedule for Future Actions for NRC Review	All 10 CFR Parts 71 and 72 licensees and certificate holders.
07/10/06	IN-06-13	Ground-Water Contamination Due to Undetected Leakage of Radioactive Water	All holders of operating licenses for nuclear power and research and test reactors including those who have permanently ceased operations and have certified that fuel has been permanently removed from the reactor and those authorized by Title 10 of the <i>Code of Federal Regulations</i> (10 CFR) Part 72 licenses to store spent fuel in water-filled structures.
07/06/06	IN-06-12	Exercising Due Diligence When Transferring Radioactive Materials	All materials licensees.
06/12/06	IN-06-11	Applicability of Patient Intervention in Determining Medical Events for Gamma Stereotactic Radiosurgery and Other Therapy Procedures	All medical licensees.
03/31/06	IN-06-07	Inappropriate Use of a Single-parameter Limit as a Nuclear Criticality Safety Limit	All licensees authorized to possess a critical mass of special nuclear material.
03/21/06	IN-02-23, Supl. 1	Unauthorized Administration of Byproduct Material for Medical Use	All medical licensees.

Date	GC No.	Subject	Addressees
01/19/06	IN-06-02	Use of Galvanized Supports and Cable Trays with Meggitt Si 2400 Stainless- Steel-jacketed Electrical Cables	All holders of operating licenses for nuclear reactors except those who have permanently ceased operations and have certified that fuel has been permanently removed from the reactor vessel; and fuel cycle licensees and certificate holders.

Note: NRC generic communications may be found on the NRC public website at <http://www.nrc.gov>, under Electronic Reading Room/Document Collections.