ATTACHMENT 1

COMMENTS ON THE DRAFT RULEMAKING PLAN

STATE OF COLORADO

Bill Owens, Governor
Jane E. Norton, Executive Director

Dedicated to protecting and improving the health and environment of the people of Colorado

4300 Cherry Creek Dr. S.
Denver, Colorado 80246-1530
Phone (303) 692-2000
TDD Line (303) 691-7700
Located in Glendale, Colorado

Laboratory and Radiation Services Division
8100 Lowry Blvd.
Denver CO 80230-6928
(303) 692-3090

http://www.cdphe.state.co.us

Colorado Department
of Public Health
and Environment

October 25, 2000

Mark Haisfeld
Division of Industrial and Medical Nuclear Safety
Office of Nuclear Material Safety and Safeguards, T9-C24
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Subject: Request for comments on September 11, 2000 draft 10 CFR Part 41 rulemaking plan

Dear Mr. Haisfeld:

This responds to the request for comments on the September 11, 2000, Draft Rulemaking Plan "Domestic Licensing of Uranium and Thorium Recovery Facilities – Proposed New 10 CFR Part 41. The State of Colorado concurs with NRC Staff Option 2b, promulgation of a new 10 CFR Part 41 for uranium and thorium facilities. The effort to develop Part 41 will also necessitate revision of guidance documents used for implementation, in particular the standard review plans noted on page 9 of the Draft Rulemaking Plan.

The State of Colorado has three overall responses.

First, the desired simplification and codification of definitions and requirements needs to have concurrence from the implementing and affected agencies, including the U.S. Department of Energy. This is especially important for the definition of material for processing and disposal at uranium/thorium facilities which will become permanent federal repositories.

Second, the Part 41 rulemaking may provide opportunity for NRC to make its approach to NRC's oversight role for uranium mills more consistent with the law which governs when NRC relinquishes its authority to an Agreement State. The recent experience of the State of Washington elevates the need for NRC to get clearer about its roles and responsibilities to the highest profile. Part 41 could make clear that NRC will defer to the Agreement State decision as with radioactive material decommissioning.

Third, these matters--in situ leaching, what material may be accepted for processing and/or disposal at a uranium/thorium mill, and modification of the fundamental Appendix A criteria--are of great relative importance to the Colorado Radiation Services Program. Colorado is willing to volunteer to participate for the Conference of Radiation Control Program Directors or the Organization of Agreement States on NRC's staff working group.

Colorado has the following comments on Attachment 1, "Specific Proposed Changes".

1. Regarding in situ uranium solution mining, Colorado has terminated licenses for two exploratory in situ leaching projects using independent state water quality protection authority to ensure full restoration of ground water quality. While underground injection control considerations came into play, these were not sufficient in themselves.

2. Colorado strongly supports simplification of the determination of material acceptability for disposal in uranium/thorium mill tailings impoundments. The starting point for this determination is that natural uranium, natural thorium or their decay products, in many forms, are within the health, safety and environmental protection envelope of such facilities. A new Part 41 could clarify this for Atomic Energy Act byproduct material as well as for naturally occurring radioactive material, in order to give clear guidance to NRC and State licensees, to regulators, and to the federal long-term custodian. In sum, the rule or guide must be unambiguous, and receive U.S. Department of Energy concurrence.

3. Part 41 could help clarify the relation of Part 40 and Part 61 requirements. The rulemaking could provide an exemption in Part 61 for source material in many forms to be processed and/or disposal at a licensed source material mill.

   The last paragraph on page 3 of the discussion in the section Difficulties With Regulating ISL Facilities, states: **"The Southwest Research Information center (SRIC), an environmental organization, recommended that the NRC not eliminate its review of ground water at ISL facilities. SRIC argued that the NRC regulation was complementary not duplicative of the UIC program. The State of Wyoming believed that NRC's efforts on ground water at ISL facilities was not needed. Industry representatives advocated that the NRC adopt *the position* in the White Paper."** It is not clear what position was advocate by industry. Colorado reserves comment on this issue until after the discussion with NRC, EPA, and other State technical staff.

4. Colorado's operating uranium mill has an established procedure for determining acceptability of alternate feed material and material for co-disposal. A second former conventional mill site in Colorado also has such a procedure. The present federal guidance is convoluted and difficult to reconcile with practical situations as they frequently present themselves. Simplification and codification in Part 41 would have great benefits.

5. Colorado has serious reservations about any NRC approach to ground water protection which even putatively might preempt independent Colorado authority over waters of the state.

6. Colorado' s operating uranium mill is predominantly subject to procedure-based requirements but also is subject to some performance-based requirements. While Part 41 could enable performance-based approaches, it would be ill-advised to preempt regulatory flexibility of choice by mandating a performance-based approach to licensing.

7. Colorado utilizes and supports establishment of standby trusts.

8. Colorado disagrees with the proposal to provide laboratories a general license for 300 lb. Of 11e.(2) byproduct material. Colorado has experience with the current 15 lb. limit which resulted in cleanup costs of about $200,000. Storage in Colorado of ore for analysis has resulted in radon doses of more than 1 mSv (100 millirem).

9. The prescriptive requirements in 10 CFR Part 40, Appendix A, criteria have served usefully for twenty years. The requirement of no active maintenance has been an important tenet, as have nonproliferation and remoteness of sites. If the criteria aren't broken, there is not need to fix them. Any changes should be judicious in not causing past designs and commitments to be second-guessed. No revision should be made until after careful reanalysis of the basis for the requirements as supported by the Generic Environmental Impact Statement on Uranium Milling, NUREG-0706, and careful evaluation of subsequent practical experience from uranium mill remedial action projects. The distinction regarding active maintenance has been difficult to implement in practice.

10. Clarification that the 11e.(2) byproduct material definition as applied to in situ leach facilities will be useful if, and only if, it helps ensure more appropriate health, safety and environmental protection.

11. Reporting and tracking spills is key information necessary for cleanup and decommissioning. Codification of requirements for adequate spill reporting and recordkeeping is desirable. What criteria would be used to determine safety significance? What criteria would apply to damage to the environment? Who would make the determination as to the safety significance or damage? These matters will need specificity.

12. Siting criteria are important for both new and existing facilities. Colorado supports reexamination of Criterion 1, Appendix A, 10 CFR Part 40, with the reservation expressed in item 9 above.

13. Colorado requires by law the annual review of financial warranties. An annual frequency poses no undue burden. An unambiguous, routine expectation is preferable to flexibility in this case.

14. Colorado supports updating the long-term surveillance charge to 2000 dollars. Colorado aiso advocates greater flexibility in setting the amount on a site-by-site basis, in order to fully reflect and provide the full cost of long term care.

In addition to the above comments, Colorado also advocates that any revision of Part 41 thoughtfully identify and carefully delineate any differences between requirements for decommissioning of uranium/thorium facilities and the requirements for all other radioactive material licensees. Requirements should be as uniform and consistent as possible across all categories of licensed radioactive materials.

If you have any questions about these comments as you consider the scope and shape of an Advanced Notice of Proposed Rulemaking, please contact me or Ken Weaver of my staff at 303.692.3058, or electronically at Kenneth.Weaver@state.co.us.

Sincerely,

W. Jake Jacobi, Manager
Radiation Services Program

WJ:kw

STATE OF WASHINGTON
DEPARTMENT OF HEALTH
DIVISION OF RADIATION PROTECTION
7171 Cleanwater Lane, Bldg. 5 • P.O. Box 47827 • Olympia, Washington 98504-7827
TDD Relay 1-800-833-6388

October 25, 2000

Mr. Mark Haisfield
Nuclear Regulatory Commission, NMSS
Division of Industrial and Medical Nuclear Safety
T9 - C24
Washington, D.C. 20555

RE: Comments on NRC's Draft Rulemaking Plan for Domestic Licensing of Uranium and Thorium Recovery Facilities – 10 CFR Part 41

Dear Mr. Haisfield:

The Washington State Department of Health hereby provides the following comments on the NRC's draft rulemaking on 10 CFR Part 41.

1) While Washington State supports NRC with any approach to updating regulations associated with domestic licensing of uranium and thorium recovery facilities, we prefer NRC's option of developing separate regulations in 10 CFR Part 41for these facilities. Washington State has specific regulations for uranium and thorium facilities outlined in *Chapter 246 – 252 WAC (Washington Administrative Code), Radiation Protection – Uranium and/or Thorium Milling.*

2) Recently, NRC has taken a position of not regulating pre–1978 uranium and thorium mill tailings (lle.(2) byproduct material) under UMTRCA. The Draft Rulemaking Plan does not mention the application of the proposed regulation 10 CFR Part 41 to only mill tailings that are post-1978, consistent with NRC's present position. Washington State has a site where pre–1978 uranium mill tailings are located in an isolated tailings disposal area, another tailings disposal area contains co-mingled pre–1978 and post–1978 tailings, and another tailings disposal area contains only post–1978 tailings. 10 CFR Part 41 should clarify not only the regulation of pre–1978 mill tailings versus post-1978 mill tailings, but also how closure of millsites containing pre–1978 tailings should proceed.

3) There are no In Situ Leach (ISL) facilities in Washington State, so we have no specific comments on the proposed rulemaking plan related to ISL facilities at this time. However, we do support the need to codify requirements relevant for ISL facilities, rather than the current process of adapting regulations developed for conventional milling operations and placing requirements in license conditions for these facilities in lieu of codified requirements.

4) Washington State strongly supports NRC's proposed direction toward performance-based requirements, similar to those outlined in Criterion 6, and the removal of specific requirements, such as those outlined in Criterion 4 (e.g., 5 to 1 slopes). We would like to note our experience from the evaluation of seismic stability at Western Nuclear's Sherwood facility. The facility is located in an area of infrequent and small seismic events. We found that the approach of probabilistic modeling was more suitable for assessing seismic stability than deterministic modeling.

5) Washington State supports NRC's direction to clarify and make the distinction in 10 CFR Part 41: what are siting criteria for new facilities, versus regulatory requirements for existing old facilities that may be in closure. Criterion 1, in particular, should be made clearer as to its applicability to new facilities versus old facilities in closure.

6) Washington State supports NRC's direction to revise Criterion 12 and not categorically eliminate closure designs that preclude active maintenance. Minimizing maintenance is a goal we support. However, on a site-specific basis, there may be closure designs that require some long-term maintenance that overall provide better long-term stability than would designs that do not require some level of maintenance.

7) Washington State supports NRC's direction to codify requirements that would allow material other than 11e.(2) byproduct material to be disposed into tailings impoundments.

Please feel free to call me at (360) 236-3241 if you have any questions.

Sincerely,

Gary Robertson

Gary Robertson, Head
Waste Management Section

State of Utah

DEPARTMENT OF ENVIRONMENTAL QUALITY
DIVISION OF RADIATION CONTROL

Michael O. Leavitt
Governor
Dianne R. Nielson, Ph.D.
Executive Director
William J. Sinclair
Director

168 North 1950 West
P.O. Box 144850
Salt Lake City, Utah 84114-4850
(801) 536-4250
(801) 533-4097 Fax
(801) 536-4414 T.D.D.
www.deq.state.ut.us Web

October 25, 2000

Mark Haisfield
Division of Industrial and Medical Nuclear Safety
Office of Nuclear Material Safety and Safeguards, T9-C24
Nuclear Regulatory Commission
Washington, D.C, 20005-0001

Via electronic mail

Dear Mr. Haisfield:

The State of Utah is providing comments on a draft rulemaking plan entitled: "Domestic Licensing of Uranium and Thorium Recovery Facilities." that has been made available on the NRC Technical Conference Forum. The State of Utah concurs with the NRC staff Option 2b, promulgation for a new 10 CFR 41 for uranium and thorium facilities. As this rulemaking proceeds, it will be important to have representation from the states. It is recommended that the NRC seek state representatives from both the Organization of Agreement States and the Conference of Radiation Control Program Directors. The State of Utah has also carefully reviewed Attachment 1 of the draft rulemaking plan entitled: "Specific Proposed Changes" and desires to comment on the direction and scope of these proposed changes that would constitute the basis for a new 10 CFR Part 41. As such, the comments are categorized using the outline in Attachment 1 of the draft rulemaking plan. We have also suggested two other areas of concern not addressed in Attachment 1 for your consideration.

1. Regulations For In Situ Leach Facilities:

Utah has no in-situ leach facilities. The focus of the change is to ensure that in-situ facilities are adequately regulated since the original uranium recovery rules focused on ore- processing by mills. We support this effort but caution that any suggested changes not dilute the original intent of regulation of mills since several mills are still in operation or on a standby status. Such is the case for two uranium mills in the State of Utah. The NRC should be aware that the application of a state or federal underground injection well control (UIC) program by the Environmental Protection Agency or a state may vary in terms of groundwater protection. Ultimately, the goal for all agencies is provide for any necessary groundwater restoration as a result of the intrusion of in-situ mining into an aquifer. There needs to be a very careful and clear discussion between the agencies as to jurisdiction, whether it be primary or concurrent, such that the goal of groundwater protection is realized.

2. Regulations for Disposal of Other Material in Tailings Piles

At present, NRC and States have to rely on guidance to make determinations of whether it is appropriate to place certain materials into tailings piles. The discussion in the draft rulemaking plan focuses upon three major points: (1) adequate protection of public health, safety, and the environment, (2) willingness of the long-term custodian to accept responsibility for maintenance of the site prior to NRC/Agreement State approving disposal, (3) approvals of other affected regulators. In testimony before the Commission on June 17, 1999, Utah pointed out several issues relating to the adequate protection program. These included the need to apply preventative measures to storage of materials, adequacy of tailings impoundments constructed under "old" technology, and monitoring programs (e.g. groundwater protection).

What the long-term custodian is willing to accept is a critical path in this discussion. In Commission testimony of June 17, 1999, Utah pointed out: "What say will the long term custodian have in receipt, processing, and ultimate disposal of. . .waste? Is there an approval role for the Department of Energy and what constitutes such approval by the Department of Energy?" This now has been broadly interpreted to include potential disposal of pre-UMTRCA uranium mill tailings, special nuclear material, low-level radioactive waste, TSCA, CERCLA, and RCRA wastes. It also should be made clear as to what "approvals of other affected regulators" will mean. It is clear that issues involving disposal of mixed hazardous waste require close coordination with the states who have primacy in this area, it is less clear in other areas.

3. Criteria for Construction of 11e.(2) Byproduct Material Disposal Cells

This recommendation recognizes a previous comment that "old technology" may not be appropriate for uranium recovery facilities desiring to receive and process "significant" quantities of 11e.(2) material. This may also recognize that the uranium recovery industry, especially milling, has changed. Due to the price of uranium and the ability to extract uranium in-situ, mills that process ore to extract uranium are an endangered species. These mills have to change focus to survive by turning to other alternatives such as processing alternate feed materials or direct disposal of off-site 11e. (2) and non-11e. (2) material. Using recommendations from a 1991 Federal Register notice (10 years out of date) may or may not be appropriate to determine the best course of action for cell construction.

4. Regulations for Processing Alternate Feed Material

Utah provided significant input as a party in the Commission decision in International Uranium (USA) Corp., CLI-00-01, 51 NRC 9 (2000). Among the issues were provisions within the NRC Guidance which allowed for processing of source material processed

primarily for source material content. The Commission has made it clear in the decision that if a material contains "any amount" of source material it is appropriate to classify it as alternate feed material, not matter "how much" material is extracted. Such matters are economic and should not be considered. However, the State of Utah believes that NRC has interpreted to the extreme to allow even minuscule amounts of source material within large amounts of waste to be processed. The State of Utah is also concerned that NRC has taken the position that interactions should occur with stakeholders to allow disposal of non 11e.(2) byproduct including TSCA,RCRA,CERCLA, NORM, NARM, and TENORM. This issue is better discussed in Item #2, Regulations for Disposal of Other Material in Tailings Piles.

If the barn doors are to be "wide open", perhaps a discussion on how wide open should be had with stakeholders. For example, it is the opinion of the State of Utah that an authorized RCRA state is not going to allow mixed listed or characteristic hazardous waste into a uranium tailings impoundment without a jurisdiction dispute. The same may apply to the EPA and TSCA and CERCLA wastes. A more reasonable approach may be to codify in the rulemaking what could or could not be received by 11e.(2) licensed facilities to be processed as alternate feed or directly disposed with the ultimate approval of the long-term custodian of the facility (Department of Energy or the State).

Finally, the State of Utah agrees that the new regulations should be more performance based (as appropriate). However, the example given as an "appropriate" based license condition that license amendments would no longer be required for each use of alternate feed could be construed by some as an example of the "fox watching the henhouse" with no opportunity for public involvement. Such performance based licensing needs to be carefully constructed to find ways to circumvent such arguments.

The processing of alternate feed material raises other issues that have not been addressed, as viewed by some, in a satisfactory manner. When a mill makes a business decision to abandon processing of ores and strictly process alternate feed, the purpose of the mill has changed. Some would view the mill as becoming a "defacto waste facility," others welcome the opportunity to keep the mill in operation. Questions start to arise regarding what is now traveling over the highways to the mill. Most people are comfortable with "ore" trucks but not "waste" trucks. Is it appropriate at the time a mill decides to make the switch or even become a "part-time" alternate feed processor to provide the public with information through a re-opening of the original Environmental Impact process in some form.

There should also be the recognition that as a transition from a mill to an alternate feed processing facility occurs that preventative measures should be considered. The State of Utah testimony on June 17, 1999 outlined several of these concerns. There should be also the recognition that state resources will be impacted. To date, the State of Utah has had to devote resources to a truck rollover, overweight vehicles, release of contaminated

conveyances, and mistaken disposal of hazardous waste. These were not issues when the mill operated as a "mill." The basic question becomes should there be additional standards for a milling facility that processes alternate feed or receives non 11e.(2) material for disposal.

Some uranium mills have (or could have) the capability to mill ores for purposes other than source material recovery. Given the current economics of uranium recovery (UR), milling ores for other metals without attempting to recover uranium might become an attractive option for a UR licensee to maintain viability of its milling facility. Needless to say, any such milling activity would create tailings and other wastes that would not satisfy the definition of 11e.(2) byproduct material. This raises the following question: Under what circumstances, if any, would it be permissible to place such tailings and wastes in a licensed 11e.(2) byproduct cell.

The waste materials created typically would be primary non-radioactive mill tailings similar physically and even chemically, in most characteristics to uranium mill tailings without the high radium concentrations. When discussing the term "non-radioactive" mill tailings. it is recognized that any natural ore could contain some amounts of naturally occurring radioactive material which could pass through the milling process into the tailings. The tailings typically would not be subject to NRC licensing unless they were ores containing licensable levels of source material. Indeed, not only would such waste pose a reduced potential radiological hazard, they might even be useful in suppressing radon emissions from UR tailings that they cover. NRC current (and prior) non-11e.(2) waste policy and various Department of Energy public statements through letters to the NRC suggest that such wastes would pose no incremental environmental hazards beyond those posed by the UR tailings and if they posed no significant dual jurisdiction complications, they would be suitable for disposal in a licensed 11e.(2) cell.

The tailings and related wastes from processing natural non-uranium ores would typically be subject to the Bevill exemption and not subject to RCRA Subtitle C hazardous waste requirements even if such wastes contain some "characteristic" constituents. Other feed materials, that do not quality for the Bevill exemption, would typically be exempt from RCRA jurisdiction as long as they did not contain any listed hazardous waste and the resulting tailings from processing of the materials did not contain any characteristic RCRA hazardous wastes.

Since NRC's proposed Part 41 Rulemaking Plan will explicitly consider disposing of non-11e.(2) waste materials in licensed UR 11e.(2) byproduct material cell, it would make good strategic and practical sense for NRC to explicitly consider disposal of milling wastes generated by non-uranium milling activities at a licensed UR mill in that mill's licensed 11e.(2) cell at the same time.

5. Concurrent Jurisdiction with Non-Agreement States

A recent Commission decision has reversed a long-standing policy of allowing concurrent jurisdiction of the non-radiological components by Non-Agreement States. The Commission has indicated that it believes that NRC has exclusive jurisdiction over both radiological and non-radiological constituents in the groundwater. This decision reversed staff recommendations which indicated that the concurrent policy of twenty years should continue. This decision is a direct challenge to non-Agreement state groundwater authority including Utah. It is the State of Utah's opinion that the federal government, through NRC as its agent, mistakenly believes that the Atomic Energy Act trumps state law relating to groundwater protection.

The Environmental Protection Agency established no federal groundwater protection program because they realized that States already had existing authorities and had been dealing with groundwater allocation and protection for decades. Waters beneath the surface within a State are indeed "waters of the State" in terms that the State has the ability to allocate those waters for a myriad of uses, classify such waters as to appropriate use, and protect groundwater of the State for future generations. The State of Utah has decided that waters of the State are subject to "anti-degradation." Utah currently has in effect, under the state groundwater protection authority, groundwater discharge permits at two facilities - Envirocare of Utah Inc. and Plateau Resources and is working on establishing such a permit for International Uranium. These facilities acknowledge and accept the state groundwater authority. Without consultation of the potential impact of such a decision with non-Agreement States, the Commission has decided that federal authority suddenly trumps state authority. There is even admission that at least one court (US Supreme Court) has reached a different conclusion on this matter. This places the licensees in a difficult situation. If a licensee refuses to accept state jurisdiction, the state of Utah will have no choice except to pursue the issue through appropriate legal means.

The impact of such a decision can be amplified by two applications of NRC-only jurisdiction. In the case of the now bankrupt Atlas Corporation, the NRC originally required no monitoring for the "non-radiologic" constituent of ammonia. After independent monitoring by the State of Utah and the issuance of a corrective action order to Atlas by the State, NRC started to evaluate the impact of ammonia. The end result is that ammonia concentrations in the Colorado River, in which NRC has "no standards", have the potential to kill endangered fish species living in the backwaters near the mill. The Atlas trustee is being required to address this issue after lawsuits, biological opinions, and research by USGS which indicates the extent of the ammonia problem.

Another example is the recent discovery of chloroform in a monitoring well on the International Uranium Corporation property following another independent verification

sampling by the Department of Environmental Quality which discovered chloroform concentrations in excess of 6400 ppm. The State of Utah took appropriate action by issuing a Groundwater Corrective Action Order. A subsequent investigation by International Uranium has suggested that a chloroform plume stretches from a former laboratory operation that discharged chloroform into a septic tank/drainfield system to a boundary monitoring well. The final chloroform investigation report is now being evaluated by DRC. NRC's response is that if the contamination is not coming from the tailings impoundments, then NRC hands are tied. Does this mean a significant contamination event would be ignored.?

Additionally, the NRC groundwater protection program has serious shortcomings that need to be reexamined and potentially revised in the Part 41 rulemaking. Among these shortcomings are:

Inadequate NRC Definition of an Aquifer - does not protect low yield groundwater flow systems, even when such systems discharge to higher yield aquifers.

Limited Number of NRC Groundwater Protection Standards (GWPS) - the 16 contaminants (8 metals, 6 pesticides, and 2 radiologics) currently regulated by the NRC in 10 CFR 40, Appendix A, Criterion 5C, fails to recognize dozens of other pollutants known to occur at uranium recovery facilities for which NRC has failed to establish GWPS.

Inadequate GWPS for Existing Table 5C Non-radiologic Contaminants - six (6) of the human health-based GWPS listed in Table 5C are outdated and have been recently decreased by EPA. Lower EPA drinking water maximum concentration limits (MCLs) are now available for the following non-radiologic contaminants (see EPA "Drinking Water Standards and Health Advisories", EPA 822-B-00-001, Summer, 2000 at http://www.epa.gov/ost/drinking/standards/): cadmium (0.005 mg/l), lead (0.015 mg/l), Lindane (0.0002 mg/l), Methoxychlor (0.04 mg/l), Toxaphene (0.003 mg/l), 2,4-D (0.07 mg/l).

Need to Add New GWPS Parameters to Table 5C: Non-radiologic Contaminants - EPA has also established GWPS for Title I uranium recovery facilities, that should also be added to Table 5C, including (40 CFR 192, Subpart A, Table 1): molybdenum (0.1 mg/l), nitrate (as N) [10.0 mg/l], and combined uranium-234 and uranium-238 (30 pCi/l).

Inadequate List of Hazardous Constituents - the NRC list of hazardous constituents provided in 10 CFR 40, Appendix A, Criterion 13 fails to identify several known contaminants at uranium recovery facilities, including: ammonia (as N), copper, flouride, manganese, nitrate (as N), nitrite (as N), vanadium, and zinc.

Commission Failure to Implement Secondary Groundwater Protection Standards - 10 CFR 40, Appendix A, Criterion 13 allows the Commission to establish secondary GWPS for a large number of potential contaminants. However, in more than 13 years since 10 CFR Appendix A was adopted, the Commission has failed to implement any secondary GWPS for any contaminant listed in Criterion 13.

Inability to Determine Ad-Hoc GWPS for Protection of Human Health or the Environment - if a new contaminant is found at a uranium recovery facility, not listed in 10 CFR 40, Appendix A, Criteria 5C or 13, the NRC is currently unable to establish any ad hoc GWPS that would allow for protection of human health or the environment. The rule should be amended to allow the Commission to establish human health or environmental protection criteria for new contaminants, as they are discovered at uranium recovery facilities, as based on EPA or other government agency water quality standards.

Failure to Define Background Groundwater Quality - although this term in mentioned several times in 10 CFR 40, Appendix A, the existing NRC rule does not provide a regulatory definition for background groundwater quality. This term should be defined as a groundwater contaminant concentration in the uppermost aquifer at a point that has not been affected by the uranium recovery facility. Such failure has allowed uranium recovery facilities to set GWPS on groundwater quality data already altered by the facility.

Failure to Regulate Organic Contaminants Until After Groundwater Pollution Occurs - the current NRC regulations do not allow a contaminant to be regulated as a "Hazardous Constituent" until after it known to exist in the uppermost aquifer [10 CFR 40, Appendix A, Criterion 5B(2)]. Only after groundwater pollution is found can NRC establish a GWPS to protect groundwater for it [see 10 CFR 40, Appendix A, Criterion 5B(5)]. For man-made organic contaminants not normally found in nature, this rule requires groundwater to be degraded and thereby detectable, before the NRC can react to set a GWPS. Unfortunately, by the time the organic contaminant is found in a monitoring well, much of the environmental damage has already been done with large releases to the vadose zone. Such an approach does little to prevent contamination of groundwater resources.

Need to Identify Hazardous Constituents thru Waste Source Term Analysis - in order to provide a greater degree of groundwater quality protection and prevent unnecessary groundwater pollution, the NRC rules should be written such that determination of Hazardous Constituents and GWPS is based on analysis of the source term parameters and concentrations found in the uranium recovery facilities wastes. This proactive approach would work to prevent pollution instead of waiting for contaminants to reach groundwater before they are identified and regulated under a NRC license.

Failure to Break Cycle of Neglect: Lack of Periodic Comprehensive Groundwater Quality Monitoring - as discussed above, the NRC cannot determine GWPS or establish that a contaminant is a "Hazardous Constituent" until after it has been detected in groundwater of the uppermost aquifer [10 CFR 40, Appendix A, Criteria 5B(2) and 5B(5)]. In order to make this determination, groundwater sampling and analysis has to be done to establish that the contaminant exists in detectable quantities. If due diligence is to be provided under the existing rules, one would periodically sample groundwater for a broad suite of contaminants to ascertain that no new contaminants are present. This is important at new facilities where the detection monitoring program under Criterion 7A is limited to a small number of groundwater quality parameters. It is also critical for existing uranium recovery facilities with known groundwater contamination, in that late arriving or otherwise retarded contaminants could initially go undetected until a periodic broad suite sampling event is performed. Unfortunately, NRC practice has been to establish groundwater monitoring criteria with as few as possible analytical parameters, and not to re-visit the issue later or require periodic sampling and analysis of a comprehensive list of contaminants.

Lack of Definition of Detectable Contaminant Concentrations - although used in many places in the current NRC rule, no regulatory definition is provided describe and constrain what constitutes a "detectable" contaminant. As a result, NRC licensees have used antiquated and inadequate analytical methods with grossly elevated minimum detection limits (MDL) in order to avoid determination of a Hazardous Constituent at their facility. If the current requirements regarding GWPS and Hazardous Constituents continue, the NRC rules must be modified to require adequate MDLs as defined by the best available analytical technology at the time of analysis.

Lack of Surface Water Quality Standards - the existing NRC rule fails to establish surface water quality standards for those situations where groundwater discharges to nearby surface water. As a result, the existing rule fails to protect surface water quality and surface water uses near uranium recovery facilities. Surface water quality standards are set by EPA and primacy states, such as Utah, under the National Pollutant Discharge Elimination System (NPDES).

Failure to Differentiate Groundwater Protection by Aquifer Quality - inherently groundwaters have varying beneficial uses based on their existing quality. Aquifers with high quality groundwater are generally more desirable and in more demand than those of low quality. Other aquifers support critical habitat for wildlife. Unfortunately, no distinction is made in the current NRC rules regarding background groundwater quality, or general use. As a result, the exiting NRC rule protects all groundwater resources to the same degree regardless the quality or current or future use. No discretion is provided in the NRC rules for limited use aquifers, e.g., those with high total dissolved solids content. Nor is more aggressive protection provided those aquifers with very high groundwater quality, or for

those that are the sole support of a critical wildlife habitat. Groundwater protection should be organized on a graduated scale with greater protection for higher quality or more sensitive resources than protection for low quality systems.

Lack of Groundwater Monitoring Quality Assurance Requirements - the existing NRC rule only mandates quality assurance for seepage control systems (10 CFR 40, Appendix A, Criterion 5F). No requirements are provided in the rule for groundwater monitoring at uranium recovery facilities. At a minium, requirements need to be provided to address: monitoring well design and installation, groundwater sampling, sample chain of custody, certification of analytical laboratories, standardized analytical methods, minimum detection limits, data reduction and validation, statistical analysis and compliance determinations, and groundwater data reporting.

Inadequate Requirements for Point of Compliance Well Locations - current NRC requirements for Point of Compliance (POC) wells discuss the need to provide early warning of imminent groundwater pollution, but do not physically limit the location of these wells relative to the facility boundary [10 CFR 40, Appendix A, Criterion 5(B)(1)]. Language elsewhere in the existing NRC rules also allows the Commission to adjust the location of the POC wells (ibid., Criterion 7A). Given these provisions, POC wells could be located beyond the facility boundary, on property owned by other parties. Under no circumstances should POC wells be located off-site without the express written consent of these neighboring landowners.

Lack of Requirements for Groundwater Corrective Action for Off-site Releases - while requirements are provided for clean-up of polluted groundwater between the Point of Compliance wells and the physical facility boundary (10 CFR 40, Appendix A, Criterion 5D); no provisions are found in the current NRC rules to mandate cleanup groundwater pollution that has traveled beyond the facility boundaries. Such cleanup is required in order to protect public health and the environment.

Failure to Provide Timely Groundwater Protection Action Limits at New Facilities - in order to protect groundwater resources, corrective action should be initiated before the human health based GWPS are exceeded. Review of the current NRC rules shows that groundwater at the POC wells is required to meet one of three (3) concentration limits (GWCL), including: the approved background concentration, the GWPS in Table 5C, or the approved alternative concentration limits (ACL), see 10 CFR 40, Appendix A, Criterion 5(B)5. However, no preference is given in the rule for the background concentration. As a result, a Licensee could pollute groundwater resources to concentrations equal to the GWPS, or the higher ACL value before the NRC would require groundwater corrective action. At new facilities, groundwater resources should be protected by setting the GWCL equal to background or some other value lesser than the GWPS. GWCL values set equal to GWPS

may be appropriate as clean-up standards at pre-existing facilities with existing groundwater contamination.

Inadequate and Un-timely Detection of Groundwater Contamination: Detection Monitoring Program - the current NRC rules are structured such that before the Commission can identify Hazardous Constituents or set GWPS at a uranium recovery facility, the Licensee must first undertake a detection monitoring program at the facility, pursuant to Criterion 7A [ibid., Criterion 5B(1)]. In turn, Criterion 7A mandates that in part this is to "... detect leakage of hazardous constituents from the disposal area so that the need to set ground-water protection standards is monitored.

Unfortunately, Criterion 7A fails to require that detection monitoring be structured for timely detection of tailings contaminants, or to provide early warning of a release from the impoundments. As a result, Licensee's have selected: 1) few groundwater quality parameters in order to minimize the statistical probability of detection, 2) groundwater quality detection monitoring parameters that are geochemically insignificant in terms of their proportion in the tailings leachate source term or are highly retarded in groundwater environments, and/or 3) POC well locations that are not immediately downgradient or as close as practicable to the source of the potential pollution.

In so doing, significant delays are created in the detection of seepage escape and groundwater pollution from the facility. Such delays lead to a greater extent of pollution once it is discovered, and increased costs and greater efforts required thereafter to clean it up. In the long run, such efforts fail to protect groundwater resources.

Lack of NRC Ability to Protect Groundwater Quality From Mill Site Facilities and Operations - documentation exists to show how mill site operations at current and past NRC uranium recovery facilities have polluted nearby groundwater resources. Unfortunately, review of 10 CFR 40, Appendix A shows no requirements are found in the current NRC rules to require milling operations be designed, constructed, operated, and maintained to prevent groundwater pollution. Important potential sources of groundwater pollution from mill site operations include: raffinate and process wastewater spill prevention and containment, laboratory waste management, ore storage, chemical reagent storage, yellowcake storage, and mill site run-off control.

To prevent groundwater pollution from these activities, the Licensee should be required to employ: 1) Best Available Technology (BAT) mill site facility design and construction, and 2) Best Management Practice (BMP) standards for mill site operation and maintenance. To this end, the NRC rules need to be amended to prevent these sources of groundwater pollution from mill site facilities and activities.

Failure to Require Deadline for Groundwater Corrective Action Completion - review of the current NRC rule shows no deadline is imposed by the Commission for when groundwater corrective action must be complete, i.e., remedial activities have returned local groundwater concentrations equal to or less than the approved GWPS. Without such deadlines, Licensees may operate an ineffective or inadequate groundwater remediation program without impunity, never achieving the required GWPS, later followed by bankruptcy. At this point, the groundwater resource has severely damaged, and the NRC has no other recourse than to throw itself on the mercies of Congress or the EPA Superfund program.

In order to avoid this situation, the NRC rules should be revised to require a deadline be proposed by the Licensee and approved by the Commission as a part of the required groundwater corrective action program. In the cases where "natural attenuation" is elected as a groundwater remediation solution, the new rule should at least adopt the EPA Title 1 uranium recovery facility requirement of a maximum 100-year groundwater cleanup timeframe [40 CFR 192.12(c)(2)].

Perhaps, as an alternative to exclusive NRC jurisdiction, the NRC could defer the protection of the groundwater to the non-agreement States as suggested as part of the groundwater strategy for in-situ uranium recovery facilities. We might be so bold as to suggest that improvement opportunities exist with a state-only regulatory scheme. For example, Envirocare of Utah, subject to a state groundwater discharge permit for the 11e.(2) licensed facility, is currently going through an excruciating process with the NRC to adjust concentration levels to deal with fluctuations in natural background concentrations of such constituents as arsenic and selenium. This is because that once "background levels" are set by the NRC that is no regulatory mechanism to adjust them for natural or seasonal variation. Under the more flexible provisions of a state groundwater permit, the constituent level can be adjusted for such variation.

There are differences in the State of Utah and NRC regulatory operations regarding groundwater protection. Some examples include:

(1) The state of Utah has a anti-degradation policy and program that tailors protection to background water quality, NRC's "one size fits all" approach to protection can result in serious degradation of some waters.
(2) The state of Utah requires actual laboratory data reports, the NRC allows summary reports.
(3) The state of Utah requires that laboratory analysis be accomplished by a Utah-certified laboratory, laboratories used by NRC licensees may not have to meet the same performance standards.
(4) The state of Utah conducts random, independent verification sampling of groundwater at state-licensed facilities, NRC conducts none.

(5) The state of Utah believes in a holistic approach to tailings impoundment design and groundwater protection. In the example of Atlas, the NRC decoupled the process in which tailings pile design was considered separately from groundwater cleanup.

These operational differences ensure better protection of groundwater at facilities located in the State of Utah. As such, NRC could defer to the State of Utah's groundwater protection program for uranium recovery facilities.

6. Operational flexibility provision

See comments under 4. While Utah does not object to performance-based licensing and conditions within such licenses, it may not be appropriate in all cases.

7. Requirements for Standby Trust

Utah supports this change.

8. Addition of General License Provision for 11e.(2) Byproduct Material

Utah supports this change

9. Deletion of Prescriptive Site and Design Requirements

There appears to be a valid argument in Attachment 1 regarding the current prohibition in 10 CFR Part 40, Criteria A regarding that a completed tailings impoundment must require no active maintenance. The change suggested to remove Criterion 12 that would allow maintenance in the long-term design deserves support.

10. Clarify the Meaning of 11e.(2) Byproduct Material as it Relates to Uranium Recoery Facilities

Utah supports this change.

11, Clarification of Reporting Requirements

Utah supports this change.

12. Clarification of Applicability of Siting and Design Requirements for Existing Facilities

Attachment 1 indicates that the proposed 10 CFR Part 41 would clarify siting and design goals and broad objectives. This is an opportunity to ensure that new facilities, however doubtful, would be subject to an objective set of siting criteria to remove past siting problems (e.g. adjacent to rivers). The question is whether to have broad goals for new and existing facilities as currently stated in Criterion 1 or to promulgate specific criteria that a new facility has to meet. It may be appropriate to eliminate these broad goals in Criterion 1 for existing facilities as they have virtually no benefit (the horse is out of the barn). The current Criterion 1 suggests: "The site selection process must be an optimization to the maximum extent reasonably achievable in terms of these features." The language suggests the recognition of a retrofit need for existing facilities.

13. Modification of Annual Surety Requirements

Attachment 1 suggests that the current standard of an annual review of surety requirements needs to be relaxed because it is an "unnecessary" regulatory burden. It appears from the presentation of information that the only burden is NRC administration of the process. It is critical to very carefully "spell out" when sureties should be updated. As with the experience in the Atlas situation, a final reclamation plan was never accomplished such that the licensee would be required to update the surety. Attempts to encourage the licensee to do such failed. The end result was that when the reclamation plan was finally approved, the licensee was bankrupt and there was insufficient money to close the site. As mill may change their focus from ore processing to alternate feed processing, the NRC should be cognizant that significant waste inventories can be built prior to any processing. A reclamation plan backed by license condition must include funding for a "maximum" amount of material at the facility.

Continuation of the annual review or defaulting to a biennial review may or may not be appropriate depending on the facility. The answer, as previously alluded to, may be to just carefully spell out "when" it is required that a surety be updated realizing that the time frame may be less than annual or greater than biennial depending on the circumstances.

14. Update the Long-Term Surveillance Fee

In Attachment 1, NRC does not propose to change the surveillance fee process, rather to only update the dollar amounts to reflect the sum in 1998 dollars, the amount being $250,000 in 1978 dollars. What will be the 1998 dollar amount and will this be sufficient to provide the Department of Energy with sufficient funding for perpetual care *and maintenance* (emphasis added) for uranium tailings sites. If the assumption in the beginning was "no" active

maintenance, this should be revisited. The Department of Energy surely has experience now with closed sites and the need for maintenance whether it be replacement of fence and signage to the need for additional riprap. Will there be sufficient monies to deal with such catastrophies as differential settlement or groundwater corrective actions at these sites in the future. The Department of Energy as long-term custodian will need to be at the table as this issue is discusssed.

Issues not covered in Attachment 1

15. Resolution of the authority to regulate uranium mill tailings

Absent from the uranium mill issues discussion is how to resolve the Commission direction "not to regulate" uranium mill tailings prior to the promulgation of the Uranium Mill Tailings Radiation Control Act (UMTRCA). The regulatory gaps created by this position impact the regulation of uranium mill tailings. NRC is currently dealing with this issue in several forums and the decision making will play out in that regard. However, consideration of a new Part 41 needs to indicate if this material will or will not be regulated. During discussion concerning groundwater issues at the Atlas site, the State of Utah was informed by the NRC that if a groundwater plume that had migrated off-site was generated prior to 1978, the NRC could not address remediation of that plume. Similar questions come forth if one starts to question "when" waste was generated on a site. Are materials generated prior to UMTRCA subject to remediation or not? Part 41 should not move forward without a commitment to resolve this difficult and complex regulatory issue.

16. Different decommissioning standards for uranium mill facilities in Agreement States

The crafting of UMTRCA provided for an oversight role for the NRC regarding decommissioning approvals by Agreement States. This is contrary to the spirit and the law of the Agreement State program in which NRC relinquishes its authority to the Agreement State. Decommissioning of sites involving radioactive materials in Agreement States have no such oversight by the NRC. Recently, an incident in the State of Washington reinforces the notion that NRC either needs to "get out" or "get in the process early." The NRC needs to better define its role with Agreement State decommissioning approval reviews, defer to the Agreement State decision as with radioactive materials site decommissioning, or change UMTRCA to remove this oversight role of the NRC which is contrary to the spirit and law of the Agreement State program.

If you have any questions regarding these comments, do not hesitate to contact me.

Sincerely,

William J. Sinclair, Director

The State
of Wyoming

Department of Environmental Quality

Jim Geringer, Governor

Herschler Building • 122 West 25th Street • Cheyenne, Wyoming 82002

ADMIN/OUTREACH	ABANDONED MINES	AIR QUALITY	INDUSTRIAL SITING	LAND QUALITY	SOLID & HAZ. WASTE	WATER QUALITY
(307) 777-7758	(307) 777-6145	(307) 777-7391	(307) 777-7369	(307) 777-7756	(307) 777-7752	(307) 777-7781
FAX 777-3610	FAX 777-6462	FAX 777-5616	FAX 777-6937	FAX 777-5864	FAX 777-5973	FAX 777-5973

October 26, 2000

Mr. Mark Haisfield
US Nuclear Regulatory Commission
Division of Industrial and Medical Nuclear Safety
Office of Material Safety and Safeguards, T9-C24
Washington, DC 20555

Dear Mr. Haisfield:

This correspondence is in response to your letter dated September 11, 2000 which requests comments on the NRC Draft Rulemaking Plan "Domestic Licensing of Uranium and Thorium Recovery Facilities" – 10 CFR Part 41. In regards to the NRC initiative to promulgate regulations specifically directed at uranium mining at ISL (In Situ Leach) wellfields, Governor Geringer previously submitted the State of Wyoming's concerns in a letter to the NRC Commissioners, dated June 10, 1999. In that letter he stressed that such proposed regulations were duplicative with Wyoming mining regulations and existing EPA Underground Injection Control (UIC) regulations administered by the state, and that the proposed enhanced dual jurisdiction will cause an increased and unneeded burden on the companies involved, the NRC, and the WDEQ. These same concerns were voiced by my agency during the public meeting held in Casper on August 26, 1998.

Our position has not changed on this issue. In fact, given the continual decline in the price of uranium since NRC's August 1998 meeting (the price has fallen from approximately $12 per pound to less than $7.50), one Wyoming ISL producer has permanently shut down production operations, while another has substantially reduced production, discontinued any further development, and reduced its work force accordingly, our previous comments are even more pertinent. The remaining ISL producer has also substantially reduced its production level and reduced its workforce to try to survive the depressed market. Indeed, the current price cannot support any uranium mining in the U.S. The remaining producers are still in business only because of higher priced contracts that will soon expire. Under these circumstances, any additional regulations and costs, without a corresponding increase in environmental protection or public health and safety, is not what this industry, or state, needs.

The NRC should not pursue regulations for mining at ISL wellfields, but should put forth efforts to determine how to decrease costs to an industry faced with a difficult economic future. Given the much reduced size of this industry, the economic pressures it faces, and the fact that the few operators remaining will be required to pay for the development of the proposed new NRC regulations, the entire rulemaking process seems unjustifiable at best.

Best regards,

Dennis Hemmer
Director

cc: NRC Commissioners
Honorable Richard Meserve, Chairman
Honorable Greta Dicus
Honorable Edward McGaffigan
Honorable Jeffery Merrifield
Wyoming Congressional Delegation

October 25, 2000

Mark Haisfield
Division of Industrial and Medical Nuclear Safety
Office of Nuclear Material Safety and Safeguards, T9-C24
U. S. Nuclear Regulatory Commission
Washington, DC 20555

Subject: Request for Comments on the Draft Rulemaking Plan, "Domestic Licensing of Uranium and Thorium Recovery Facilities"-10 CFR 41

Dear Mr. Haisfield,

The CRCPD Suggested State Regulations SR-13 Group, Licensing Requirements for Uranium and Thorium Processing and Related Radioactive Materials, appreciates this early opportunity to comment on the draft rulemaking plan. We offer the following for your consideration:

1) This rulemaking involves many issues. Although the in-situ leach facilities are certainly a primary area to update in the rulemaking, particularly for agreement states with these operations, the SECY papers and rulemaking raise other issues that are of concern to both agreement and non-agreement states such as concurrent jurisdiction, processing of material similar to natural uranium ore, and disposal of material similar to 11e.(2) material. The SR-13 Group advises that a state representative should be sought from both the Organization of Agreement States and the C.R.C.P.D. to best represent both agreement and non-agreement state perspectives.

2) We support the development of a new Part 41 to specifically address uranium and thorium processing. We have reviewed Attachment 1 to the proposed rulemaking plan and generally agree that the issues listed merit discussion and resolution during the rule-making process. In addition, we suggest that the rule-making plan address:

   No. 1) Regulations for In-situ Leach Facilities: The rulemaking plan should more specifically address the need for clean-up standards for in-situ operations. The plan should reference evaluating if NRC can rely on EPA's groundwater regulations and UIC permit rules, (or state if the state has been designated by EPA), in order to minimize NRC's review of water protection issues. The rulemaking plan should state that surface aquifer and surface water clean-up is the goal. The rulemaking plan should address radioactive contamination of surface water, and the surface aquifer, by the licensee.

   NOTE: Some states, using federal and/or state authority, do require groundwater clean-up in the mining fields, therefore, this proposed NRC rulemaking should carefully consider how the regulation is crafted so that it does not interfere with

the on-going good works of the state.

No. 2) Regulations for Disposal of Other Material in Tailings Piles: The rulemaking plan should specify that the goal is to simplify and codify the "defining criteria" to be used. TENORM and NORM should also be considered.

No. 6) Operational Flexibility Provision: We support the proposed direction toward performance based requirements for operations. The rule-making plan should specify what areas are under consideration. Initial reviews of cell design and construction should be conducted by regulatory authorities. Permitting the licensee to determine alternate feed materials without a specific regulatory review or an explicit pre-approved framework may not be acceptable, at least for the initial shipments of radioactive material.

No. 13) Modification of Annual Surety Requirements: The rule-making plan should consider alternate methods of streamlining the process. The states support annual reviews.

No. 14) Update the Long Term Surveillance Fee: The discussion should be expanded to address the need for more realistic costs.

The following could be added as new issues or incorporated into Nos. 1-14 of the Proposed Rule-making Plan.

Additional Issue: The rulemaking plan should address the problem of pre and post 1978 11e.(2) material. It is understood that NRC's position is that UMTRCA does not give them authority over pre-1978 11e2 material. However, this material continues to pose regulatory problems that should be addressed during the rule-making process.

Additional Issue: The Part 41 preamble, regulations and/or guidance should explicitly address the rationale/regulatory authority for treating decommissioning of uranium and thorium processing facilities differently than other radioactive materials licensees.

Should you have any additional questions, you may contact me or any member of the SR-13 Group for clarification.

Sincerely,

Cheryl K. Rogers, Chair SR-13 Group (Part U)
Conference of Radiation Control Program Directors, Inc.

National Mining Association
Foundation For America's Future

Richard L. Lawson
President and Chief Executive Officer
(202) 463-2647

September 18, 2000

The Honorable Richard Meserve
Chairman
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Dear Chairman Meserve:

I am writing to express National Mining Association's (NMA) views regarding the recent decisions of the Commissioners relating to: 1) SECY-99-011, "Draft Rulemaking Plan: Domestic Licensing of Uranium and Thorium Recovery Facilities – Proposed New 10 CFR Part 41; 2) SECY-99-012, "Use of Uranium Mill Tailings Impoundments for the Disposal of Waste Other Than 11e.(2) Byproduct Material and Reviews of Applications to Process Material Other Than Natural Uranium Ores; 3) SECY-99-013, Recommendations on Ways to Improve the Efficiency of NRC Regulations at *In Situ* Leach Uranium Recovery Facilities and 4) SECY-99-277, Concurrent Jurisdiction of Non-Radiological Hazards of Uranium Mill Tailings." While NMA fully agrees with the Commission's decision that NRC has exclusive jurisdiction over both the potential radiological and non-radiological hazards associated with 11e.2 byproduct material, NMA has significant concerns about the other Commission decisions that may involve an extremely expensive rulemaking proceeding for uranium recovery (UR) facilities.

NMA has repeatedly stated that a Part 41 is not essential but has agreed that consideration of this rulemaking is appropriate as long as it would not result in a whole host of new prescriptive regulations for the UR industry. Now that the Commission has voted to move forward with a Part 41 rulemaking, and given the current economic state of the industry, NMA needs additional information to determine if NMA's UR members can bear the financial burden of developing a new Part 41. For example, a detailed rulemaking plan and cost-estimates must be made available to the industry including information pertaining to how much NRC has spent to date, the status of any current draft(s), full time equivalent (FTE) estimates for the future, the cost of any necessary memoranda of understanding (MOUs) and the number of UR licensees NRC anticipates there will be to pay for the rulemaking. Only armed with such information can NMA's UR members make informed judgments whether the potentially substantial increase in annual fees associated with the rulemaking will result in concomitant benefits. NRC must keep in mind that there are currently only 12 licensees to share these costs and the number of licensees

is expected to decrease over the next few years.[1] Also, given that once the rulemaking is complete, it can only be applied prospectively, NRC must consider whether there will be enough licensees left at that time to justify the regulations. Indeed, it is possible that the costs associated with the rulemaking may be enough in and of themselves to cause UR licensees to take a hard look at ceasing operations.

NMA cannot support any proposals that do not promote a more efficient and effective regulatory program that optimizes the protection of public health, safety and the environment. After reviewing the Commission's direction to the staff on these issues, NMA is not yet convinced that the benefits from the establishment of a new Part 41 will outweigh the disadvantages. NMA supports the resolution on the alternate feed issue and believes there has been a little forward movement on the disposal of non-11e.(2) materials in tailings piles, both of which could be of some economic benefit to some UR licensees if put into effect in a timely manner. Even if NRC decides not to pursue the new Part 41, NMA supports NRC proceeding with its decisions on alternate feed and non-11e.(2) disposal through guidance, as a less expensive and more timely alternative for reaching the stated goals of the Commission decisions on these issues. The most obvious potential negative impact of a new Part 41 would be the continuing dual regulation by NRC and Non-Agreement States of in-situ leach (ISL) wellfield operations and the new costs created by the Commission's decisions to treat all wastes (including restoration fluids and sludges) as 11e.(2) byproduct material, which could be the straw that breaks the camel's back.

Based on the Commissioners' comments regarding the dual regulation of ISL operations, it appears that the Commission does not fully understand the regulatory structure that regulates the ISL industry, including specifically, wellfield operations. Several Commissioners commented on the relationship between NRC's regulatory program and the underground injection control (UIC) program of "EPA or EPA authorized states." It must be recognized that regulation of ISL wellfields extends far beyond the requirements of the EPA's UIC program as there are separate state regulations specific to ISL mining, control of wellfield operations and groundwater restoration. This apparent lack of understanding may have resulted from the extent and breadth of the state regulatory framework not being fully communicated by NRC Staff in the SECY papers. Consistent with Commissioner McGaffigan's and other's concerns regarding NRC Staff resources and costs to the licensees, we believe that it is not necessary to reinvent the wheel, and NRC should recognize the states' right to regulate mining, negating the need for NRC involvement in wellfield and restoration operations, thereby minimizing the need for Part 41 regulations. NMA is assuming that despite this apparent confusion over the regulatory structure, the Commission is interested in reducing the duplicative regulation that currently exists. Dual jurisdiction over wellfields significantly increases the costs for uranium producers and is truly a waste of both licensee and NRC resources. Dual jurisdiction poses similar problems for state

---

[1] By NMA's estimates, for the next fiscal year only 10 UR licensees will pay annual fees. Of these 10 licensees, three likely will be actively producing via ISL and one producing uranium using alternate feed for the mill.

agencies responsible for regulating ISL mining. These states waste precious resources working with the licensees and NRC to resolve conflicting license and permit requirements. Given the extremely depressed price of uranium, production is only really taking place due to existing contracts, most of which are due to expire in the near term. Therefore, NMA is supportive of actions that reduce dual jurisdiction, including MOUs with other agencies, if the MOUs can be negotiated in a quick and cost-efficient manner.

NMA is concerned, however, that the Commission's decision to treat all ISL effluents as 11e.(2) byproduct material could potentially pose a barrier to reducing duplicative regulation over ISL wellfields given that the Commission also recently decided that Non-Agreement States have no jurisdiction over the non-radiological components of 11e.(2) byproduct material. If Non-Agreement States have no jurisdiction over 11e.(2) byproduct material or source material, it is not clear how NRC can promote reliance on state programs to avoid dual jurisdiction as contemplated in the Commissioners' decisions. NMA requests further clarification on how these two decisions interact.

NMA believes that the direction provided to the staff in the ISL decision to regulate all waste streams associated with ISL uranium mining as 11e.(2) byproduct material has other serious, unintended consequences. While it appears from the voting records of the individual Commissioners that they truly believe that this treatment of ISL waste streams will produce more efficient and consistent regulations, unfortunately the opposite is true. In fact, treating all effluents at ISL facilities as 11e.(2) byproduct material generates a whole new set of problems and inconsistencies. For example, the comments by the Commissioners in the voting record describe restoration fluids as 11e.(2) byproduct material, which raises concerns as to the current exclusion in the definition of byproduct material in 10 CFR 40.4 regarding depleted ore bodies. It is difficult to reconcile the logic of the Commissioners' decision that restoration fluids produced from restoring depleted ore bodies, which the regulations specifically state do not constitute 11e.(2) byproduct material, are somehow themselves 11e.(2) byproduct material. Presumably, the only basis for such a conclusion is that some uranium continues to be removed in ion exchange vessels from restoration fluids even though the removal of the uranium is not the "primary" purpose of the groundwater restoration operations.

If the aforementioned rationale is the basis for finding restoration fluids to be 11e.(2) byproduct material, consider the following. Frequently, underground uranium mines have to pump excess mine drainage to dewater the mines so that the miners can function. The ventilation required for the miners to function effectively and safely (e.g., radon removal) brings oxygen into contact with mine water and assists in the dissolution of uranium from the ore body. As a result, excess mine drainage often contains uranium concentrations that exceed discharge requirements under Clean Water Act National Pollutant Discharge Elimination Standards (NPDES) regulations, and additional treatment is required such as an ion exchange (IX) vessel to remove the uranium and a radium/barium settlement pond to remove excess radium. In the case of uranium, the ion exchange resin is stripped to concentrate the uranium for further processing as "refined and processed ore." (See, 57 Fed. Reg. 20532.) In the past, unless the IX vessel was

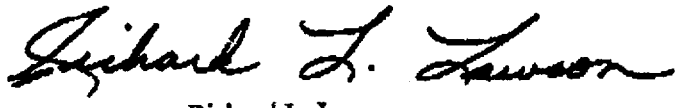
tied into the mill circuit by license amendment, the discharges and sludges (*i.e.*, radium/barium) from this treatment of mine waters have not been regulated by NRC as 11e.(2) byproduct material. This was because the discharges and sludges were not production effluent or sludges from the extraction of source material primarily for its source material content but rather were effluents and sludges from efforts to dewater the mine and to satisfy EPA NPDES release limits. In other words, the removal of source material under such circumstances was considered incidental to the treatment of the mine water for discharge. Indeed, under these circumstances, excess mine drainage that is treated to remove uranium and radium to satisfy NPDES purposes is similar to treating restoration fluids at an ISL facility to remove uranium in an IX vessel and radium in a radium/barium settlement pond to satisfy NPDES limits. In both cases, oxygen (that is not intentionally added to the water as in ISL production operations) in water dissolves uranium that is pumped to the surface, removed in an IX unit and the excess fluids must be disposed of frequently under an NPDES permit. It is inconsistent with NRC practices well prior to 1995 to deem such discharges 11e.(2) byproduct material.

Another example of a problem created by the decision to broaden the types of effluents that are 11e.(2) byproduct material is the potential impact on groundwater corrective action programs. Groundwater corrective action programs can use treated mine water discharged from the water treatment plant to seep into the alluvium and sweep the tailings seepage into an interceptor trench for collection and disposal in solar evaporation ponds. The minewater used for this action would be treated by ion exchange to remove the uranium to discharge limits under an NPDES permit. Under the most recent Commissioners' decisions, these discharges would be considered *production* effluents, which cannot be released pursuant to an NPDES permit. And even if releasable, would require increased treatment to meet lower discharge limits (2 mg/L to 0.44 mg/L) thereby significantly increasing the cost of the groundwater corrective action program. In fact, NRC has relatively recently taken the opposite position. In 1998, NRC conducted an inspection of one licensee's facility, and the inspector alleged that the treated minewater discharge was regulated material and the discharges were in violation of 10 CFR Part 20, Appendix B limits. The company challenged this allegation, and NRC agreed that the discharges were not regulated since the source material extraction was incidental to the treatment of the minewater prior to discharge. Based on the current decisions by the Commissioners, NMA is concerned that some member companies will be forced into a violation of NPDES regulations and NRC 10 C.F.R. 20, Appendix B limits for activities that in the past were not considered to be production activities.

Even if after review of the rulemaking plan and cost-estimates, NMA's UR licensees decide that the benefits to the industry outweigh the costs, NMA may still be unable to support the rulemaking without assurances from the Commission that the process will be a truly open one. Several of the Commissioners' decisions indicated that their positions could change based on stakeholder input to any proposed rules. NMA supports the proposition that a truly open and

effective rulemaking process requires an open mind to address matters not thoroughly considered at the preliminary states of the proceeding.

Sincerely



Richard L. Lawson

Cc: The Honorable Greta Dicus
The Honorable Nils J. Diaz
The Honorable Edward McGaffigan, Jr.
The Honorable Jeffrey S. Merrifield
Dr. Donald A. Cool, NRC
Mr. Michael F. Weber, NRC
Mr. Daniel M. Gillen, NRC

TOTAL P.08

William Paul Goranson, P.E.
Manager, Radiation Safety
Regulatory Compliance and Licensing

Rio Algom Mining Corp.
6305 Waterford Boulevard
Suite 325, Oklahoma City 405.858.4807 tel
Oklahoma 73118 405.810.2860 fax

Rio Algom

October 2, 2000

CERTIFIED MAIL Z 579 114 131
RETURN RECIEPT REQUESTED

The Honorable Richard Meserve
Chairman
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Subject: Nuclear Regulatory Commission decisions on staff reports SECY 99-013, 99-011, and 99-277

Dear Chairman Meserve:

Rio Algom Mining Corp. would like to respond to the Commission's decisions regarding the above referenced staff reports. Rio Algom Mining Corp. (RAMC) is a uranium mining company that operates three uranium recovery facilities. One facility is located in Wyoming is an in-situ leach uranium mine, and RAMC has two conventional mill facilities located in New Mexico, currently on standby, and Utah, undergoing decommissioning. Consequently, the impacts of the Commission decisions have a significant effect on the way RAMC conducts business.

With respect to SECY-99-011, "Draft Rulemaking Plan: Domestic Licensing of Uranium and Thorium Recovery Facilities - Proposed New 10 CFR §41", RAMC participated in the public scoping meetings on the proposed rulemaking. In those meetings, RAMC stated that it was not opposed to the concept of a separate part of the regulations dedicated to uranium recovery. However, information regarding the context of the rules has been lacking and the cost to the industry was not made clear enough to provide full support for the concept. Those same concerns arise upon review of the written commentary for the commission decisions. It is apparent that the individual licensees will be charged for the cost of the rulemaking, and it is unclear as to how these costs will be spread to the licensees. Additionally, the uranium recovery industry has been forced to pay increasingly higher Part 170 and 171 fees while the price of the industries commodity, uranium, continues to have market prices at all time lows. Thus, the economic impact of regulation is becoming increasingly a depressing factor on the financial viability of the operating projects. It is conceivable that the number of licensees will continue to decline due to depressed market conditions that, by the time the new regulations will be promgulated, there may be no operating uranium recovery facilities remaining to regulate.

RAMC has assisted the NRC staff in this rulemaking by providing them technical information and providing tours of its ISL facility in Wyoming. RAMC will continue to provide any assistance it can practically provide to the staff during this process to expedite and maintain as low costs possible. However, there remains a concern that during the rulemaking process, the Part 41 rulemaking will significantly add to the cost

of regulation for each licensee. Without a viable industry, there may very few licensees to benefit from this new regulation.

The Commission decision on SECY-99-013, "Recommendations on Ways to Improve the Efficiency of NRC Regulations at In Situ Leach Uranium Recovery Facilities", provides an entirely different concern for RAMC. That concern is based two issues that were not raised in either the staff report or the Commissioner's commentaries on the decisions. The first issue is the adequacy of State regulation and the effects of that regulation concurrent with NRC regulation. Based on the Commissioners' comments regarding the dual regulation of ISL operations, it appears that the Commission does not fully understand the regulatory structure that regulates the ISL industry, including specifically, wellfield operations. Several Commissioners commented on the relationship between NRC's regulatory program and the underground injection control (UIC) program of "EPA or EPA authorized states." It must be recognized that regulation of ISL wellfields extends far beyond the requirements of the EPA's UIC program as there are separate state regulations specific to ISL mining, control of wellfield operations and groundwater restoration. This apparent lack of understanding may have resulted from the extent and breadth of the state regulatory framework not being fully communicated by NRC Staff in the SECY papers. RAMC assumes that despite this apparent confusion over the regulatory structure, the Commission is interested in reducing the duplicative regulation that currently exists. Dual jurisdiction over wellfields significantly increases the costs for uranium producers and is truly an inefficient use of both licensee and NRC resources. Dual jurisdiction poses similar problems for state agencies responsible for regulating ISL mining. These states consume precious resources working with the licensees and NRC to resolve conflicting license and permit requirements. Given the extremely depressed price of uranium, production is only really taking place due to existing contracts, most of which are due to expire in the near term. Therefore, RAMC is supportive of actions that reduce dual jurisdiction, including MOUs with other agencies, if the MOUs can be negotiated in a quick and cost-efficient manner. RAMC believes that States such as Wyoming and Nebraska have UIC programs that are adequately developed and experienced to regulate ISL wellfields in an effective and efficient manner.

The second issue that concerns RAMC is the Commission's decision to treat all ISL effluents as 11e.(2) byproduct material. RAMC believes that the direction provided to the staff in the ISL decision to regulate all waste streams associated with ISL uranium mining as 11e.(2) byproduct material has other serious, unintended consequences. While it appears from the voting records of the individual Commissioners that they truly believe that this treatment of ISL waste streams will produce more efficient and consistent regulations, unfortunately the opposite is true. In fact, treating all effluents at ISL facilities as 11e.(2) byproduct material generates a whole new set of problems and inconsistencies. For example, the comments by the Commissioners in the voting record describe restoration fluids as 11e.(2) byproduct material, which raises concerns as to the current exclusion in the definition of byproduct material in 10 CFR §40.4 regarding depleted ore bodies. It is difficult to reconcile the Commissioners' decision that restoration fluids produced from restoring depleted ore bodies, which the regulations specifically state do not constitute 11e.(2) byproduct material, are somehow themselves 11e.(2) byproduct material. Presumably, the only basis for such a

conclusion is that some uranium continues to be removed in ion exchange vessels from restoration fluids even though the removal of the uranium is not the "primary" purpose of the groundwater restoration operations.

If the aforementioned rationale is the basis for finding restoration fluids to be 11e.(2) byproduct material, consider the following. Frequently, underground uranium mines have to pump excess mine drainage to de-water the mines so that the miners can function. The ventilation required for the miners to function effectively and safely (e.g., radon removal) brings oxygen into contact with mine water and assists in the dissolution of uranium from the ore body. As a result, excess mine drainage often contains uranium concentrations that exceed discharge requirements under Clean Water Act National Pollutant Discharge Elimination Standards (NPDES) regulations, and additional treatment is required such as an ion exchange (IX) vessel to remove the uranium and a radium/barium settlement pond to remove excess radium. In the case of uranium, the ion exchange resin is stripped to concentrate the uranium for further processing as "refined and processed ore." (See, 57 Fed. Reg. 20532.) In the past, unless the IX vessel was tied into the mill circuit by license amendment, the discharges and sludges (i.e., radium/barium) from this treatment of mine waters have not been regulated by NRC as 11e.(2) byproduct material. This was because the discharges and sludges were not production effluent or sludges from the extraction of source material primarily for its source material content but rather were discharges and sludges from efforts to dewater the mine and to satisfy EPA NPDES release limits. In other words, the removal of source material under such circumstances was considered incidental to the treatment of the mine water for discharge. Indeed, under these circumstances, excess mine drainage that is treated to remove uranium and radium to satisfy NPDES purposes is similar to treating restoration fluids at an ISL facility to remove uranium in an IX vessel and radium in a radium/barium settlement pond to satisfy NPDES limits. In both cases, oxygen (that is not intentionally added to the water as in ISL production operations) in water dissolves uranium that is pumped to the surface, removed in an IX unit and the excess fluids must be disposed of frequently under an NPDES permit. It is inconsistent with NRC practices well prior to 1995 to deem such discharges 11e.(2) byproduct material.

Another example of a problem created by the decision to broaden the types of effluents that are 11e.(2) byproduct material is the potential impact on groundwater corrective action programs. Quivira Mining Co., a wholly owned subsidiary of RAMC, is required by license condition to operate a groundwater corrective action programs that uses treated mine water discharged from the water treatment plant to seep into the alluvium and sweep the tailings seepage into an interceptor trench for collection and disposal in solar evaporation ponds. The minewater used for this action would be treated by ion exchange to remove the uranium to discharge limits under an NPDES permit. Under the most recent Commissioners' decisions, these discharges would be considered production effluents, which cannot be released pursuant to an NPDES permit. And even if releasable, would require increased treatment to meet lower discharge limits (2 mg/L to 0.44 mg/L) thereby significantly increasing the cost of the groundwater corrective action program. In fact, NRC has relatively recently taken the opposite position. In 1998, NRC conducted an inspection of Quivira's facility, and the inspector alleged that the treated minewater discharge was regulated material and the

discharges were in violation of 10 CFR § Appendix B limits. Quivira challenged this allegation, and NRC agreed that the discharges were not regulated since the source material extraction was incidental to the treatment of the minewater before discharge. Based on the current decisions by the Commissioners, RAMC is concerned that it will be forced into a violation of NPDES regulations and 10 C.F.R. §20, Appendix B limits for activities that in the past were not considered to be NRC regulated activities. Therefore, RAMC is asking the Commission for a further clarification of the decision to classify all discharges associated directly and indirectly with the extraction of source material as 11(e)2 byproduct material.

RAMC agrees with the commissions decision regarding SECY-99-277, "Concurrent Jurisdiction of Non-Radiological Hazards of Uranium Mill Tailings". As stated earlier in this letter, RAMC has facilities in three states, all of which are non-Agreement States. One of those states, Utah, is on the pathway to become an Agreement State for the regulation of uranium recovery facilities, however, the states of New Mexico and Wyoming are not likely to become Agreement States in the near future. In New Mexico, Quivira Mining Co., an RAMC subsidiary, maintains the Ambrosia Lake Mill Facility. As part of the groundwater corrective action program, Quivira holds two groundwater discharge permits with the State of New Mexico to regulate the non-radiological constituents of 11(e)2 byproduct material, (i.e. tailings seepage). The Commission decision on concurrent jurisdiction pre-empts the State jurisdiction, but there is no guidance on what steps are to be taken by the licensee in this change of jurisdiction. As one would expect, jurisdiction is easier to obtain than relinquish, and as a licensee that is potentially caught between two competing levels of government, any help by the NRC in clarifying this decision to the Non-Agreement States would help expedite closure activities and timetables.

RAMC appreciates the efforts by the Commission in attempting to resolve some of the outstanding issues facing both the agency and the industry. If you have any questions, please call me at (405) 858-4807.

Sincerely,

William Paul Goranson, P.E.
Manager, Radiation Safety, Regulatory
Compliance and Licensing

CC: The Honorable Greta Dicus
The Honorable Nils J. Diaz
The Honorable Edward McGaffigan, Jr.
The Honorable Jeffrey S. Merrifield
Dr. Donald A. Cool, NRC
Mr. Michael F. Weber, NRC
Mr. Daniel M. Gillen, NRC
Ms. Katie Sweeney, NMA
Mr. Marvin Freeman, RAMC

State of New Mexico
ENVIRONMENT DEPARTMENT
Community Services Bureau
Radiation Protection Program
2052 Galisteo Street, P.O. Box 26110
Santa Fe, New Mexico 87502
Telephone (505) 827-1862
Fax (505) 827-1863

GARY E. JOHNSON
GOVERNOR

PETER MAGGIORE
SECRETARY

PAUL R. RITZMA
DEPUTY SECRETARY

November 20, 2000

Mark Haisfeld
Division of Industrial and Medical Nuclear Safety
Office of Nuclear Material Safety and Safeguards, T9-C24
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Dear Mr. Haisfeld:

Please accept the following comments to the NRC's September 11, 2000 draft 10CFR§41 rulemaking plan:

1. The NRC should follow Option 2B and promulgate 10CFR§41.

1. Disposal of non-11e.(2) material. *What a swift way to circumvent the requirements of 10CFR§61, and for profit to the uranium companies!!* We are not against the uranium companies realizing some benefit, however disposal of non-11e.(2) material should meet the requirements of all applicable regulations such as 10CFR§61. I have worked on both Title 1 and Title 2 reclamation projects, however none of these sites could meet the technical criteria of 10CFR§61. Also, the LLW compacts need to retain right to oversight of non-11e.(2) materials.

1. Alternate feed materials. We see no need for limitations except that this should not be an opportunity to circumvent the requirements of 10CFR§61 and LLW compact requirements.

1. Performance based licensing (PBL). This seems to be an excellent idea. Implementation of these licenses should be similar to Broad A licenses, with a sitting radiation safety committee. Members of the committee should include the RSO, the facility manager, the facility manager's supervisor (as applicable), and a staff member responsible for groundwater compliance. It should be incumbent on PBL licenses to act with the same of rigor and responsibility of Broad A licenses. If PBL licensees seek to amend their methods of operation, they should first notify their NRC representative in writing regarding the scope of change. The licensees could then proceed with the desired changes to their operations. All operational changes should be subject to the approval of

the NRC.

1. General license provision for 300 lbs of 11e.(2) byproduct material. We see no adverse circumstances stemming from this provision provided they are held to any surety and decommissioning requirements.

1. Concurrent Jurisdiction. The NRC should keep their finger in the groundwater/UIC pie, especially for radiological hazards. Perhaps the EPA and UIC need to relinquish on this matter by recognizing that these discharges are the result of NRC activities. With good reason, the regulated community is chronically suspicious of the EPA and the standards set by that agency. While concurrent jurisdiction is a burden for licensees, we are happier in the thought of the NRC retaining a voice in promulgation and implementation of standards that affect their licensees. Within the radiation protection profession, the notion is generally held that the EPA does not exercise reasonable discretion in defining proper radiation protection limits. The EPA's dose limits are believed by radiation effects experts to be considerably below levels of statistical validity.

1. ISL byproduct effluent discharge. How can we make this quantum leap from defining tailings discharge as byproduct material, to defining ISL discharge as non-byproduct? A horse is a horse no matter how you color it.

1. Modification of surety requirements to biannual updates makes good sense.

Our appreciation to the Commission and the NRC for allowing us to respond to this draft rulemaking plan.

Respectfully Yours,

Stanley Fitch
Radiation Specialist
Radiation Protection Program
New Mexico Environment Department

State of New Mexico
ENVIRONMENT DEPARTMENT
Office of the Secretary
Harold Runnels Building
1190 St. Francis Drive, P.O. Box 26110
Santa Fe, New Mexico 87502-6110
Telephone (505) 827-2855
Fax (505) 827-2836

GARY E. JOHNSON
GOVERNOR

PETER MAGGIORE
SECRETARY

PAUL R. RITZMA
DEPUTY SECRETARY

BY TELEFAX AND CERTIFIED MAIL RETURN RECEIPT REQUESTED

December 22, 2000

Mark Haisfield
Division of Industrial and Medical Nuclear Safety
Office of Nuclear Material Safety and Safeguards, T9-C24
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Re: Comments on NRC Draft Rulemaking Plan (Sept. 11, 2000)

Dear Mr. Haisfield:

The New Mexico Environment Department ("NMED") submits the following comments on the Nuclear Regulatory Commission's ("NRC") September 11, 2000 Draft Rulemaking Plan. Attachment 1 of the Plan proposes new regulations governing uranium and thorium recovery facilities, to be codified at 10 C.F.R. Part 41, pursuant to the Atomic Energy Act ("AEA"), 42 U.S.C. §§ 2011 to 2296.

NMED has a number of concerns with the Draft Rulemaking Plan and the recent NRC decisions upon which it is based. NMED notes that many of the proposals in the Plan are adopted from the mining industry "white paper," entitled *Recommendations for a Coordinated Approach for Regulating the Uranium Recovery Industry: A White paper Presented by the National Mining Association* (1998). NMED views this industry "white paper" as representing the views of only one stakeholder group. NMED urges the NRC to consider the views of other stakeholders, including non-agreement states such as New Mexico in this rulemaking process, and to seriously reconsider its decisions on some of the following issues.

1. Regulations for *In Situ* Leach Facilities

NMED recognizes the need for and supports NRC's proposal to promulgate new regulations to establish appropriate clean-up criteria and standards for soils and ground water impacted by *in situ* leach ("ISL") facilities. The current regulations under 10 C.F.R. Part 40 are not adequate. NMED would be happy to work with NRC staff in crafting such regulations.

2. Regulations for Disposal of Other Material in Tailings Piles

NRC suggests that the Draft Rulemaking Plan would "allow more flexibility" in authorizing the disposal of non-byproduct material,[1] including hazardous wastes, in uranium mill tailings impoundments. NMED believes that serious environmental and legal problems would emerge with allowing disposal of hazardous wastes in uranium mill tailings impoundments, and that such a proposal would be unwise.

Under the federal Resource Conservation and Recovery Act ("RCRA"), 42 U.S.C. §§ 6901 to 6992k, and analogous state laws, hazardous wastes must be disposed of at permitted disposal facilities. Such facilities must comply with strict, detailed regulatory requirements that have been established for the protection of human health and the environment. 40 C.F.R. Parts 260-272. RCRA is implemented by the United States Environmental Protection Agency ("EPA") and authorized states (such as New Mexico) that have enacted hazardous waste programs no less stringent than the federal program.

The disposal of hazardous waste in mill tailings impoundments would constitute land disposal, as defined by RCRA. 42 U.S.C. § 6924(k).[2] When Congress enacted the 1984 RCRA amendments, it strongly disfavored land disposal of hazardous waste and established particularly stringent regulatory requirements for the use of this disposal method. Congress specifically found that:

> [C]ertain classes of land disposal facilities are not capable of assuring long-term containment of certain hazardous wastes, and to avoid substantial risk to human health and the environment, reliance on land disposal should be minimized or eliminated, and land disposal, particularly [by] landfill and surface impoundment, should be the least favored method for managing hazardous waste.

42 U.S.C. § 6901(b)(7). Accordingly, as part of RCRA, Congress enacted a set of provisions known as the "land disposal restrictions." 42 U.S.C. § 6924(b) through (m).

---

1 Section 11e.(2) of the AEA defines "byproduct material" as "the tailings or waste produced by the extraction or concentration of uranium or thorium from any ore processed primarily for its source material content." 42 U.S.C. § 2014(e)(2).

2 Section 3004(k) of RCRA defines the "land disposal" of hazardous waste as "any placement of such hazardous waste in a landfill, surface impoundment, waste pile, injection well, land treatment facility, salt dome formation, salt bed formation, or underground mine or cave." 42 U.S.C. § 6924(k).

These provisions generally prohibit the land disposal of hazardous waste unless the waste is first treated to meet stringent standards developed by EPA. 42 U.S.C. § 6924(m); 40 C.F.R. Part 268. Congress also enacted "minimum technology" requirements, mandating that hazardous waste landfills and surface impoundments be designed with double liners, a leachate collection system, and groundwater monitoring. 42 U.S.C. § 6924(o).

From NMED's perspective, an NRC proposal to "allow more flexibility" for the disposal of hazardous wastes in mill tailings impoundments would enable industry to circumvent the RCRA and analogous state regulatory and permitting requirements, including the land disposal restrictions and minimum technology requirements. Such a proposal would open an expansive loophole in the RCRA regulatory scheme, create an increased risk of harm to human health and the environment from releases of hazardous wastes and hazardous constituents, and undermine congressional objectives in enacting and amending RCRA.

Moreover, NMED cannot see where NRC has the legal authority to promulgate such a rule. RCRA directs the administrator of EPA to implement the hazardous waste program and promulgate implementing regulations. State agencies administer analogous state programs authorized by EPA. NMED does not believe that NRC would have authority to promulgate rules exempting the disposal of hazardous waste in mill tailings impoundments from the requirements of RCRA or analogous state laws.

3. Regulations for Processing Alternate Feed Material

See comments in item #2 above.

4. Concurrent Jurisdiction With Non-Agreement States

NMED is particularly disturbed by NRC's apparent decision to renounce the concurrent NRC and non-agreement state jurisdiction over non-radiological hazards associated with byproduct material, as defined in section 11e.(2) of the AEA. This decision overrules longstanding NRC policy[3] that has been implemented without serious problems for over twenty years.

a. Environmental Issues

NMED is concerned that the NRC's decision, if implemented, will result in unacceptable degradation of ground water in New Mexico and other non-agreement states. Preemption of state authority over non-radiological hazards associated with section 11e.(2) byproduct material would allow uranium recovery facilities to evade cleanup of non-radiological contaminants that NRC does not recognize as a "hazard." For example, existing New Mexico state law requires abatement of non-radiological constituents that the NRC does not regulate, including chloride, nitrate, sulfate, and total dissolved solids. NMED

3 This policy was set forth in a memorandum from Howard K. Shapar, Executive Legal Director, NRC, to Chairman Ahearne (Apr. 28, 1980).

enforces ground water quality standards for these constituents to protect its ground water resources for future domestic and irrigation use. New Mexico is a rapidly developing, arid state that relies on the state regulatory authority for protection of this precious resource. NMED would consider such unregulated degradation of New Mexico's ground water resources to be unacceptable.

Furthermore, preemption of state jurisdiction would leave the NRC with exclusive authority to decide how ground water cleanup should be implemented, including review and approval of alternate concentration limits ("ACL's"). NMED believes that state agencies have a much deeper understanding of the hydrogeologic conditions surrounding uranium facilities within their jurisdiction, and is concerned that the states' ground water protection efforts may be frustrated if the NRC serves as the sole authority for review and approval of ACL's and other aspects of ground water cleanup.

In addition, NMED is concerned that the new regulations will not adequately address off-site ground water contamination, due to NRC's traditional focus on regulatory efforts within license boundaries. NMED is currently dealing with this issue at the Homestake Mining Company ("HMC") former uranium recovery facility in Grants, New Mexico. At this site, elevated concentrations of uranium, molybdenum, and selenium in ground water outside the licensee's property boundary are not being addressed under the Corrective Action Plan that is overseen by NRC, despite the inclusion of cleanup standards for these constituents in HMC's license. NRC has not required corrective action to address off-site contamination; all of HMC's point-of-compliance wells are located within the property boundary. NMED is therefore seeking to address the off-site contamination using State authority. NRC's preemption of NMED's authority to regulate non-radiological hazards associated with byproduct material, coupled with its failure to address off-site contamination at this site, will result in further unregulated degradation of ground water intended for future domestic and irrigation use.

Preemption of state jurisdiction also appears to be inconsistent with the NRC's proposal to defer to the federal underground injection control ("UIC") program[4] for protection of ground water at ISL facilities. The UIC program is implemented by the EPA and states with UIC primacy status. 42 U.S.C. § 300h-1(b)(3). NRC's proposal would apparently defer the protection of ground water from 11e.(2) byproduct material at ISL facilities to EPA and primacy states, while simultaneously preempting all other non-agreement state regulation of hazards from such material. NMED believes that these decisions present a fundamental contradiction that may thwart NRC's attempts to establish a workable framework for ground water protection at ISL facilities, at least in non-agreement states that have primacy for administration of the federal UIC program.

4 The UIC program is established pursuant to Part C of the Safe Drinking Water Act, 42 U.S.C. §§ 300h to 300h-5.

b. Legal Issues

NMED further disagrees with NRC's conclusion that Congress intended to preempt state regulation of non-radiological hazards associated with 11e.(2) byproduct material. Indeed, NMED believes that the AEA demonstrates that Congress intended no such thing.

Section 274(k) of the AEA expressly reserves state authority to regulate non-radiological hazards:

> Nothing in this section shall be construed to affect the authority of any State or local agency to regulate activities for purposes other than protection against radiation hazards.

42 U.S.C. § 2021(k). In his comments regarding the concurrent jurisdiction issue, Chairman Meserve stated his belief that section 274(k) merely serves to establish that "by becoming an Agreement State, a state does not give up any authority that it otherwise would have the power to exercise."[5] However, section 274(k) on its face applies not only to agreement states, but also to "*any* State or local agency." NMED finds Chairman Meserve's interpretation of this provision to be strained.

NMED also contests the argument that Congress intended to preempt state authority over non-radiological hazards when it enacted the Uranium Mill Tailings Control Act of 1978 ("UMTRCA"). It is true that UMTRCA amended the AEA to authorize federal regulation of the non-radiological hazards associated with 11e.(2) byproduct material. 42 U.S.C. §§ 2022(b)(1) and 2114(a)(1). However, because Congress did not repeal or amend section 274(k) in UMTRCA, this provision remains valid and in effect. Nor does any conflict between section 274(k) and the UMTRCA provisions exist to support a conclusion that section 274(k) has been implicitly superseded or repealed, as has been argued.[6] To the contrary, the provisions are perfectly reconciled simply by recognizing that Congress intended concurrent federal and state jurisdiction.

Furthermore, the Supreme Court has held that a federal statute does not preempt state authority unless it was "the clear and manifest purpose of Congress" to do so. *Ray v. Atlantic Richfield Co.*, 435 U.S. 151, 157 (1978). Accordingly, at least one federal court of appeals has found that "regardless whether or not a state has entered into [an agreement with the NRC], the state retains its authority to regulate non-radiation hazards." *Illinois v. Kerr-McGee Chem. Corp.*, 677 F.2d 571, 580 (7th Cir. 1982), *cert. denied*, 459 U.S. 1049; *accord Kerr-McGee Chem Corp. v. City of West Chicago*, 914 F.2d 820 (7th Cir. 1990); *Brown v. Kerr-McGee Chem. Corp.*, 767 F.2d 1234 (7th Cir. 1985). The court of

5 Commissioner Comments on SECY-99-0277 (Aug. 11, 2000) (comments of Chairman Meserve).

6 *Id.*

appeal's analysis in these cases is bolstered by the Supreme Court's decision in a state common law tort case, in which the Court held:

> [F]or a state law to fall within the preempted zone, it must have some direct and substantial effect on the decisions made by those who build or operate nuclear facilities concerning radiological safety levels.

English v. General Elec. Co., 496 U.S. 72, 85 (1990).

The fact that Congress declined to repeal or revise section 274(k) is particularly significant in light of these decisions. The cases were decided in 1982, 1985, and 1990; Congress amended the AEA in 1983 and 1992. According to the Supreme Court, when Congress reenacts a statute in the face of clearly developed caselaw, the reenactment includes the settled judicial interpretation of the statute. *Herman & McLean v. Huddleston*, 459 U.S. 375, 384-86 (1983).

Thus, NMED's reading of the statute leads to the conclusion that Congress did not intend to preempt state authority to regulate non-radiological hazards associated with section 11e.(2) byproduct material. Federal caselaw strongly supports this conclusion.

5. Clarification of Reporting Requirements

NMED does not agree that a spill threshold volume of 10,000 gallons for ISL facilities will adequately provide for ground water protection. NMED suggests that spill reporting requirements include recording *all* spills, while reserving those releases of a threshold value (e.g., ≥10,000 gallons) or releases outside the permitted area for immediate notification. A complete record of all spills could be reported on a quarterly or annual basis.

NMED appreciates the opportunity to comment on the Draft Rulemaking Plan. If you require clarification on any of the above comments, please do not hesitate to contact the NMED Office of the Secretary at (505) 827-2855.

Sincerely,

Peter Maggiore
Cabinet Secretary

Richard Mertz
General Counsel

cc: Myron Knudson, Director, Superfund Division, EPA Region 6