

# NUCLEAR REGULATORY COMMISSION WASHINGTON, D. C. 20555

MEMORANDUM FOR:

Robert Doda

Regional State Agreements Officer

Region IV

FROM:

Vandy L. Miller, Assistant Director

for State Agreements Program

State Programs

SUBJECT:

TEXAS DRAFT CHANGES TO URANIUM RULES AND MOUS WITH TEXAS WATER COMMISSION

AND RAILROAD COMMISSION

Attached for your information and incorporation into your review and response to the Texas Bureau of Radiation Control (TBRC) are combined comments from State Agreements, NMSS/LLWM and OGC.

Please note that these comments reflect a review of the draft Texas regulations as if they were being revised in their entirety. The comments marked with an asterisk are the comments which apply to the revisions to incorporate the groundwater standards. The comments are arranged in four categories. Category A contains comments which the State Agreements staff consider must be resolved to have compatible regulations. Category B contains comments on standards considered to be more stringent than NRC's standards. Category C contains comments on State standards that are not in NRC's standards. Category D contains comments and recommendations which would enhance the understanding of the regulations or alleviate the potential for misunderstanding of the regulations.

Comments on the MOUs were included at the end of each of the four categories, when appropriate.

We are available to discuss these comments with the Texas staff if they would like additional clarification.

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Attachment: As stated

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NRC Staff Comments on Texas Uranium Recovery Regulations

### Category A - Changes Needed for Compatibility Finding

Page 43-1, Section 43.1 Scope and Purpose, (a)(1).

The scope as written is too general and may permit a commingling of radioactive waste. It is recommended that the State adopt the following wording:

- (a) The regulations in this part establish procedures, criteria, and terms and conditions upon which the Agency issues licenses for operation of uranium recovery facilities and the disposition of byproduct material. The requirements of this part are in addition to, and not in substitution for, other applicable requirements of these rules.
- (b) This part establishes procedural requirements and performance objectives applicable to any uranium recovery operation and to byproduct material as defined in this part. It establishes specific technical and financial requirements for uranium recovery facilities, byproduct material impoundments including their construction, operation, and decommissioning, decontamination, reclamation and ultimate stabilization, closure and postclosure activities, license transfer and termination, and ownership and ultimate custody.
- (c) The regulations in this part do not establish procedures and criteria for the issuance of licenses for materials covered under Title I of the Uranium Mill Tailings Radiation Control Act of 1978 (92 Stat. 3021) unless that program fails to accomplish remedial action.
- (d) This part provides for the implementation of the certain Memorandum of Understanding between the Texas Department of Health and other State agencies.
- (e) In addition to the requirements of this part, all licensees, unless otherwise specified, are subject to the requirements of Parts 11, 12, 13, 21, 22, and 41 of these rules.
- Page 43-1, Section 43.2 Definition of Byproduct Material (1).

This definition should be deleted since it is not used in this part. It only adds to confusion in the implementation of this part.

3. Page 43-2, Section 43.2 Definition of Byproduct Material (2).

The definition of byproduct material goes beyond that intended or defined in UMTRCA. Staff recommends dropping the words, and, "other tailings having similar radiological characteristics." Again, staff wishes to point out that the disposal of radioactive wastes other than wastes produced by or resulting from the extraction or concentrations of uranium or thorium from any ore

produced primarily for its source material content (11e(2) material) into a tailings disposal area could result in a situation where the Department of Energy could refuse to take title to the mill tailings disposal site upon completion of closure of the site. Additionally, wastes other than 11e(2) material may be subject to RCRA regulations or other EPA rules for the hazardous constituents present in the material. By letter dated March 23, 1989, State Programs notified the mill Agreement States of the NRC staff's position on the subject.

The NRC staff is analyzing the possible materials that could be included within the general intent of UMTRCA but not meeting the specific definition. The results of this analysis should be available in a few months, including options to implement the conclusions.

4. Page 43-4, Section 43.2 Definition of Security.

Add to the definition the following, "anything constituting self insurance is prohibited." See NRC 10 CFR 40, Criterion 9(f).

 \*Page 43-7, Section 43.26 Special Requirements for Specific License Applications for Uranium Recovery Facilities, item (d) line 3.

Staff questions the incompleteness of the reference to 43.90(1). It would appear that the applicant would provide procedures addressing the operational aspects of the technical requirements in all of 43.90.

 Page 43-8, Section 43.30 Issuance of Specific Licenses, item (a) line 2.

Change "may" in second line to "shall", i.e., ... "the agency shall issue a...." Issuance of the license should not be an option if all regulatory requirements are met.

 Page 43-12, Section 43.40 Transfer of Material, item (a) line 1, item (b) lines 2 and 3.

Change "radioactive material" to "source or byproduct material." Part 43 does not apply to the broad term "radioactive material," but only to "source or byproduct material."

 Page 43-13, Sections 43.40 Transfer of Material, item (c), lines 1, 4 and 7.

Change "radioactive material" to "source or byproduct material." See comment above.

9. Page 43-14, Section 43.60, Financial Security Requirements General Comment.

The staff notes the absence of language in 43.60 which states that "proof of forfeiture shall not be necessary to collect the surety so that, in the event that the licensee could not provide an acceptable replacement surety within the required time, the surety shall be automatically collected prior to its expiration. See 10 CFR Part 40. Criterion 9.

 Page 43-14, Section 43.60 Financial Security Requirements, item (b) in general and line 4 of item (b) specifically.

This section appears to duplicate in part the "security" definition in 43.2. The differences should be resolved. The staff recommends defining, "corporate surety" to be a parent company guarantee subject to the required financial tests. As an example of the corporate guarantee the NRC finds acceptable, the State should use Appendix A to 10 CFR Part 30 which is patterned after the financial BTP for uranium mills.

 Page 43-15, Section 43.60 Financial Security Requirements, item (d), lines 2, 3 and 9.

Change lines 2 and 3 to read, "In establishing a specific security, the...." Change line 9 to read, "the next license renewal and the long-term care charge until monies are paid in accordance with 43.70." (See NRC 10 CFR Part 40, Criterion 9). Change line 2 by deleting "and maintenance and control" since these activities are part of long-term care.

 Page 43-15, Section 43.60, Financial Security Requirements, item (f) line 4.

Change line 4 to read, "restoration, and disposal, at the specific site if that security is considered adequate to satisfy these requirements, and the portion of the security for site closure and long-term care is clearly identified and committed for such purposes."

 Page 43-15, Section 43-60, Financial Security Requirements, item (h).

NRC 10 CFR Part 40, Criterion 9 states that the term of the surety mechanism must be open ended, unless it can be demonstrated that another arrangement would provide an equivalent level of assurance. A mechanism which is automatically renewed unless notified at least 90 days in advance would be acceptable. The staff recommends rewording item (h) to reflect this concern. (See NRC 10 CFR Part 40, Criterion 9).

 Page 43-16, Section 43.70, Long-term Care and Maintenance Requirements.

Change the title of this section "Long-term Care Requirements." This should be done to avoid the confusion about taking credit for maintenance in the design of disposal facilities and under what conditions maintenance can be approved as part of long-term care (See recommendation on adding definition of long-term care).

 Page 43-16, Section 43.70, Long-term Care and Maintenance Requirements, item (b).

Change (b) to read, "The final disposition of tailings or wastes should be such that no ongoing active maintenance is required to preserve conditions of the site and

isolation of byproduct material. (See NRC 10 CFR Part 40, Criterion 1 and Criterion 12).

16. Page 43-16, Section 43.70, Long-term Care and Maintenance Requirements, item (c).

The requirement for an inflation adjustment is missing from this requirement. It should be included. (See NRC 10 CFR Part 40, Criterion 10). In addition, the use of maintenance separate from long-term care should not be implied unless a determination is made that maintenance is required to meet the long-term isolation/stability requirement (i.e., an alternative to the requirements is necessary).

17. Page 43-16, Section 43.70 Long-term Care and Maintenance Requirements, item (d).

As stated, the impression is created that there may be some sites whose ownership is not subject to being transferred to the State of Federal government. What determines when a site will not be transferred, and has the TBRC identified any such sites? (e.g., commitment by licensee to remove all byproduct material from the site).

18. Page 43-16, Section 43.90 Technical requirements, item (b)(2).

What is the definition of "useable groundwater sources?" Is it groundwater with or without treatment, drinking water, or useable for irrigation? Staff recommends clarifying language be added or the term specifically defined in 43.2.

 Page 43-17, Section 43.90, Technical Requirements, item (e)(3), line 7.

The staff notes that the justification for an acceptable slope stability is stated somewhat differently from that in NRC 10 CFR Part 40, Criterion 4, and may be less stringent than NRC's.

20. \*Page 43-23, Section 43.90, Technical Requirements, item (h) Corrective Action Program, line 8.

Two sentences should be added after the word agency ... "by the agency. The objective of the program is to return hazardous constituent concentration levels in groundwater to the concentration limits set as standards. The licensee's proposed program must address removing the hazardous constituents that have entered the groundwater at the point of compliance or treating them in place." See 10 CFR Part 40, Criterion 5(D). This could be added as a definition of a corrective action program in 43.2 instead of inserting it in this location.

21. \*Page 43-26, Section 43.90, Technical Requirements, item (n) (2), line 11.

Staff notes the absence of the requirement for detection monitoring programs for licenses in effect September 30, 1983 and licensees issued after September 30, 1983. See 10 CFR 40 Appendix A, Criterion 7A. The State should set

a specific time, such as one (1) year, in which licensees are to propose and implement the detection monitoring requirement.

22. \*Page 43-26, Section 43.90, Technical Requirements, item (n)(2).
The staff notes the absence of the statements on the purposes of compliance monitoring, corrective action monitoring, and use of existing monitoring programs. NRC staff recommends defining these

23. Page 43-27, Section 43.90, Technical Requirements, item (o).

Add the following sentence to (o) "Notwithstanding the existence of individual dose standards, strict control of emissions is necessary to assure that population exposures are reduced to the maximum extent reasonably achievable and to avoid site contamination." See NRC 10 CFR Part 40, Criterion 8.

various monitoring programs. See NRC 10 CFR Part 40. Criterion 7A.

24. \*Page 43-27, Section 43.90 Technical requirements, item (o), Airborne Emission and Discharge Control Requirements, (5) line 2.

Change "40 CFR 440" to "40 CFR Part 440 as codified on January 1, 1983."

25. Page 43-28, Section 43.95, Land Ownership.

The section on land ownership is missing several elements and erroneous in other places. The language contained in NRC 10 CFR Part 40 Appendix A, Criterion 11, A through F should be adopted, as presented below.

- A. Criterion 11-A These criteria relating to ownership of tailings and their disposal sites become effective on November 8, 1981, apply to all licenses terminated, issued, or renewed after that date.
- B. Any uranium or thorium milling license or tailings license must contain such terms and conditions as the Commission determines necessary to assure that prior to termination of the license, the licensee will comply with ownership requirements of this criterion for sites used for tailings disposal.
- C. Title to the byproduct material licensed under this Part and land, including any interests therein (other than land owned by the United States or by a State) which is used for the disposal of any such byproduct material, or is essential to ensure the long term stability of such disposal site, must be transferred to the United States or the State, in which such land is located, at the option of such State. In view of the fact that physical isolation must be the primary means of long-term control, and Government land ownership is a

desirable supplementary measure, ownership of certain severable subsurface interests (for example, mineral rights) may be determined to be unnecessary to protect the public health and safety and the environment. In case, however, the application/operator must demonstrate a serious effort to obtain such subsurface rights, and must, in the event that certain rights cannot be obtained, provide notification in local public land records of the fact that the land is being used for the disposal of radioactive material and is subject to either an NRC general or specific license prohibiting the disruption and disturbance of the tailings. In some rare cases, such as may occur with deep burial where no orgoing site surveillance will be required, surface land ownership transfer requirements may be waived. For licenses issued before November 9, 1981, the Commission may take into account the status of the ownership of such land, and interests therein, and the ability of a licensee to transfer title and custody thereof to the United States or a State.

- D. If the Commission subsequent to title transfer determines that use of the surface or subsurface estates, or both, of the land transferred to the United States or to a State will not endanger the public health, safety, welfare, or environment, the Commission may permit the use of the surface or subsurface estates, or both, of such land in a manner consistent with the provisions provided in these criteria. If the Commission permits such use of such land, it will provide the person who transferred such land with the right of first refusal with respect to such use of such land.
- E. Material and land transferred to the United States or State in accordance with this Criterion must be transferred without cost to the United States or a State other than administrative and legal costs incurred in carrying out such transfer.
- F. The provisions of this part respecting transfer of title and custody to land and tailings and wastes do not apply in the case of lands held in trust by the United States for any Indian tribe or lands owned by such Indian tribes subject to a restriction against alienation imposed by the United States. In the case of such lands which are used for the disposal of byproduct material, as defined in this Part, the licensees shall enter into arrangements with the Commission as may be appropriate to assure the long-term surveillance of such lands by the United States.

## Comments on the Texas MOUs

 \*Page 43-35, MOU with Texas Water Commission (TWC) item 15, last sentence.

The monies deposited in the Radiation and Perpetual Care Fund for the purposes of meeting the financial security requirements in 43.60 and 43.70 should be restricted and only be used for the purpose for which they were deposited.

 \*Page 43-39, MOU with Texas Railroad Commission, item 3(b), lines 8, 9, and 10.

The staff wishes to point out the if the land and byproduct material is transferred to the Texas Department of Health, (TDH) the TDH will become the custodian licensed by the Commission. The long-term care activities will be regulated by NRC, since this is a regulatory authority reserved to the NRC. Until the State of Texas formally exercises its option to take title to the disposal area and byproduct material, the TDH may want to preserve the Federal option. To recognize this in the MOU, we recommend line 9 be revised to read, "of Texas or the Federal government and, if the land and byproduct material is transferred to the State of Texas, the TDH will assume responsibility for its long-term are under an NRC license." Line 12 would read, "rules and those of the NRC for long-term care."

3. \*If in the event conflicts arise over some aspect of the joint MOUs between TWC and TDH and RRC and TDH, how will such conflicts be resolved? Under the present NRC agreement with the State of Texas, NRC recognizes the TDH as the final authority. Staff recommends adding a section to the MOUs that explain how such conflicts will be resolved.

- Category B Texas Regulations Believed to be More Stringent Than NRC Regulations
- 1. Page 43-7, Section 43.26, Special Requirements for Specific License Applications for Uranium Recovery Facilities, item (c) Staff notes that item (c) may be more stringent than NRC regulations. If "prior to issuance of the license" were changed to "prior commencement of operations," then this requirement would not be more stringent.

## Category C - Texas Standards not Contained in NRC Regulations

 Page 43-7, Section 43.25 General Requirements for the Issuance of Specific Licenses, item (d).

The staff notes that item (d) is not addressed in NRC's 10 CFR Part 40 regulations.

2. Pages 43-9, 10, General comment.

The staff notes that standards have been added to section 43.31 which are not addressed in NRC's 10 CFR Part 40 regulation, i.e., items g(3) and (4) and (h)(1) and (2).

 Page 43-11, Section 43-32, Expiration and Termination of Licenses, item (f).

The staff takes note that item (f) is not addressed in NRC's 10 CFR Part 40 regulations.

Page 43-15, Section 43.60, Financial Security Requirements, item
 (i).

The staff notes that 43.60(i) is not addressed in NRC's 10 CFR Part 40 regulations.

#### Comments on the Texas MOUs

 Pages 43-37 and 43-38, Appendix 43-C MOU with the Railroad Commission of Texas, item 1.(a).

As a reminder, the staff wants to point out that the TDH resposibilities described in Appendix 43-C, item 1 are responsibilities that have not been covered under the Atomic Energy Act authority. The NRC staff will not provide any further review of this section.

- Category D Recommended Changes Which Would Enhance the Understanding of the Regulations or Alleviate the Potential for Misunderstanding the Regulations
- 1. \*Page 43-2, Section 43.2 Definition of closure.

Because there is no definition for "post-operational activities" it is suggested that the words, "post-operational" be deleted and closure defined as follows. Closure means the activities following operations to decontaminate and decommission the buildings and site used to process ore for its source material content and reclamation of the tailings and/or waste disposal areas. Staff believes this suggestion will provide regulatory clarity.

2. \*General Comment, Section 43.2.

For regulatory clarity, and because of their use in the regulations, it is suggested that definitions also be provided for the following terms: Postclosure, Surveillance, Monitoring, Detection Monitoring, Compliance Monitoring, Long-term Care, Corrective Action Program, and any other definitions where the TBRC intends to use terms differently than used in NRC regulations or guidance documents.

3. Page 43-5, Section 43.24.

Filing applications for specific licenses, item (d) line 2. Add the following words to the end of the sentence, "provided that the application specifies the additional activities for which licenses are required and complies with regulations of the Agency as to applications for such licenses." This would clarify that including other activities in the application for a uranium recovery facility does not alter the regulatory requirement for the other activities.

4. Page 43-6, Section 43.25.

General Requirements for the issuance of specific licenses, item (c). After the word "inimical" add the following, "to common defense and security," i.e.,..."not be inimical to common defense and security or to public health and safety and the environment."

 \*Page 43-11, Section 43.32, Expiration and Termination of License, item 43.32(e), line 2.

The reference to "paragraph (d)(3)" should be "paragraph (d)(4)."

6. Page 43-13, Section 43.40 Transfer of materials, item (d). The staff recommends adding the following paragraph between (d)(3) and (d)(4). "The transferor may obtain sources of information complied by a reporting service from official records of the Commission or the licensing agency of an Agreement State as to the identity of licensees and the scope and expiration dates of licenses and registrations, or..." (See NRC 10 CFR Part 40, 40.51 (d)(4).

7. Page 43-13, Section 43.50.

Change the title by dropping the word termination which is now in Section 43.32. The title of Section 43.50 should read, "Modification and Revocation of Licenses."

 Page 43-13, Section 43.50 Modification, Revocation, and Termination of Licenses, item (a), lines 3 and 4.

Change to read ... " or by reason of rules, regulations, or orders issued by the Agency in accordance with the Act."

 Page 43-14, Section 43.50 Modification, Revocation, and Termination of Licenses, item(d).

This appears to be a duplication of 40.32.

 \*Page 43-14, Section 43.60 Financial Security Requirements, Item (c)(1), line 1.

As used in this regulation, does the use of the word "restoration" mean groundwater restoration or surface restoration? Staff recommends adding clarification. Use of the term "closure" in (c)(2) would include the groundwater restoration resulting from the disposal area.

11. Page 43-16, Section 43.90, Technical Requirements, item (b), line 3.
The words "would assure meeting" should read "would assist in meeting." By addressing the site features listed, nothing is "assured."

12. Page 43-17, Section 43.90, item (c), line 6.

The staff recommends deleting the words "and maintenance." Maintenance will not be routine at sites that are closed in accordance with the standards.

- 13. Page 43-17, Section 43.90, Technical Requirements, item (e)(2).
  Suggest changing the word, "shall" to "should."
- 14. \*Page 43-21, Section 43.90, Technical Requirements, item
  (g)(1)(i)(g).

Add the words, "caused by human exposure to waste constituents" after "human health risks." This language clarifies what risks are part of the evaluation.

15. \*Page 43-21, Section 43.90, Technical Requirements, item (g)(1)(i)(h), line 2.

Change to read, "physical structures caused by exposure to waste constituents."

16. \*Page 43-21, Section 43.90 Technical Requirements, item (g)(1)(i)(i).

Add the words, "and permanence" after the word persistence. The intent is to differentiate between two actions. One, the continuance of an effect after the cause is removed, and the other being fixed and changeless indefinitely.

17. \*Page 43-22, Section 43.90, Technical Requirements, item (g)(i)(ii)(h).

Change to read, "potential for human health risks from exposure to waste constituents."

 \*Page 43-22, Section 43.90 Technical Requirements, item (g)(1)(ii)(i), line 2.

Change to read, "physical structure caused by exposure to waste constituents, and."

19. \*Page 43-22, Section 43.90, Technical Requirements, item (g)(1)(ii)(j).

Add the words, "and permanence" after the word persistence, See comment 16.

20. \*Page 43-22, Section 43.90, Technical Requirements, item (g)(2).

Regarding the referenced to exempted aquifiers by EPA, does the Texas Water Commission use the same criteria for exempting aquifiers as EPA?

21. \*Page 43-22, Section 43-90, Technical Requirements, item (g)(3)(i).

The reference to 10 CFR Part 40, Appendix A, Criterion 13 is redundant with the definition of the hazardous constituent in 43.2.

22. \*Page 43-24, Section 43.90 Technical Requirements, item (j).

NRC staff recommends clarifying this paragraph by placing the last two sentences of the paragraph first. This would place the development of the seepage control systems to be developed only after seepage has been identified.

23. \*Page 43-25, Section 43.90 Technical Requirements, item (m) Disposal area cover and closure (i) and (1)(ii).

The staff notes the explanatory information in footnote 1, to Criterion 6 of Appendix A to 10 CFR Part 40 is not included in these regulations. (i.e., This is a design standard). The staff notes the explanatory material for radon monitoring presented in 10 CFR Part 40, Criterion 6, footnote 2, has not been included. How are these aspects of radon monitoring to be made known to the licensee? Staff recommends the explanatory material be added.

24. Page 43-27, Section 43.90, Technical Requirements, item (o)(2) line 9.
The staff recommends dropping the words "uranium dryer." This change would remove the limitation that the emission controls apply only to the uranium dryer stack.

25. \*Page 43-28, Section 43.90, Technical Requirements, item (p).

It should be noted that, if the State adopts alternatives to the requirements adopted and enforced by the NRC. 10 CFR Part 150.31(d) requires NRC action, i.e., the Commission review of State programmatic or site specific alternatives with notice and opportunity for hearing. Texas regulations should specifically state that Commission approval is required. The staff recommends changing the second line to read, "must be approved by the Commission with notice and opportunity for hearing as required in 10 CFR 150.31(d)."

#### Comments on the Texas MOUs

1. \*Page 43-34, MOU with Texas Water Commission (TWC), item 8.

To prevent confusion it is recommended that the following words be added to the paragraph ...waters in the State "consistent with the conditions in item 6 of this MOU."

\*Pages 43-34 and 35, item 9, iine 12.

Will the joint hearing procedures conducted pursuant to TWC rules conflict with any of the Texas Department of Health (TDH) Rules?

 \*Page 43-35, MOU with the Texas Water Commission, item 10, last sentence.

Is the posting of financial security with the TDH as agreed with the TWC a difference security than that for other securities for decontamination and decommissioning of processing facilities and site and for reclamation of waste disposal areas? If applicable as we read this, the restoration referred to in this line is for the restoration of the aquifer in the in situ mining zone or aquifier directly impacted by the insitu mining operation not the aquifer impacted by the waste management operations. We recommend adding after the word restoration the following words, "of the aquifer directly impacted by the in situ mining operations."

 \*Pages 43-34 and 43-35, MOU with Texas Waste Commission, items 10, 11, and 15.

Because financial security is required for decommissioning, etc., efforts for both TWC and TDH activities, it may be advisable to identify what portion of the total will be earmarked for below and above ground activities.

5. \*Page 43-38, MOU with the Texas Railroad Commission (TRRC), 2(b), like 3.

The wording, "regulation of releases and disposals of effluents and wastes on land surfaces" is unclear to the NRC staff. We assume that this means, "regulation of byproduct material disposal in surface impoundments."