

July 25, 2003

MEMORANDUM TO: Chairman Diaz  
Commissioner McGaffigan  
Commissioner Merrifield

FROM: William D. Travers **/RA by Patricia Norry Acting For/**  
  
Executive Director for Operations

SUBJECT: FEDERAL REGISTER NOTICE - UTAH ALTERNATIVE  
GROUNDWATER PROTECTION REGULATIONS

In Staff Requirements Memorandum-SECY-03-0025 dated April 21, 2003, the Commission approved the staff's proposal for processing the State of Utah's request to use alternative standards. As stated in SECY-03-0025, the staff has prepared a Federal Register (FR) notice which provides for a hearing process similar to the process in Subpart H of 10 CFR Part 2, "Rulemaking," to implement the notice and hearing requirement in Section 274o of the Atomic Energy Act, as amended. The resolution of the alternative standards issue is a key step in the process of completing the evaluation of the Utah proposal to amend its 274b Agreement to include 11e.(2) byproduct material and the facilities that generate such material (uranium mills). The staff is proceeding with the evaluation of the application and will process the application in parallel with the alternative standards hearing process.

Even though the Commission has approved this approach, due to its unique nature, the FR notice is attached for Commission review and any comments. The staff intends to proceed with publication of the FR notice in 10 working days unless directed otherwise by the Commission.

SECY, please track.

Attachment:  
As stated

cc: SECY  
OCA  
OGC  
OPA  
CFO

NUCLEAR REGULATORY COMMISSION

10 CFR Part 40

State of Utah: NRC Staff Assessment of Utah's Proposed Alternative Standard  
to Use Utah's Existing Groundwater Regulation in Lieu of the  
Nuclear Regulatory Commission Regulations

AGENCY: Nuclear Regulatory Commission.

ACTION: Notice and Opportunity for Public Hearing on Utah's Proposal to Use Alternative Groundwater Protection Standards for Uranium Mills and 11e.(2) Byproduct Material Disposal Facilities.

SUMMARY: By letter dated October 23, 2002, to Paul Lohaus, Director, Office of State and Tribal Programs, U.S. Nuclear Regulatory Commission (NRC), William J. Sinclair, Director, Division of Radiation Control (the Division), State of Utah, submitted information on how the Division proposes to regulate a portion of the groundwater aspects of uranium milling in the State of Utah. Utah's proposed approach is to use its existing groundwater protection regulations, based on Environmental Protection Agency (EPA) drinking water limits, in lieu of a portion of the specific groundwater requirements in Appendix A to 10 CFR Part 40 (Appendix A). The Commission has determined that Utah's proposed approach constitutes use of alternative standards. Under Section 274o of the Atomic Energy Act, as amended (Act), the Commission must make a determination that such alternatives will achieve a level of stabilization and containment of the sites concerned, and a level of protection for public health, safety, and the environment from radiological and non-radiological hazards associated with such sites, after

notice and opportunity for public hearing. Through this Federal Register notice, the Commission intends to fulfill both the notice and opportunity for public hearing provisions of Section 274o of the Act.

**DATES:** The comment period expires (insert date 30 days after date of publication). Comments received after this date will be considered if it is practical to do so, but the Commission cannot assure consideration of comments received after the expiration date.

**ADDRESSES:** Written comments may be submitted to Secretary, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, Attention: Rulemaking and Adjudications Staff.

E-mail comments to: [SECY@nrc.gov](mailto:SECY@nrc.gov). If you do not receive a reply e-mail confirming that we have received your comments, contact us directly at (301) 415-1966.

Hand deliver comments to: 11555 Rockville Pike, Rockville, Maryland 20852, between 7:30 am and 4:15 p.m. Federal workdays. (Telephone (301) 415-1966).

Fax comments to: Secretary, U.S. Nuclear Regulatory Commission at (301) 415-1101.

Publicly available documents created or received at the NRC after November 1, 1999, are available electronically at the NRC's Electronic Reading Room at <http://www.nrc.gov/NRC/ADAMS/index.html>. From this site, the public can gain entry into the NRC's Agencywide Document Access and Management System (ADAMS), which provides text and image files of NRC's public documents. Copies of documents cited in this section are available through ADAMS. If you do not have access to ADAMS or if there are problems in accessing the documents located in ADAMS, contact the NRC Public Document Room (PDR) Reference staff at 1-800-397-4209, 301-415-4737 or by email to [pdr@nrc.gov](mailto:pdr@nrc.gov).

The Division has posted documents related to its amendment application including the alternative groundwater regulations on the Division's web site at:

<http://www.deq.state.ut.us/EQRAD/millst.htm>.

Copies of comments received by NRC may be examined at the NRC Public Document Room, 11555 Rockville Pike, Public File Area O-1-F21, Rockville, Maryland. Copies of the Division's submittal and copies of the NRC Staff correspondence with the Division are also available for public inspection in the NRC's Public Document Room. The ADAMS Accession Numbers are presented with the first mention of each document (ML\_\_\_\_\_).

FOR FURTHER INFORMATION CONTACT: Dennis M. Sollenberger, Office of State and Tribal Programs, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001. Telephone (301) 415-2819 or e-mail [dms4@nrc.gov](mailto:dms4@nrc.gov).

#### SUPPLEMENTARY INFORMATION:

##### Background

Since Section 274 of the Act was added in 1959, the Commission has entered into Agreements with 33 States. The State of Utah Agreement became effective April 1, 1984, but did not include authority for 11e.(2) byproduct material or the land disposal of source, byproduct and special nuclear material received from other persons. In 1990, Utah amended its Agreement to include land disposal of source, byproduct and special nuclear material received from other persons. In 1996, Utah returned its authority for the evaluation of radiation safety information on sealed sources and devices containing byproduct, source, or special nuclear

materials and the registration of the sealed sources or devices for distribution, as provided for in regulations. The State of Utah initiated further amendment of their current Section 274b Agreement to add authority for 11e.(2) byproduct material by a letter of intent from Governor Michael Leavitt dated June 26, 2001 (ML013250419). By letter dated November 19, 2001 from William J. Sinclair, Director, Division of Radiation Control, Utah submitted a draft application to amend its Agreement (ML013250578). NRC sent comments on the draft application to Utah by letter dated February 21, 2002 (ML020530319). The draft application did not contain either draft of final regulations for the control of 11e.(2) byproduct material. Utah subsequently developed draft and final regulations on which the NRC staff provided comments (ML021490340, ML021790511, ML022110416, and ML023290240). Under the proposed amendment, four NRC licenses would transfer to Utah. NRC periodically reviews the performance of the Agreement States to assure compliance with the provisions of Section 274.

In its review of Utah's draft regulations, the staff identified that Utah proposed to use its existing groundwater protection standards in lieu of the groundwater protection requirements in Appendix A. The NRC staff considers the Utah groundwater regulations as alternative standards to the requirements in Appendix A. (The Act was amended in 1983 to add the last paragraph of Section 274o which requires the Commission to determine if Agreement State alternative standards are acceptable in lieu of those promulgated by NRC or EPA under Section 275.) Section 274o requires that the Commission make a determination, after notice and opportunity for public hearing, that such alternative standards will achieve a level of stabilization and containment of the sites concerned, and a level of protection for public health, safety, and the environment from radiological and non-radiological hazards associated with such sites, which is equivalent to, to the extent practicable, or more stringent than the level which would be achieved

by standards and requirements adopted and enforced by the Commission for the same purpose and any final standards promulgated by the Administrator of the Environmental Protection Agency in accordance with Section 275.

The NRC had not identified any instances in which an Agreement State had proposed alternative standards under Section 274o and, therefore, the implementing process for this provision had not been previously developed. Upon receiving the Utah request, the NRC undertook development of an implementing process which included a Commission determination that notice through the Federal Register and a hearing process similar to the process in Subpart H of 10 CFR Part 2, "Rulemaking," would fulfill the NRC's requirements in Section 274o. Additionally, as part of that process, the NRC staff requested that Utah provide an analysis that compares the differences between the Utah regulations and NRC's regulations, and demonstrates that, notwithstanding these differences, the Utah groundwater regulations meet the provisions in Section 274o. Utah submitted its response supporting the substitution of Utah's groundwater regulations for NRC's regulations, by letter dated October 23, 2002 (ML022980335).

This Notice is being published in fulfillment of the requirement to notice and provide an opportunity for public hearing in this instance.

#### Discussion

In its application for the amended Agreement, Utah stated that the Director, Division of Radiation Control, was designated, by the Water Quality Board, as a Co-Executive Secretary of

the Water Quality Board (see Utah Code Annotated (UCA) 19-5-106 and 19-5-104(1)(k)). As Co-Executive Secretary, the Director, Division of Radiation Control, has legal authority to issue, administer, and enforce specific groundwater permits under the Utah Water Quality Rule R317-6 as applied to the current four 11e.(2) byproduct material facilities that would transfer to Utah. The four current NRC licensed facilities are: Envirocare, Rio Algom, International Uranium Corporation, and Plateau Resources Limited. Therefore, the Division of Radiation Control has substituted the Utah Administrative Code R317-6, Groundwater Quality Protection, for certain of the groundwater standards provided in 10 CFR Part 40, Appendix A (specifically Criteria 5B(1) through 5H, 7A, and 13). In addition, under State procedures, appeals of enforcement proceedings and permit issues relating to groundwater would be administered through the Water Quality Board.

NRC considers the substitution of R317-6 for the groundwater protection regulations in 10 CFR Part 40, Appendix A, Criteria 5B(1) through 5H, 7A, and 13 to be the substitution of an alternative standard. The substitution was proposed in Utah Administrative Code R313-24-4(1)(b). On October 23, 2002, Utah provided a comparative analysis of R317-6 to the Appendix A standards listed above (ML022980335). Utah's analysis concludes that R317-6 provides an equivalent level of protection of the groundwater as the NRC standards. Implementation of R317-6 would be accomplished through issuance of a separate groundwater discharge permit for the specific site in addition to the radioactive materials license. Of the four current NRC licensed facilities, two of the facilities (Envirocare and Plateau Resources Limited) have existing Utah groundwater discharge permits, International Uranium Corporation is in discussions with Utah for a groundwater discharge permit, and Rio Algom is currently implementing a groundwater remediation program.

NRC staff reviewed the Utah groundwater protection regulations (R317-6), the Utah comparative analysis for R317-6, and the administrative approach in the Utah groundwater protection permitting process to determine if the resulting overall approach meets the requirements for alternative standards in Section 274o. The NRC staff review focused on three major areas: the administrative procedure including the permitting process, the specific numerical limits in the regulations, and the hazardous constituents that must be considered in setting standards at a specific site.

Utah's administrative process of issuing separate groundwater discharge permits as well as the other procedural requirements in R317-6 differ from the process in Criteria 5B(1) through 5H and 7A. However, staff's review concluded that they accomplish the same regulatory outcome of establishing a site-specific groundwater protection program for both radiological and nonradiological hazards associated with 11e.(2) byproduct material that are consistent with the groundwater protection regulations of the Commission.

The NRC staff review of the specific numerical limits in R317-6 determined that the specific values in R317-6 were based on the EPA drinking water limits (primary and some secondary limits) and that Utah had updated its groundwater protection regulations to reflect current EPA drinking water regulations in 40 CFR Part 141 and 142. Although the numerical limits in NRC regulations are also based on EPA drinking water limits, they are based on EPA limits in effect in 1983 when EPA issued its uranium milling regulations in 40 CFR Part 192, Subparts D and E. Thus, Utah's rules reflect some differences, discussed further below, that are included in the current issuances of EPA's drinking water limits.

The Utah groundwater regulations apply to all facilities in the State unless specifically exempted in the regulations, i.e., the effect of using R317-6 is to apply consistent groundwater regulations to uranium milling facilities as well other industries in the State of Utah. The NRC staff review identified the following differences between the specific numerical limits in R617-6 and the NRC regulations: (1) four chemical constituents listed in R317-6 have higher (less stringent) values than specified in NRC's regulations; (2) several chemical constituents listed in R317-6 have lower (more stringent) values than specified in NRC's regulations; and (3) R317-6 also includes specific numerical values for chemical constituents that are not listed in NRC regulations, but are listed in the EPA primary or secondary drinking water standards (and thus may be more stringent than NRC regulations). Given this, and as discussed further below, the NRC staff concludes that the Utah regulation, R317-6, has the same objective and basis as the NRC regulations, although the Utah regulation has been updated as EPA has updated its drinking water regulations to reflect current constituents and limits.

Utah's specific constituents and limits values (higher, lower, and not identified in NRC regulations) are based on the EPA maximum concentration limits (MCLs) in its primary or secondary drinking water standards as updated by EPA. NRC standards are based on the MCLs in the EPA's 1983 primary drinking water standards. The different values for the MCLs are due to EPA updating its MCLs based on newer scientific information. NRC staff has used the newer values when NRC licensees have proposed their use as part of an Alternate Concentration Limit (ACL) proposal as permitted in Appendix A, to 10 CFR Part 40. Based on this information, NRC staff concludes that the Utah groundwater protection regulation (R317-6) has the same objective as NRC's regulations and is based on the same EPA standards that form the basis for the NRC regulations. The Utah regulation, however, is based on the more

recent version of the EPA regulations. Thus, the differences between the proposed Utah groundwater protection regulations and the 10 CFR Part 40, Appendix A groundwater protection standards are essentially the differences between the two versions of the EPA regulations. Because NRC regulations in this area must conform to those in 40 CFR Part 192, Subparts D and E, until such time as EPA updates these regulations, NRC is not able, by law, to update its regulations. However, the public health, safety, and environmental protection objectives are the same in both regulations.

The Utah regulation at R317-6-6.3.1.6 also includes a reference to the EPA RCRA Groundwater Monitoring Technical Enforcement Guidance Manual (1986) for use in selecting constituents for groundwater monitoring and this document uses the current list of constituents in 40 CFR Part 261, Appendix VIII, which has been updated by EPA since it was used earlier as the basis for Criterion 13 of 10 CFR Part 40, Appendix A. The updated list drops certain chemicals listed in Criterion 13 and includes other constituents not currently listed in Criterion 13. Utah has stated that it will use Criterion 13 and the list in 40 CFR Part 261, Appendix VIII, as guidance in selecting the constituents to be monitored at 11e.(2) byproduct materials facilities. The constituents selected will be based on the feed material to the facility and the process chemicals used at the facility. This selection process is equivalent to the hazardous constituent selection process in Criteria 5B(2) and 5B(3).

Therefore, the NRC staff conclusion is that the Utah Administrative Code R317-6 provides a level of protection for public health, safety, and the environment from radiological and nonradiological hazards associated with such sites, which is equivalent to, to the extent

practicable, or more stringent than the level which would be achieved by standards and requirements adopted and enforced by the Commission for the same purpose.

#### Section 274o Hearing for Alternative Standards

The Commission has approved the use of a hearing process similar to the provisions in Subpart H of 10 CFR Part 2 for the “hearing” component required by the last paragraph of Section 274o. The proposed alternative standards have been subject to the State of Utah rulemaking process which includes opportunity for a public hearing. A hearing process similar to the provisions in Subpart H is not intended to duplicate the State’s process; rather, it will be used to provide sufficient information for the Commission to make the determination required in Section 274o.

Pursuant to the hearing process set forth in Subpart H of 10 CFR Part 2, the Commission is requesting information from interested members of the public on the alternative standards proposed by the State of Utah of substituting Utah Administrative Code R317-6 for the groundwater protection standards in 10 CFR Part 40, Appendix A, Criteria 5B(1) through 5H, 7A, and 13. The NRC staff will evaluate the information received and provide the information to the Commission for a final determination. The issue under consideration is:

Does the Utah alternative standard achieve a level of stabilization and containment of the sites concerned, and a level of protection for public health, safety, and the environment from radiological and nonradiological hazards associated with such sites, which is equivalent to, to the extent practicable, or more stringent than the level which would be achieved by standards

and requirements adopted and enforced by the Commission for the same purpose and any final standards promulgated by the Administrator of the Environmental Protection Agency in accordance with Section 275?

### Environmental Analysis

The environmental impact of a Commission determination that an Agreement State's alternative standards that have been found to provide a level of protection that is equivalent to, to the extent practicable, or more stringent than standards promulgated by NRC or the Administrator of EPA under Section 275 are within the generic impact analysis conducted by NRC and EPA in promulgating their standards and requirements (NUREG-0706, "Final Generic Environmental Impact Statement on Uranium Milling," and EPA 520/1-83-008, "Final Environmental Impact Statement for Standards for the Control of Byproduct Materials from Uranium Processing"). Any site-specific application of alternative standards in Agreement States will be evaluated under the State's environmental assessment required of the State under the Section 274o.

Dated at Rockville, Maryland, this \_\_\_\_ day of \_\_\_\_\_, 2003.

For the Nuclear Regulatory Commission.

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Annette L. Vietti-Cook,  
Secretary of the Commission.