May 31, 2001

Kennecott

Mr. Phillip Ting, Chief Fuel Cycle Licensing Branch, FCSS c/o Document Control Desk U.S. Nuclear Regulatory Commission Washington, DC 20555-0001

40-8584

Dear Mr. Ting:

Subject: Source Material License SUA-1350 Request for a Five (5) Year Postponement of the Initiation of the Requirements of Timeliness in Decommissioning Pursuant to 10 CFR 40.42(e) for the Sweetwater Uranium Project

Kennecott Uranium Company hereby requests an amendment to Source Materials License SUA-1350 for a five (5) year postponement of the initiation of the requirements for timely decommissioning of the Sweetwater Uranium Project (Source Material License SUA-1350) under 10 CFR 40.42(e) which states, "The Commission may grant a request to delay or postpone initiation of the decommissioning process if the Commission determines that such relief is not detrimental to the public health and safety and is otherwise in the public interest."

This is Kennecott Uranium Company's second request for a postponement. The initial request was submitted by letter dated March 20, 1996 and approved by letter dated June 18, 1996. A copy of the approval letter is included in Appendix VII. This request is also required by the letter dated August 18, 1999 that accompanied the performance based operating license issued to Kennecott Uranium Company for the Sweetwater Uranium Project that states, "Please note that if the mill does not begin operation within the next two years, you will need to request an extension for the initiation of decommissioning in order to comply with 10 CFR 40.42(d)(3)." A copy of this letter is included in Appendix I. Substantial detail and backup documentation regarding the application of this rule to source material processing facilities has been provided to facilitate review.

Kennecott Uranium Company requests that this application be processed in a timely manner. Should you require additional information or have any questions please do not hesitate to contact me. Kennecott Uranium Company staff will be available to meet with you regarding this application should this help to expedite matters.

Sincerely yours, Oscar Paulson

Facility Supervisor A:\03AMAY cc: Elaine Brummett (2) NRC-DRSS Rich Atkinson

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Kennecott Uranium Company is Manager of the Green Mountain Mining Venture

Application for a Five (5) Year Postponement of the Initiation of the Requirements of Timeliness in Decommissioning Pursuant to 10 CFR 40.42(e) for the Sweetwater Uranium Project

1. Regulatory History of Timeliness in Decommissioning

10 CFR 40.42 (a.k.a. Timeliness in Decommissioning) became final on August 15, 1994. This rule requires that source material licensees decommission facilities if:

(3) No principal activities under the license have been conducted for a period of 24 months; or

(4) No principal activities have been conducted for a period of 24 months in any separate building or outdoor area that contains residual radioactive material such that the building or outdoor area is unsuitable for release in accordance with NRC requirements.

American Mining Congress (AMC)/National Mining Association (NMA) Challenge 1.1 This rule was challenged in court by the National Mining Association (NMA) formerly the American Mining Congress (AMC) (American Mining Congress v. Nuclear Regulatory Commission and The United States, Docket No. 94-1619 --- Challenge to Final Timeliness in Decommissioning Rule). Representatives of NMA met with you and other members of Nuclear Regulatory Commission (NRC) staff on January 10, 1995 concerning this rule.. This meeting is summarized in an attachment dated February 2, 1995 entitled "Summary of January 10, 1995 Meeting to Discuss Final Rule on Timeliness in Decommissioning of Materials Facilities". in Appendix II. This summary was provided by the Nuclear Regulatory Commission (NRC). The American Mining Congress (AMC) responded to these minutes in a letter dated March 8, 1995 that is included in Appendix III. This letter documented the National Mining Association's (Name's) conclusion that there is no limit on the number of extensions that a licensee can receive if the requisite conditions have been met (adequate surety and not detrimental to the environment and other wise in the public interest). A second meeting between NMA and NRC staff occurred on July 6, 1995. That meeting was documented in a letter from Anthony J. Thompson Esq. of Shaw, Pittman, Potts and Trowbridge to Steven F. Crockett of the NRC. This letter requested a response from NRC. Katie Sweeney, Assistant General Counsel of NMA, met with you and your staff to discuss this and other issues in January 1996. A response to the National Mining Association's (NMA) letter, dated February 16, 1996, was received from the Nuclear Regulatory Commission (NRC) which contained a final letter of understanding clarifying their position on how the soon to be finalized regulation will apply to uranium recovery licensees. This letter stated, "The conclusion that there is no limit to the number of extensions that a licensee can receive is correct." A copy is included in Appendix IV. This submittal is in part formatted to meet the requirements of that letter.

1.2 Kennecott Uranium Company Dialogue with NRC

Michael H. Gibson of Kennecott Uranium Company discussed the then proposed Timeliness in Decommissioning rule with former NRC Chairman Ivan Selin in May of 1993 at a meeting in Denver, Colorado. At that meeting, Chairman Selin stated that it might make good sense to provide a "blanket exemption" for uranium recovery facilities from the requirements of Timeliness in Decommissioning. This discussion is documented in a letter dated September 15, 1993 from James E. Gilchrist, Vice President of the American Mining Congress, to then NRC Chairman Selin which is attached in Appendix V.

At an NRC/Licensee meeting in Rockville, Maryland on October 25, 1994, the issue of Timeliness in Decommissioning was discussed. The issue of regulation by exemption was discussed. The issue of a licensee's history of submittals to prepare a facility for resumption of operations was discussed as well, with the understanding that a history of submittals and activity related to future resumption of operations would be considered in an application for a postponement of the initiation of Timeliness in Decommissioning.

At a meeting with members of the staff of Kennecott Uranium Company, NRC staff and a member of the staff of Shepherd Miller, Inc. (a consultant for Kennecott Uranium Company) in Rockville, Maryland on February 23, 1995, Joseph J. Holonich then Chief of the Uranium Recovery Branch discussed Timeliness in Decommissioning. He stated that "possession of a license may be the basis for an exemption since an enforced license protects public health and safety." He also discussed the importance of safe operation of the facility that did not jeopardize public health, safety or the environment and adequate in place surety. In addition, Joseph J. Holonich provided additional clarification as to the meaning of the term "otherwise in the public interest" included in the regulation in a letter dated June 3, 1996. A copy of this letter is included in Appendix VI.

At an NRC/licensee meeting in Arlington, Texas on July 25, 1995, at which Kennecott Uranium Company had a representative, Joseph J. Holonich discussed the Timeliness in Decommissioning Rule. He discussed the two (2) meetings with NMA staff. You then stated that a two (2) year waiver extension was "reasonable and that one longer than two (2) years was acceptable if appropriately justified." He also stated that approval of an exemption request longer than five (5) years was "highly unlikely."

The matter of Kennecott Uranium Company's initial request for a postponement to the requirements of Timeliness in Decommissioning was discussed with Charlotte Abrams formerly of the Uranium Recovery Branch staff on Friday, February 9, 1996. She stated that one application had already been received by NRC. She discussed the general requirements of the application and the topics that should be covered in it. That discussion is being used as the basis for this application, as well as the initial one in 1996.

2. Facility Description and Site History

2.1 General Site History

The facility was originally constructed by Minerals Exploration Company, a wholly owned subsidiary of Union Oil Company of California in 1979 and 1980. It was operated from February 1981 until it was shut down in April 1983. During this period approximately 2.5 million tons of ore mined from the Sweetwater Pit was processed by the mill. The shut down was due to a substantial drop in uranium prices and the loss of a contract for production from the facility with Indiana Public Service. The facility was placed under care and maintenance by Minerals Exploration Company. Until June 23, 1992 the facility was owned by Minerals Exploration Company which was also the licensee. The facility was acquired by the Green Mountain Mining Venture (GMMV), a partnership between Kennecott Uranium Company and U.S. Energy Corp., a Wyoming corporation and a joint venture between U.S. Energy Corp. and Crested Corp. a Colorado corporation. The license for the facility was transferred to Kennecott Uranium Company on June 23, 1992 and the facility is operated and managed by Kennecott Uranium Company. By letter dated June 18, 1996 the Commission granted a five (5) year postponement of the initiation of decommissioning for the Sweetwater Uranium Project. This letter is attached in Appendix VII. Since transfer of the license to Kennecott Uranium Company numerous submittals were made to the Nuclear Regulatory Commission (NRC) in support of converting the existing license into a performance based operating license. On August 18, 1999 a performance based operating license for the facility was granted.

On September 11, 2000, U.S. Energy Corp. and the joint venture between U.S. Energy Corp. and Crested Corp. transferred their share of the Green Mountain Mining Venture to Wyoming Coal Resource Company, a Kennecott Uranium Company affiliate, placing complete control of the joint venture in the hands of Kennecott. The joint venture also owns the Jackpot Mine and associated mining claims that control a substantial uranium resource beneath Green Mountain approximately twenty-two (22) air miles north of the Sweetwater Uranium Project, as well as the Big Eagle Mine consisting of claims, two (2) flooded open pit uranium mines and a large shop building and wash bay.

2.2 Facility Description

The facility consists of a uranium mill housed in two (2) buildings (one for grinding, leach, countercurrent decantation and yellowcake and a second for solvent extraction), a maintenance shop, an administration building, a tire and lube building and other ancillary structures. The facility is described in detail in the revised Environmental Report submitted to NRC in August 1994.

2.3 Regulatory and Licensing History

The original license was issued to Minerals Exploration Company on February 16, 1979 by the NRC. This followed submission of the original Environmental Report for the

facility dated November 1976 and the notice of availability of a Final Environmental Impact Statement for the facility dated January 15, 1979. An application for renewal of the license was filed on April 3, 1984. The license was renewed following issuance of an Environmental Assessment by the NRC dated May 29, 1985 and a Finding of No Significant Impact (FONSI). The license was renewed again when transferred from Minerals Exploration Company to Kennecott Uranium Company on June 23, 1992. This renewal followed a second Environmental Assessment dated March 24, 1992 and a second Finding of No Significant Impact (FONSI). The Commission granted a five (5) year postponement of the initiation of decommissioning for the Sweetwater Uranium Project by letter dated June 18, 1996. This letter is attached in Appendix VII. The license was placed in timely renewal pending review of the submittals for a new performance based operating license. This new license was granted on August 18, 1999.

3. Reasons for Granting a Five (5) Year Postponement for the Sweetwater Uranium Project Kennecott Uranium Company is the operator and manager of the Sweetwater Uranium Project. The project is part of the Green Mountain Mining Venture (GMMV) which also owns the Jackpot Deposit and the Big Eagle Mine on Green Mountain approximately thirty (30) miles north of the Sweetwater Uranium Project. The entire Green Mountain Mining Venture (GMMV) is owned since September 11, 2000 by Kennecott Uranium Company and Wyoming Coal Resource Company (a Kennecott Uranium Company affiliate).

The Green Mountain Mining Venture acquired the Sweetwater Uranium Project from its former owner, Minerals Exploration Company, a wholly owned subsidiary of Unocal, expressly for the purpose of processing ore extracted from the proposed Jackpot Mine. The mill was constructed and operated by Union Oil Company (Unocal) to process ore from the Sweetwater Pit located near the mill. The mill was shut down and placed under care and maintenance on April 15, 1983 due to the loss of a contract for production from the mill following the processing of approximately 2.5 million tons of ore from the Sweetwater Pit. The mill has remained shut down until the present day.

The Sweetwater Uranium Project was acquired by the Green Mountain Mining Venture before the proposed Timeliness in Decommissioning rule was promulgated. The Green Mountain Mining Venture acquired the project at a time when uranium prices were low in the belief that the uranium market would rebound in the future, as it is beginning to do. The time of market rebound was expected to be years in the future. The Green Mountain Mining Venture acquired the property understanding that it would take years to permit and develop the Jackpot Mine and revise the source material license for the Sweetwater Uranium Project for resumed operation. A Bureau of Land Management (BLM) Record of Decision for the Jackpot Mine was received and a Wyoming Department of Environmental Quality (DEQ) Permit to Mine (Permit to Mine #660) was received for the property dated June 26, 1996. It is the intent of Kennecott Uranium Company to resume operations at the Sweetwater Mill at such time as market conditions permit. In addition, the mill facility could also be used by Kennecott Uranium Company to process alternate feed materials.

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The following is a list of reasons why a five (5) year postponement of the requirements of Timeliness in Decommissioning should be granted by the Nuclear Regulatory Commission:

3.1 Exemplary Project Compliance History and Safety Record

3.1.1 NRC Compliance History

The Sweetwater Uranium Project has an excellent compliance history with the NRC. A review of the inspections back to 1991 reveals no violations. One of the arguments for promulgating Timeliness in Decommissioning was that "...there is a risk that safety practices at the inactive facility or the inactive portion of the operating facility may become lax as key personnel relocate..." The exemplary compliance history of the Sweetwater Uranium Project shows that practices have not become lax in spite of years of suspended operations. Copies of the NRC inspection reports for years 1996, 1997 and 1998 are included in Appendix VIII. Inspection reports for 1991, 1992, 1993 and 1995 were included in the previous application.

The tailings impoundment is currently under a groundwater Corrective Action Program (CAP) mandated by License Condition 11.3. This program continues to remove contaminants from the groundwater around the tailings impoundment.

3.1.2 Lost Time Accident History

The facility has not experienced a lost time accident involving a Kennecott Uranium Company employee in over eleven (11) years, again showing that safety practices have not become lax. The facility safety program includes regular safety meetings, Mine Safety and Health Administration (MSHA) required annual refresher training, and NRC required annual radiation refresher training and monthly radiation safety meetings. Additional training such as crane operations training has also been provided. The facility is inspected by the Office of the State Mine Inspector of Wyoming and of course, the NRC.

3.1.3 Compliance History with the Office of the State Mine Inspector

The facility is inspected semiannually by an inspector from the Office of the State Mine Inspector. The inspections routinely refer to the facility's housekeeping as being "good"; see attached copies of the Inspection Reports from 1996 to the present in Appendix IX. Previous inspection reports were included in the initial application.

3.1.4 Environmental Protection Agency Compliance History

3.1.4.1 40 CFR Part 61 Subpart W Compliance History

Required Method 115 testing of the facility's tailings impoundment for radon emissions has been conducted in 1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, and 2000. The impoundment has always been in compliance with 40 CFR Part 61 Subpart W. The results of these tests are listed below:

Test Date	Flux
	pCi/m2-sec
August 7, 1990	9.0
August 13, 1991	5.1
August 5, 1992	5.6
August 24, 1993	5.0
August 23, 1994	5.0
August 15, 1995	3.59
August 13, 1996	5.47
August 26, 1997	4.23
August 11, 1998	2.66
August 10, 1999	1.27
August 8, 2000	4.05

3.1.4.2 40 CFR Part 61 Subpart I Compliance History

The facility has been in compliance with 40 CFR Part 61 Subpart I. In fact, measured doses to airborne radionuclides other than radon-222 and its daughters have been low enough that reporting is not required. Compliance with this standard during future operation has been shown in Section 5.0 of the revised Environmental Report for the facility dated August 1994.

3.1.4.3 Compliance with the Constraint Rule (10 CFR 20.1101(d) Effective January 9, 1997.

The facility has been in compliance with this rule since its inception as radioactive airborne particulates downwind of the facility have been at background levels.

> **3.1.4.4 40 CFR 190 Subchapter F Part 190 Subpart B (40 CFR 190.10(a))** The facility has been in compliance with 40 CFR 190.10(a), the 25 millirem (whole body)/75 millirem (thyroid)/25 millirem (any other organ) dose limits to member of the public (radon and its daughters excepted) from uranium fuel cycle operations which include uranium milling. Compliance with this standard during future operations is demonstrated in Section 5.0 of the revised Environmental Report.

3.1.5 State Of Wyoming Department of Environmental Quality (DEQ) Compliance History

As of May 12, 1992, the area containing the Sweetwater Mill and the tailings impoundment were excluded from the DEQ Permit to Mine No. 481 and the associated reclamation bond and placed directly under NRC bonding as per License Condition 9.16. This situation continues to the present day. The facility has an excellent record with the State of Wyoming DEQ.

3.2 Stability of Staff

One reason given for implementation of Timeliness in Decommissioning was that "...safety practices...may become lax as key personnel relocate..." Key personnel have not left the facility. The same four (4) staff members have been employed at the site for over ten (10) years.

The staff on site has an aggregate of over seventy-five (75) years of uranium industry experience.

3.3 General Condition of the Facility

The facility has been maintained in excellent condition. It has been visited by Joseph J. Holonich, former Chief of the Uranium Recovery Branch on September 21, 1995. The facility has also been visited by Charlotte Abrams formerly of the Uranium Recovery Branch staff on October 13, 1994 as well as Elaine Brummett of the uranium recovery licensing staff on June 7, 1999. Regular care and maintenance work is performed at the facility by site staff and contract personnel as required.

Photographs of the exterior of the facility, Grinding, Leaching, Counter-Current Decantation (CCD) and Solvent Extraction (SX) areas of the mill as well as a photograph of a pump are included in Appendix X. These photographs clearly show that the facility is well maintained.

3.4 Radiologic Cleanliness of the Facility

The facility was thoroughly cleaned at the time of shutdown in the Spring of 1983. Most areas of the mill were decontaminated with the exception of the yellowcake area which

was only externally decontaminated. This can be substantiated by contamination survey records.

3.5 Financial Surety

Decommissioning and reclamation costs for the NRC bonded area are covered by a surety instrument in the amount of \$6,471,986.00 described in a letter from the Nuclear Regulatory Commission (NRC) dated November 29, 2000. The surety is governed by License Condition 9.7. The surety for the facility was increased immediately prior to the issuance of the new performance based operating license on August 18, 1999.

3.6 Radiation Doses to the General Public

Doses to members of the general public from the facility have always been well below regulatory limits. Radiation doses are documented by ambient gamma radiation surveys, airborne particulate monitoring and radon monitoring required by license condition 11.5 of SUA-1350. The results of this monitoring are submitted semiannually in the form of the required 10 CFR 40.65 Reports. The facility is extremely isolated. The nearest community to the facility is Bairoil, Wyoming which is approximately 22 air miles northeast of the Site. This town has a population of 228 (1990 Census).

The tailings impoundment is partially below grade with above ground embankments surrounding it as seen in Figure 1 in Appendix X. Continuous particulate airborne monitoring is performed downwind of this impoundment. Airborne particulate levels are always well below 10 CFR Part 20 Appendix B, Table 2 Effluent Concentrations as documented by the particulate monitoring data for the last five (5) years, included in Appendix XI.

3.7 Radiation Doses to Employees

Doses to site employees are well below regulatory limits. In fact, doses are so low that individual monitoring is not required pursuant to 10 CFR 20.1502. These doses are discussed and documented in the As Low As Reasonably Achievable (ALARA) Audit Report submitted to the NRC annually.

3.8 Changes in the Uranium Market

Recent substantive changes in the uranium market have occurred. . These changes include:

3.8.1 Price Increases

A rise in the non-Commonwealth of Independent States (CIS) market price from \$7.10 per pound on January 22, 2001 to \$8.90 per pound on May 14, 2001 (Uranium Exchange (UX) prices) has occurred. This is an increase of 25.3% in just four (4) months. In addition, there have been credible predictions of a resurgence in the uranium market. The following article from the Uranium Exchange (UX) Weekly (May 14, 2001) contains one of these predictions:

Cameco shares rise on CEO forecast

Cameco Corporation's shares jumped last week after company chairman and chief executive officer Bernard Michel predicted at the UI mid-term conference in Toronto that the price of uranium could double. Shares of Cameco stock (NYSE:CCJ) rose to a 52week high of US\$25.65 (CDN\$40) on Friday, up 12 percent for the week. At the Toronto UI mid-term session last Wednesday, Michel said higher uranium prices would not have a negative impact on nuclear power generation, saying that if uranium prices doubled, the cost of nuclear-generated electricity would only increase 5 percent because uranium represents a small portion of the overall costs. In an interview with Toronto's The Globe and Mail on May 10, Michel said he sees the price of uranium fluctuating between 50 percent and 100 percent higher than where it is today. "If I try to guess the future, which is always a dangerous game. I think we would see the price of uranium in the US\$13 to \$18 range," Michel said.

3.8.2 Renewed Interest in Nuclear Power

There has been renewed interest in nuclear power in the United States and elsewhere in the world within the last six (6) to twelve (12) months. This interest has been created in part by electrical supply problems on the West Coast and by other issues. Several utilities have been considering the construction of new nuclear power plants. The following items (most notably the recently released National Energy Policy of May 2001), are illustrative of substantive renewed interest in nuclear power:

- The Southern Company is considering siting a new nuclear reactor in Georgia or Alabama. UX Weekly April 9, 2001
- Exelon has requested a pre-application review of a Pebble Bed Modular Reactor (PBMR) and has stated its intention to submit an application for construction. UX Weekly April 9, 2001.
- Energy Northwest has decided to study the feasibility of completing WNP-1. – UX Weekly – March 26, 2001.
- British Energy is planning to replace its seven (7) advanced gas cooled reactors (AGRs) with nuclear rather than gas fired plants. – UX Weekly – March 5, 2001.
- Finland is planning to construct a fifth nuclear power plant. UX Weekly
 February 26, 2001
- Taiwan will immediately resume construction on the Lungmen I nuclear plant. – UX Weekly – February 19, 2001.

- Consideration is being given to completion of the Tennessee Valley Authority's (TVA's) Bellefonte nuclear plant. – UX Weekly – February 12, 2001
- The Tennessee Valley Authority (TVA) is considering restarting the Browns Ferry I nuclear plant. UX Weekly, December 11, 2000.
- "One or more of five U.S. inutilities will announce applications seeding site location approval for a series of new nuclear power plants." stated Joe Colvin, chief executive of the Nuclear Energy Institute, NEI. He stated that the utilities involved are Constellation Energy, Dominion Resources, Entergy Exelon and Southern. — UI News Briefing March 27, 2001
- The National Energy Policy dated May 2001 made the following recommendations that are favorable to the nuclear industry in the United States:

Recommendations:

- The National Environmental Policy Development (NEPD) Group recommends that the President support the expansion of nuclear energy in the United States as a major component of our national energy policy. Following are specific components of the recommendation:
- Encourage the Nuclear Regulatory Commission (NRC) to ensure that safety and environmental protection are high priorities as they prepare to evaluate and expedite applications for licensing new advanced-technology nuclear reactors.
- Encourage the NRC to facilitate efforts by utilities to expand nuclear energy generation in the United States by uprating existing nuclear plants safely. Calvert Cliffs is the first U.S. nuclear plant to receive a renewed license from the Nuclear Regulatory Commission. The renewal will allow the plant to continue producing environmentally sound electricity for an additional twenty years.
- Encourage the NRC to relicense existing nuclear plants that meet or exceed safety standards.
- Direct the Secretary of Energy and the Administrator of the Environmental Protection Agency to assess the potential of nuclear energy to improve air quality.
- Increase resources as necessary for nuclear safety enforcement in light of the potential increase in generation.
- Use the best science to provide a deep geologic repository for nuclear waste.
- Support legislation clarifying that qualified funds set aside by plant owners for eventual decommissioning will not be taxed as part of the transaction.

- Support legislation to extend the Price-Anderson Act.
- The NEPD Group recommends that, in the context of developing advanced nuclear fuel cycles and next generation technologies for nuclear energy, the United States should reexamine its policies to allow for research, development and deployment of fuel conditioning methods (such as pyroprocessing) that reduce waste streams and enhance proliferation resistance. In doing so, the United States will continue to discourage the accumulation of separated plutonium, worldwide.
- The United States should also consider technologies, in collaboration with international partners with highly developed fuel cycles and a record of close cooperation, to develop reprocessing and fuel treatment technologies that are cleaner, more efficient, less waste-intensive, and more proliferation-resistant.
- Exelon may announce decision for a new nuclear plant within a year. Uranium Exchange (UX) Weekly May 28, 2001:

"Exelon announced May 23 that it hopes to announce construction of a new nuclear plant in the U.S. within the next 12 months. The utility is currently in talks with the U.S. Nuclear Regulatory Commission (NRC) over streamlining licensing for the Pebble Bed Modular Reactor (PBMR), which it claims will be "faster, safer, and cheaper" to build than the current generation of nuclear plants. Representatives from the NRC and the U.S. Department of Energy have reportedly made a number of visits to South Africa to view the work on the PBMR. Exelon is working with South African utility Eskom and British Nuclear Fuels. Exelon holds a 12.5% interest in the joint venture project."

• Californians favor more nuclear plants. – Uranium Exchange (UX) Weekly – May 28, 2001:

> "A surprising 59 percent of Californians now support building more nuclear plants, according to a Field Poll released last Wednesday. The pollsters said the findings suggest how deeply the power crisis has affected people in California, which has been hit by rolling blackouts and soaring electric bills over the past few months. The last time the organization polled Californians about nuclear energy was in 1984—five years after the Three Mile Island accident in PA—and it found 61 percent opposed to nuclear power at that time. "In my interpretation, the current energy crisis has some bearing on the public's changed attitudes on nuclear power," said Mark DiCamillo, spokesman for the Field Institute, a nonpartisan polling organization. "The public is searching for clean ways

> to add capacity. I think the poll is saying that nuclear should be included in that consideration." The poll of 1,015 California adults was taken May 11—20. Among registered voters, the poll showed 61 percent favored nuclear power while 33 percent were opposed. Broken down by political affiliation, 75 percent of Republicans support more nuclear power versus 53 percent for Democrats and 55 percent for others."

3.9 Receipt of a Performance Based Operating License

The facility, after almost seven (7) years of permitting work (Fall 1992 – Conceptual Design – Tailings Management Plan, to August 18, 1999 — Receipt of the license), received a performance based operating license. The length of time required to obtain the operating license (almost seven (7) years) exceeds the extension of the implementation of Timeliness in Decommissioning being requested.

3.10 Permitting of the Jackpot Mine

Permit to Mine #660 was received for the Jackpot Mine from the State of Wyoming Department of Environmental Quality (DEQ) on June 26, 1996.

3.11 Public Interest Considerations

The NRC regulation, 10 CFR 40.42(e) states, "The Commission may grant a request to delay or postpone initiation of the decommissioning process if the Commission determines that such relief is not detrimental to the public health and safety and is otherwise in the public interest."

The continued existence of the Sweetwater Mill is in the public interest and in the interest of the United States of America in that its continued existence preserves uranium production capacity in the United States. The Sweetwater Mill is one of only six (6) standing uranium mills in the United States and the only one remaining in Wyoming. Preservation of the only uranium mill in Wyoming would be in the public interest.

In addition, at such time as the uranium market permits the resumption of operations at the Sweetwater Uranium Project, the mill and the associated mine will provide primary and secondary employment in the area and tax revenues. These economic benefits are clearly in the public interest. The project benefits related to the mill are described in Sections 8 and 11 of the revised Environmental Report submitted to NRC in August 1994.

In addition Senate Bill 472 — A Bill to ensure that nuclear energy continues to contribute to the supply of electricity in the United States (sponsored by Senator Domenici) discusses the uranium processing industry stating that, "(9) to ensure the long-term reliability of supplies of nuclear fuel, the United States must ensure that the domestic

uranium mining, conversion, and enrichment service industries remain viable;" Viability of the domestic uranium processing industry can best be maintained by allowing the existing uranium mills in the United States to stand so that in the future they can again contribute to the energy security of the United States.

Clearly taken in the context of this proposed legislation, granting of a second five (5) year postponement of the initiation of the requirements of timeliness in decommissioning is in the public interest.

Preservation of existing source material processing capability in the United States is also consistent with the stated goals of the National Energy Policy, which clearly supports the expansion of the use of nuclear power to generate electricity.

3.12 Reasonableness of a Five (5) Year Postponement

A five (5) year postponement is reasonable given extensions by the NRC of license periods from five (5) to ten (10) years. The extension of license periods from five (5) to ten (10) years was done as a means of reducing NRC staff workload. This subject was discussed by NRC staff at the joint NRC/NMA meeting in Denver, Colorado on March 13, 1996. This was done as a means of reducing NRC workload.

A five (5) year postponement is reasonable in light of the time required to permit and start a major uranium mining and milling operation and in light of all of the other factors discussed in this application. In fact, shorter time frames are unreasonable. Revision of SUA-1350 for resumed operation required almost seven (7) years from starting of preparation of the Conceptual Design – Tailings Management Plan (Fall 1992), to receipt of the performance based operating license (August 18, 1999).

The permitting process for the Jackpot Mine took even longer and has been costly. The permitting process was initiated by Anaconda in December 1977, with a request for a License to Explore. Anaconda continued the permitting process until the ceased working on the property in 1984. The property was returned to U.S. Energy in 1986 and the permitting process was resumed. The process was continued by the Green Mountain Mining Venture (GMMV), a joint venture between Kennecott Uranium Company, U.S. Energy Corp and a joint venture between U.S. Energy Corp and Crested Corp, which was formed in 1990. A revised permit to mine application was submitted by the GMMV in 1993. The Permit to Mine was received on June 26, 1996. Permitting for the Jackpot Mine had been ongoing for nineteen (19) years and has cost over \$8.3 million. In light of the above described time frame a five (5) year postponement is reasonable.

A five-year postponement is also reasonable in light of the time frames required to make business decisions and to wait out unfavorable, but improving, market conditions. This issue was previously raised by members of the uranium recovery industry in comments on the proposed rule. Please see Comments on Timeliness in Decommissioning of Materials Facilities (RIN 3150-AD85) dated April 19, 1993 (Section III), in Appendix XII.

3.13 Payment of Full Annual Fees and Hourly Charges

The Sweetwater Uranium Project pays the full annual fee required of an operating uranium mill in spite of its standby status. The project has paid the following annual fees:

3.13.1 Annual Fees Paid

Year	Fee Paid
1991	\$100,100.00
1992	\$168,082.00
1993	\$100,133.00
1994	\$74,670.00
1995	\$60,900.00
1996	\$57,000.00
1997	\$57,000.00
1998	\$61,800.00
1999	\$61,700.00
2000	\$131,000.00
2001	\$132,000.00 *(Partially paid to date)

The facility is regularly inspected by the NRC and the costs of the inspections are borne by the licensee through the hourly charges. In addition, the costs of review of all submittals made to the agency are paid by Kennecott Uranium Company. The project has paid the following hourly charges:

3.13.2 Hourly Charges Paid

Year	Charges Paid
1991	\$9,870.00
1992	\$24,461.00
1993	\$6,116.00
1994	\$22,302.00
1995	\$46,166.00
1996	\$14,088.00
1997	\$12,138.00
1 998	\$51,988.00
1999	\$76,733.00
2000	\$17,443.00

In spite of its standby status, the facility receives substantial regulatory oversight, the cost of which is borne by the licensee.

4. Conclusions

Kennecott Uranium Company is requesting a five (5) year postponement of the implementation of the requirements of Timeliness in Decommissioning for the Sweetwater Uranium Project licensed under Source Material License (SUA-1350). Kennecott Uranium Company believes that a five (5) year postponement should be granted for the following reasons:

- **4.1** Record of safe operation to both employees and the general public during suspended operations.
- **4.2** Record of regulatory compliance during suspended operations to all applicable State and Federal regulations including NRC, EPA, Wyoming DEQ and other regulations.
- 4.3 Adequate surety in place in the amount of \$6,471,986.00 as of September 12, 2000.
- 4.4 Receipt of a performance based operating license for the facility dated August 18, 1999.
- **4.5** Improving uranium market, including price increases from \$7.10 per pound on January 22, 2001 to \$8.90 per pound on May 14, 2001 (Uranium Exchange (UX) prices).
- 4.6 Issuance of the Wyoming DEQ Permit to Mine #660.
- 4.7 Excellent facility condition and cleanliness.
- 4.8 No detriment to public health and safety or the environment.
- **4.9** History of low radiation doses to employees making individual monitoring of doses unnecessary as per 10 CFR 20.1502.
- **4.10** Continued existence of the mill is in the public interest as it is one of only six (6) uranium mills remaining in the United States and the only one remaining in Wyoming.
- **4.11** Renewed interest in the United States and other nations in nuclear power. The renewed interest in nuclear power in the United States is clearly expressed in the National Energy Policy dated May 2001.



UNITED STATES NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

August 18, 1999

 RECEIVED
4UG 2 3 1999
O. PAULSON
U. INGLOON

Kennecott Uranium Company ATTN: Mr. Oscar Paulson, Facility Supervisor Sweetwater Uranium Facility P.O. Box 1500 Rawlins, WY 82301-1500

SUBJECT: RENEWAL OF SOURCE MATERIAL LICENSE SUA-1350 FOR OPERATION AND APPROVAL OF THE RECLAMATION PLAN AND SURETY AMOUNT FOR THE KENNECOTT URANIUM COMPANY SWEETWATER URANIUM PROJECT, SWEETWATER COUNTY, WYOMING

Dear Mr. Paulson:

The U.S. Nuclear Regulatory Commission (NRC) has completed its review of your request for a performance-based operating license for the Kennecott Uranium Company (KUC) Sweetwater Uranium Project, Sweetwater County, Wyoming, dated June 11, 1997. In conducting its review, the staff considered the revised Radiation Safety Program submitted March 13, 1994, revised Environmental Monitoring Plan submitted June 7, 1994, Revised Environmental Report submitted August 15, 1994, Volumes I through IX of the Final Design for Tailings Management submitted 1997-1999, and the draft license submitted February 3, 1999. The initial KUC request is for: (1) resumed operation of the mill; (2) one new tailings impoundment; and (3) eight evaporation ponds. Additional impoundments and ponds may be constructed as authorized by License Condition 10.3. Also, the NRC bond area is increased to 1432 acres. The staff has concluded that the operational design and related commitments comply with requirements in Title 10 of the Code of Federal Regulations, Parts 20 and 40, and has prepared a Safety Evaluation Report to document its review. A copy of this report is provided as Enclosure 1.

The NRC staff has also completed its review of the Reclamation Plan (Volumes II, III, V, and VI of the 1997 Final Design, as amended) and has concluded that the reclamation design and the Decommissioning Plan for land and buildings will meet NRC requirements stated in 10 CFR Part 40, Appendix A, Criteria 4(c), (d), and (e); and 6(1) and 6(6); with regard to reasonable assurance of stability, control and cleanup of contaminated material, and limitation of radon flux. Therefore, Source Material License SUA-1350 will be amended to incorporate reclamation to the approved design. A copy of the staff's Technical Evaluation Report (TER) for this action is provided as Enclosure 2.

The revised annual surety bond estimate submitted July 29, 1999, in the amount of \$6,308,000 has been approved and noted in License Condition 9.7, and must be in place within three months of the date of this letter. As a part of the reclamation plan approval, the staff also has approved the cost estimate for reclaiming structures that will be constructed to support mill operation. The licensee must increase the surety bond to include this amount before construction begins, as required by License Condition 9.7.

O. Paulson

The license is being issued to incorporate the above modifications in the performance-based format, as discussed with you on July 28, 1999. A copy of the renewal license, authorizing operation of the mill, as well as the TER documenting the license condition changes are provided as Enclosures 3 and 4.

An Environmental Assessment (EA) (Enclosure 5) was prepared in accordance with 10 CFR 51.21 and 51.30, to document compliance with the National Environmental Policy Act for both the planned operation of the mill and for reclamation. Based on the EA that was issued to the public docket room, a notice was published in the <u>Federal Register</u> August 12, 1999 (Enclosure 6), indicating a finding that no significant impact should result from implementation of either the approved Facility Operation Plan or the Reclamation Plan.

Please note that if the mill does not begin operation within the next two years, you will need to request an extension for initiation of decommissioning in order to comply with 10 CFR 40.42(d)(3). If you have any questions concerning this letter or the enclosures, please contact Ms. Elaine Brummett of my staff at (301) 415-6606.

Sincerely.

John J. Surmeier, Chief Uranium Recovery and Low-Level Waste Branch Division of Waste Management Office of Nuclear Material Safety and Safeguards

Docket Number: 40-8584 License No.: SUA-1350

Enclosures: As stated

cc: R. Chancellor, WDEQ R. Edge, DOE GJ R. Atkinson, KUC

February 2, 1995

Mr. James E. Gilchrist, Vice President Environmental Affairs American Mining Congress 1920 N Street N.W., Suite 300 Washington, DC 20036-1662

SUBJECT: SUMMARY OF JANUARY 10, 1995, MEETING TO DISCUSS FINAL RULE ON TIMELINESS IN DECOMMISSIONING OF MATERIALS FACILITIES

Dear Mr. Gilchrist:

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> Enclosed is a summary of the meeting held on January 10, 1995, to discuss the final rule on Timeliness in Decommissioning of Materials Facilities. Anthony Thompson and Traci Stegemann represented the American Mining Congress (AMC) at the meeting. The meeting summary will serve to record the approach this Office intends to take toward licensee requests for delays in initiating and completing decommissioning. Please let me know if this resolves AMC concerns with the rule.

> > Sincerely,

Joseph J. Holonich, Chief High-Level Waste and Uranium Recovery Projects Section Division of Waste Management Office of Nuclear Material Safety and Safeguards

Enclosure: As stated

cc: Anthony Thompson Traci Stegemann Shaw, Pittman, Potts & Throwbridge

MEETING SUMMARY

<u>Date/Time of Meeting</u> :	January 10, 1995, 3:30 p.m.
Location of Meeting:	Two White Flint North Room T6A-1
	•

Attendees:

Attachment

The meeting was held at the request of the American Mining Congress (AMC) to discuss AMC concerns with the final rule on Timeliness in Decommissioning of Materials Facilities, published in the <u>Federal Register</u> on July 15, 1994. AMC has initiated a court proceeding, challenging the applicability of the rule to uranium mills. At the request of AMC, the court is holding the litigation in abeyance while AMC attempts to resolve its concerns with NRC.

AMC identified two primary concerns related to the application of the rule to uranium milling facilities. AMC argued 1) that the requirement to complete decommissioning within 24 months may be impossible to meet for most mills and 2) that the requirement for initiating decommissioning if a facility has not operated for 24 months does not adequately take into account the cyclical nature of the mineral extraction industry.

1. Requirement to complete decommissioning within 24 months

AMC stated that it may be impossible for most mills to complete decommissioning in 24 months. At many mills, at least some of the waste or rubble from the decommissioning of the mill structures will be disposed of in the tailings impoundment. The impoundment, which will be reclaimed on a separate schedule in accordance with Criterion 6A of 10 CFR Part 40, Appendix A, may not be ready to accept the decommissioning wastes within the 24 month time frame.

NRC pointed out that the Statement of Considerations for the rulemaking recognizes this potential need to extend the date for completion of decommissioning at uranium recovery facilities. Requests for such delays can be accommodated through the provisions in § 40.42(h). Additionally, if a specific date for completion of decommissioning is incorporated in a license, as is the case for most sites, the date in the license would take precedence over the timeliness rule provisions.

2. Requirement to initiate decommissioning within 24 months

AMC stated that the requirement to initiate decommissioning within 24 months of suspension of milling does not adequately take into account the cyclical nature of the mineral extraction industry. AMC argued that mills typically shut down, sometimes for periods of many years, when the price of the mineral is low. The mill operator anticipates remaining in standby until the price of the mineral rises enough for it to be attractive to restart the mill. This is true, not only for the uranium industry, but for many other mineral extraction operations. During the time a uranium mill is on standby, it is under license to NRC, subject to NRC inspection, and paying an annual fee; it also has a surety that is reviewed annually. These facilities, according to AMC therefore, do not present the same potential problems of safety practices becoming lax or financial resources necessary for decommissioning becoming unavailable, as other facilities that are covered under the rule.

NRC pointed out that a licensee can request a delay or postponement of the initiation of decommissioning under § 40.42(e). In order for NRC to grant that request, the licensee must show that the delay a) "is not detrimental to the public health and safety" and b) "is otherwise in the public interest." The licensee would have to make a formal request addressing these issues.

NRC stated that addressing the issue of public health and safety should be relatively simple and straightforward. The licensee can reference the safety requirements already contained in its license and NRC inspections of its facility as the demonstration that it is maintaining an adequate level of protection of public health and safety. NRC envisions a relatively short statement from the licensee addressing this aspect of § 40.42(e).

The licensee will also have to discuss why its proposal to delay decommissioning is in the public interest. One aspect of this issue was discussed in detail. All licensees are required by regulation to have in place, financial assurance based on an NRC-approved reclamation plan. There have been situations in which it was recognized that the approved reclamation plan needed upgrading. In some of those situations it was also recognized that the cost to implement the revised reclamation plan, and thus the amount of surety needed, would be substantially greater than for the existing, approved plan. However, until the revised reclamation was formally approved by NRC and incorporated in the license, the surety remained based on the old reclamation plan. It can sometimes take several years of review, discussion, and revision to achieve a reclamation plan that is approved by NRC, during which time the public interest may not be protected with an adequate surety. Therefore, if a mill operator requests a delay in decommissioning, under § 40.42(e), and there is a revision to the mill's reclamation plan under review, NRC will not consider it to be in the public interest to grant the delay unless the licensee's surety accounts for the reclamation plan under review. The surety amount does not need to be based on an NRC-approved cost estimate; it can be based on the licensee's estimated cost to implement the reclamation plan under review.

ATTENDEES NRC-AMC MEETING JANUARY 10, 1995

Tim Johnson Mary L. Thomas Robert L. Fonner Dan Gillen Myron Fliegel Joe Holonich Mal Knapp Traci Stegemann A.J. Thompson Steve Crockett

4

NRC/DWM NRC/RES NRC/OGC NRC/DWM NRC/DWM NRC/DWM Shaw Pittman/AMC Shaw Pittman/AMC NRC/OGC 301-415-7299 301-415-6230 301-415-1643 301-415-7295 301-415-6627 301-415-6643 301-415-6708 202-663-8820 202-663-9198 301-415-1620

Attachment

135

March 8, 1995

By Hand Delivery

Mr. Joseph J. Holonich, Chief High-Level Waste and Uranium Recovery Projects Section Division of Waste Management U.S. Nuclear Regulatory Commission 11555 Rockville Pike Rockville, MD 20852

> Re: American Mining Congress v. Nuclear Regulatory Commission and The United States, Docket No. 94-1619 - Challenge to Final Timeliness in Decommissioning Rule

Dear Mr. Holonich:

Thank you for taking the time to meet with us on January 10, 1995 to discuss resolution of the American Mining Congress' (AMC) judicial challenge to the Nuclear Regulatory Commission's (NRC) final timeliness in decommissioning rule (59 Fed. Reg. 36,026, July 15, 1994). As you may be aware, on February 13, 1995, AMC merged with the National Coal Association to establish the National Mining Association (NMA) so henceforth your dealings on these issues will be with the new organization.

NMA appreciates your sending a draft of the January 10, 1995 meeting's minutes. NMA believes that the meeting made significant progress towards addressing its concerns with the final rule. NMA does, however, wish to take this opportunity to express its ongoing objection to routine regulation by waiver, exemption, or exception. This type of regulatory

practice continually poses the potential for inconsistent decisions over time, particularly, when there are major changes in agency personnel.

This letter, written on behalf of NMA, sets forth its uranium recovery facility licensee members' understanding of how NRC will apply the requirements of the timeliness rule to their facilities. NMA requests that NRC confirm in writing whether NMA's understanding is correct. Assuming NMA's understanding is correct, NRC's response should provide an adequate basis to settle and dismiss the above-referenced action. If there are aspects of NMA's understanding that NRC deems incorrect, further discussions will be necessary.

First, with respect to the 24-month timeframe for (1)completion of decommissioning activities, NMA recognizes that this requirement is intended to apply only to the mill areas and not to the tailings. The final rule notes that "§40.42 applies to the uranium processing facilities." 59 Fed. Reg. at 36,031. It also states in 10 C.F.R. §40.42(k): "Specific licenses for uranium and thorium mills are exempt from paragraphs (d)(4)(f) and (g) of this section with respect to reclamation of tailings impoundments and/or waste disposal areas." Id. at 3603. At many sites, however, it may not be possible to dispose of the mill within 24 months because of specific license requirements that schedule burial at some appropriate time which may not be within the 24-month period. Site reclamation is an integrated process based on site specific circumstances, management decisions and approved plans and submittals.^{1/} It is inappropriate to simply assume that mill disposal can automatically be completed within 24 months from the beginning of the site closure process. Thus,

In addition, not all mills are disposed in the tailings pile but may be buried somewhere else on site. To the extent that any such portion of a site is being "used for disposal of byproduct material" it, along with the tailings, will be transferred to the state or federal government for perpetual licensing as a restricted site and, thus, would not be subject to the decommissioning requirements in Part 20 but rather would be subject to the requirements of 10 C.F.R. Part 40, Appendix A.

specific timetables for the various components of site closure must be and are established in site licenses.

NMA's Conclusion: It is NMA's understanding that where specific license provisions regarding the completion of decommissioning activities exist, or are required in the future, these specific license timetables will be controlling rather than the general requirements of the timeliness rule.

Second, with respect to the 24-month inactivity (2)period for facilities on "standby," NMA understands that NRC believes "flexibility has been built into the final rule so that a licensee can file for an exemption from having to commence decommissioning following 24 months of inactivity." 59 Fed. Reg. at 36,032. The rule provides that extensions of the 24-month period of inactivity can be granted if NRC determines that "this relief is not detrimental to the public health and safety and is otherwise in the public interest." The criteria by which this broad standard may be Id. satisfied are not explained. At our meeting, NRC indicated that an exemption from the 24 month inactivity trigger would be granted if the criteria noted above are satisfied (which it assumes will not be a major undertaking) and the licensee has posted adequate surety.

NMA's Conclusions:

a. With respect to showing that continued standby status is "not detrimental to the environment" and is "otherwise in the public interest", NMA assumes that, unless a licensee plainly has failed to fulfill its license requirements or has done so haphazardly (which would presumably result in a pending or contemplated enforcement action), this determination would be a pro forma exercise for NRC since NRC must regulate and oversee licensees whether they are on standby or not. And, presumably, NRC would not have granted a license in the first place unless these requirements were going to be met.

A

Uranium recovery facility licenses contain multiple requirements, including financial surety, protection of on-site workers, and other elements that protect the environment and the public interest whether the site is actively in production or not. Indeed, NRC asserts that it exercises full and complete oversight over standby sites and, therefore, charges them the same annual fee as that for an actively operating facility. See 59 Fed Reg. 36895 (July 20, 1994). Also, NRC not only has a "history" of site compliance but a history of licensee submittals both to prepare a facility for standby and to prepare it for resumption of operations. Thus, almost by definition, unless NRC is not fulfilling its responsibilities, the licensee must be satisfying the "not to the detriment of the environment," and "otherwise in the public interest" requirements.

b. With respect to the surety requirement, it is NMA's understanding that the amount of the surety would be based on the amount approved by the Commission or, if there is no approved amount, on the licensee's estimate of costs for final site reclamation. If there is no approved amount or no estimate, then the amount of the surety required would be subject to discussions between by NRC and the licensee.

(3) Finally, given the nature of the uranium recovery market, NMA anticipates that licensees may need to make multiple requests for extensions of the 24 month inactivity period.²⁴ However, NMA notes that this seems both cumbersome and unnecessary when the Commission could simply put a specific condition in the license allowing a longer standby term since the licensee must satisfy the "not to the detriment" and "in the public interest" criteria notwithstanding the requirements of the general timeliness in decommissioning standard. This would be a sensible approach since, as noted above, the general provisions of the rule will

It is worth noting that virtually any site requiring a site specific advisory board, (SSAB) as proposed in NRC's decommissioning and decontamination rulemaking proceeding (59 Fed. Reg. 43,200, August 22, 1994), will likely require multiple extensions as well.

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not control the time of mill reclamation or for that matter any other reclamation activities required by specific license conditions.

NMA's Conclusions: NMA assumes that there is no limit on the number of 24 month extensions that a licensee can receive. If the requisite conditions have been met (adequate surety and not detrimental to the environment and otherwise in the public interest), a facility will, if necessary, be granted continued extensions of the 24 month period.

NMA and its licensee members look forward to your response. If you have any questions about the substance or intent of this letter, please do not hesitate to call me at 202/663-9198.

Sincerely,

Anthony J. Thompson

AJT/clc

113921-01 / DOCSDC1



UNITED STATES NUCLEAR REGULATORY COMMISSION WASHINGTON, D.C. 20555-0001

February 16, 1996

Anthony J. Thompson, Esq. Shaw, Pittman, Potts & Trowbridge 2300 N Street, N.W. Washington, DC 20037-1128

SUBJECT: TIMELINESS IN DECOMMISSIONING RULE

Dear Mr. Thompson:

This letter is in response to your letter of August 25, 1995, to Steven F. Crockett of the Nuclear Regulatory Commission's Office of the General Counsel. Your letter, written in behalf of the National Mining Association (NMA), set forth the NMA members' understanding of how NRC will apply the Timeliness in Decommissioning rule (59 <u>FR</u> 36026, July 15, 1994) to uranium mills. Based on your letter, we believe there needs to be additional clarification of the NRC staff's positions. Therefore, I have attempted to address the conclusions highlighted in your letter by clearly restating the NRC's positions. The enclosure contains the clarifying information.

I hope you find that the information provided clarifies our position. Because the 24 month time period for submitting notification to NRC as required by the rule, expires next August, it is important that licensees begin preparing their requests if they wish to remain in standby status and not begin decommissioning activities.

If you have any questions on the enclosure, please feel free to contact either me or Mike Fliegel of my staff. I can be reached at (301) 415-7238 and Dr. Fliegel can be reached at (301) 415-6629.

Sincerely,

tough _ I - Holowich

Joseph J. Holonich, Chief Uranium Recovery Branch Division of Waste Management Office of Nuclear Material Safety and Safeguards

Enclosure: As stated

U.S. Nuclear Regulatory Commission Staff Response to National Mining Association Comments on Decommissioning Timeliness Rule

Comment 1

National Mining Association (NMA) Comment

It is NMA's understanding that where specific license provisions regarding the completion of decommissioning activities exist, or are required in the future, these specific license timetables will be controlling rather than the general requirements of the timeliness rule.

Staff Response

The staff agrees with this conclusion.

Comment 2

NMA Comment

With respect to showing that continued standby status is "not detrimental to the environment" and is "otherwise in the public interest", NMA assumes that, unless a licensee plainly has failed to fulfill its license requirements or has done so haphazardly (which would presumably result in a pending or contemplated enforcement action), this determination would be a *pro forma* exercise since the U.S. Nuclear Regulatory Commission must regulate and oversee licensees whether they are on standby or not, particularly if licensees are being charged for it. And, presumably, NRC would not have granted a license in the first place unless these requirements were going to be met. To the extent there are concerns raised by an extension, additional license conditions could address any such concerns and provide NRC with the necessary comfort level.

Staff Response

The staff believes there are a number of clarifications that need to be made in response to this comment.

- 1. The standard requires a determination that continued standby status "...is not detrimental to the **public health** and safety [emphasis added]," not "the environment" as stated in the NMA conclusion.
- 2. The determination is not a pro forma exercise. The licensee must show that continued standby status will not be detrimental to public health and safety. In a meeting held on January 10, 1995, and documented in the NRC letter to James E. Gilchrist of the American Mining Congress dated February 2, 1995, NRC stated that addressing this issue should be relatively simple and straightforward. The licensee can reference the safety requirements already contained in its license and NRC inspections of its facility as the demonstration that it is maintaining an adequate level of protection of public health and safety. We stated that NRC envisions a relatively short statement from the licensee addressing this

aspect of § 40.42(e). However, as was stated by the staff during the January 10, 1995 meeting, the review would involve at a minimum an evaluation of the license to ensure that all necessary conditions were included and correct. The staff review was not characterized as a pro forma exercise.

- 3. The determination that continued standby status "...is otherwise in the public interest" is separate from the public health and safety determination. NRC stated at the January 10, 1995, meeting that the licensee will have to discuss why its proposal to delay decommissioning is in the public interest. NMA's conclusion that unless a licensee is not fulfilling its license requirements, the fact that it was originally granted a license resolves this issue, is clearly incorrect for the following reasons:
 - a. Properly fulfilling its license requirements is a necessary condition for being in the public interest but not necessarily a sufficient condition. It is not clear how the fact that a facility is complying with its license leads one to conclude that continual standby is in the public interest.
 - b. NRC originally granted licenses, in most cases many years ago, to these facilities to produce uranium. The public interest now, or in the future, for uranium production may be different than when the original license was granted. Furthermore, the standby request is not to produce uranium but to await changes to market conditions that might (or might not) eventually lead to uranium production. Therefore, a request for an exemption would have to show why continuation in a standby status is in the public interest. For more on the public interest showing, see the Staff Response to Comment 3.

Comment 3

NMA Comment

With respect to the surety requirement, it is NMA's understanding that the amount of the surety would be based on the amount approved by NRC or, if there is no approved amount, on the licensee's estimate of costs for final site reclamation. If there is no approved amount or no estimate, then the amount of the surety required would be subject to discussions between NRC and the licensee.

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Staff Response

As stated by NRC at the January 10, 1995, meeting, the surety issue is tied to the determination of whether continued standby status is in the public interest. All licensees are required by regulation to have in place, financial assurance based on an NRC-approved reclamation plan. In many cases, the surety based on the approved plan will be the surety that satisfies the public interest. However, there have been situations in which it was recognized that the approved reclamation plan needed upgrading. In some of those situations it was also recognized that the cost to implement the revised reclamation plan, and thus the amount of surety needed, would be substantially greater than for the existing, approved plan. However, until the revised reclamation was formally approved by NRC and incorporated in the license, the surety was based on the old reclamation plan.

It can sometimes take several years of review, discussion, and revision to achieve a reclamation plan that is approved by NRC. Although the licensee would have a surety based on an NRC accepted value, the public interest may not be protected because the NRC accepted value may not result in an adequate surety. Therefore, if a mill operator requests a delay in decommissioning, under § 40.42(e), and there is a revision to the mill's reclamation plan under review, NRC will not consider it to be in the public interest to grant the delay unless the licensee's surety accounts for the reclamation plan under review.

Comment 4

NMA Comment

NMA assumes that there is no limit on the number of extensions that a licensee can receive. If the requisite conditions have been met (adequate surety and not detrimental to the environment and otherwise in the public interest), a facility will, if necessary, be granted continued extensions. Indeed, given the unique nature of the uranium industry's stand-by situation, licensees could request an exemption from the 24 month period for a period of time ranging from 24 months to years. At the end of the agreed upon time, the licensee would have the option of requesting another exemption/extension. NRC's processing of these requests would be pro forma, unless specific concerns are identified by the licensee or raised by NRC.

Staff Response

Several aspects of this conclusion repeat the misunderstandings of previous conclusions (i.e., the test is related to public health and safety, and the adequacy of surety is a component of the test of being in the public interest) and it again assumes a *pro forma* processing of request. Please see the clarification provided for those comments. The conclusion that there is no limit to the number of extensions that a licensee can receive, is correct.

Comment 5

NMA Comment

In the alternative, the appropriate timeframe could be established as a license condition which would be controlling over the general requirements of the timeliness rule.

Staff Response

The staff does not view a license condition as an alternative approach. We expect that in any instance in which we grant an extension of the time a licensee can remain on standby, the extended time period would be established in the license. Since that extension would have been granted in conformance with § 40.42(e), we do not see a conflict between the rule and the license condition.

September 15, 1993

AMERICAN MINING CONGRESS

FOUNDED 1897

1920 N Street NW, Suite 300 Washington, DC 20036-1662 202/861-2800 Fax: 202/861-7535

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* Immediate Past Chairman † Honorary The Honorable Ivan Selin Chairman U.S. Nuclear Regulatory Commission Rockville, Maryland 20852

Dear Chairman Selin:

During your visit to Wyoming and Colorado, you had a variety of discussions with, among others, uranium fuel cycle licensees. The American Mining Congress (AMC) which represents many of those licensees in NRC regulatory proceedings was a participant at one of those meetings which covered a variety of topics. One of those topics that was raised by Michael H. Gibson, who is Vice President of Kennecott Uranium Company and the Chairman of AMC's Uranium Policy Council (UPC), is the focus of this letter -namely, the relevance of NRC's proposed "Timeliness in Decommissioning" rulemaking (58 Fed. Reg. 4099-4110) to AMC's member company uranium recovery licensees.

Mr. Chairman, as you may recall, AMC has grave concerns regarding the presumptions in the proposal about when facilities become "inactive" and thereby subject to decommissioning timetables. As AMC noted in its comments on the proposed rules (copy attached), the concept of arbitrary timetables for determining when a business becomes inactive is particularly problematic for mineral processing facilities in general, and specifically for both conventional and in situ uranium production necessarily generic approach to decommissioning timetables in the proposal will inevitably lead to requirements that, for uranium recovery licensees, often would be based on inappropriate assumptions. These licensees are already subject to comprehensive regulation during active operations, standby and closure, and their operating and closure decisions are highly licensee and site specific.

At our meeting with you in Denver, after AMC's concern about arbitrary closure requirements for such facilities was broached by a Mr. Gibson, you suggested that it might make good sense to provide a "blanket exemption" from the timeliness in decommissioning requirements for uranium recovery facilities. AMC agrees that this would be the simplest and most cost-effective means of preserving necessary operational flexibility for uranium recovery licensees without jeopardizing public health and safety.

AMC hopes that by refreshing your recollection of this discussion you will look into the potential for such an exemption.

Yours very truly, The second

James E. Gilchrist Vice President

Enclosure



UNITED STATES NUCLEAR REGULATORY COMMISSION

WASHINGTON, D C. 20555-0001

June 3, 1996

Anthony J. Thompson, Esq. Shaw, Pittman, Potts & Trowbridge 2300 N Street, N.W. Washington, D.C. 20037-1128

SUBJECT: TIMELINESS IN DECOMMISSIONING RULE

Dear Mr. Thompson:

I am responding to your March 25, 1996, letter on behalf of the National Mining Association (NMA). I hope that, by clarifying the U.S. Nuclear Regulatory Commission's position on one matter, I can move us closer to resolution of what appears to be the only issue remaining between us.

In your letter you ask us to clarify what we mean by "otherwise in the public interest." You are particularly concerned that paragraph 3.b of my response to comment 2 in my February 16, 1996, letter to you may mean that the NRC intends to judge the best economic interests of licensees.

We have no such intention. Paragraph 3 was meant to make two chief points, both of which are ultimately tied to the agency's safety mission, and not to any desire by the NRC to exercise judgement about private economic interests. First, compliance with safety standards is necessary for a time extension, but not sufficient. Second, the time extension must also be "otherwise in the public interest," and while adequate surety, of the sort discussed in the attachment to my February letter, is an important part of being "otherwise in the public interest," it is not the whole. Our chief concern here remains, as always, health and safety. We want to know that there are good reasons for believing that it is in the <u>public</u> interest to allow an inactive facility to remain undecommissioned.

In reaching a determination about the public interest, the NRC does not intend to judge whether continuation of standby status is in the <u>applicant's</u> best <u>economic</u> interests. Those interests might, or might not, coincide with the public interest. A public interest argument might be based, for example, on Federal concern for the domestic uranium mining industry. Existing statutes oblige the Secretary of Energy to gather information on the uranium mining industry and to have a "continuing responsibility" for the domestic industry, "to encourage use of domestic uranium." See 42 U.S.C. §§ 2201b and 2296b-3. Although this responsibility is not the NRC's, the NRC recognizes that the viability of the industry is a Federal concern. Paragraph 3.b in the enclosure to my February letter permits an applicant to argue that the policies behind the cited provisions support the application for time extension.

There may be other, similar, arguments that could be made, e.g., a public interest argument based on possible future needs of the electric utility industry or on national defense. Some of these arguments may depend on

A. Thompson

2

circumstances unique to a given applicant. Therefore, we have avoided attempting to define exhaustively "the public interest." The NRC's rule permits each applicant for a time extension to make the arguments most relevant to its circumstances.

I hope that this clarification removes NMA's remaining concern, and that this letter, together with your March 25, 1996, letter, my February 16, 1996, letter, and your August 25, 1995, letter, constitute a sufficient record to guide members of the NMA who want to file for time extensions. I would hope also that the same letters can serve as the basis for filing a motion for voluntary dismissal in the D.C. Circuit. I look forward to your esponse.

Sincerely,

Joseph J. Holonich, Chief Uranium Recovery Branch Division of Waste Management Office of Nuclear Material Safety and Safeguards
A. Thompson

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Sincerely,

[Original signed by]

Joseph J. Holonich, Chief Uranium Recovery Branch Division of Waste Management Office of Nuclear Material Safety and Safeguards

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UNITED STATES NUCLEAR REGULATORY COMMISSION WASHINGTON, D.C. 20555-C001 June 18, 1996

RECEIVED O PAHISON

Kennecott Uranium Co. ATTN: Oscar Paulson, Facility Supervisor Sweetwater Uranium Mill P.O. Box 1500 Rawlins, Wyoming 82301-1500

SUBJECT: REQUEST TO POSTPONE INITIATION OF THE REQUIREMENTS OF TIMELINESS IN DECOMMISSIONING PURSUANT TO 10 CFR 40.42(e)

Dear Mr. Paulson:

By your letter dated March 20, 1996, Kennecott Uranium Company submitted a request for postponement of the initiation of the requirements of Timeliness in Decommissioning pursuant to 10 CFR 40.42(e) for the Sweetwater Uranium facility, Source Material License SUA-1350. Under 10 CFR 40.42(e), "The Commission may grant a request to delay or postpone initiation of the decommissioning process if the Commission determines that such relief is not detrimental to the public health and safety and is otherwise in the public interest." The U.S. Nuclear Regulatory Commission staff has completed its review of Kennecott's request and considers the request for a five (5) year postponement of the initiation of decommissioning of the Sweetwater Uranium facility to be acceptable. The bases for the staff's decision are discussed below.

1. Record of regulatory compliance.

In June 1992, the license for the Sweetwater Uranium facility was transferred from Minerals Exploration Company to Kennecott Uranium Company. Since the time of that transfer, the facility has maintained an excellent inspection record. A review of inspection records for the last ten years indicates that Kennecott Uranium Company has received no Notices of Violation for the Sweetwater facility and, previous to the transfer to Kennecott, no safety violations were identified at site inspections. In addition, the facility has a good record of compliance with the State of Wyoming Department of Environmental Quality and the applicable requirements of the U.S. Environmental Protection Agency (EPA).

2. Public health and safety/maintenance of facility.

Based on NRC staff observations at site visits and inspections, the facility continues to be maintained in good condition. Radiological and monitoring requirements have been met as prescribed by the license and reporting by the licensee is timely. No detrimental impacts to the public health and safety or the environment have been identified.

Mr. O. Paulson

3. Surety in place.

Decommissioning and reclamation costs for the site are covered by a surety instrument that is reviewed annually. This annual review is a basis by which the staff ensures that the licensee's surety is adequate. If the licensee submits a revised reclamation plan, at such time as it receives approval to resume operation and/or construct additional facilities at the site, the licensee will increase its surety accordingly.

4. "...in the public interest."

The site is covered by an adequate surety (See 3, above); therefore, the public interest in continued health and sefety is protected from a financial default that could preclude decommissioning of the site. In addition, existing statutes oblige the Secretary of Energy to have a "continuing responsibility" for the domestic uranium mining industry, "to encourage use of domestic uranium." See 42 U.S.C. §§ 2201b and 2296b-3. The NRC recognizes that the viability of the industry is a Federal concern, that there is a public interest in uranium supply, and that this factor may be meaningful where the licensee has actively maintained the mill in a condition to operate, evidencing an honest expectation to operate and support industry viability. Because each mill's status will be judged on its own merits, the number of mills in such a condition is not relevant. Neither, as was mentioned in my letter of June 3, 1996, to Anthony J. Thompson (enclosed), is the price of uranium, nor the economic business decisions of the licensee.

5. Planned resumption of operations.

In March 1993 the Sweetwater facility submitted the first of a number of documents necessary for NRC's approval to resume operation of the Sweetwater mill. Since that time, Kennecott has submitted a revised tailings management study, a revised Environmental Monitoring Manual, an environmental report, a background groundwater study, and geologic and seismic reports for NRC staff review. Work on final documents have been delayed pending a decision from the EPA regarding use of an existing tailings impoundment. Since the submittal of the subject request for postponement, Kennecott has received approval from the EPA and plans to submit the additional information necessary for NRC review and approval for resumption of mill operation in the near future. Given the time needed for preparation of submittals and review and approval of resumed operations, the staff considers the licensee's request for a postponement of decommissioning to be reasonable.

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Mr. O. Paulson

If you have any questions regarding this letter, you may contact the NRC Project Manager, Ms. Charlotte Abrams, at (301) 415-5808.

Sincerely,

Jugh J. Hopik

Joseph J. Holonich, Chief Uranium Recovery Branch Division of Waste Management Office of Nuclear Material Safety and Safeguards

Enclosure: As stated

Docket No.: 40-8584 License No.: SUA-1350



UNITED STATES

REGION IV

611 RYAN PLAZA DRIVE, SUITE 400 ARLINGTON, TEXAS 76011-8064

August 30, 1996



Mr. Oscar Paulson Kennecott Uranium Company 140 East Social Hall Ave., Suite 400 Salt Lake City, Utah 84111

SUBJECT: NRC INSPECTION REPORT 40-8584/96-01

Dear Mr. Paulson:

On July 31, 1996, the NRC completed an inspection of your Sweetwater Uranium Facility. Further information was derived from discussions with you on August 15, 1996. The enclosed report presents the results of that inspection.

The inspection disclosed that you have continued to maintain the mill in a standby status although plans are underway to resume milling operations in the future. No violations or deviations were cited; therefore, no response to this letter is required.

Regarding groundwater remediation activities, we noted that your contractor laboratory has not analyzed all required constituents using the lower limits of detection specified in the license. Based upon your commitment during the inspection to address this issue with your contractor, we will review this issue further during a subsequent inspection.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice." a copy of this letter and its enclosure will be placed in the NRC Public Document Room.

Should you have any questions concerning this inspection, please contact Mr. Robert Evans at (817) 860-8234 or Mr. Charles L. Cain at (817) 860-8186.

Sincerely,

Charles L. Cary

Fa Ross A. Scarano, Director Division of Nuclear Materials Safety

Docket No.: 40-8584 License No.: SUA-1350

Enclosure: NRC Inspection Report 40-8584/96-01



Kennecott Uranium Company

cc w/enclosure: Mr. Michael H. Gibson Kennecott Uranium Company Caller Box 3009 Gillette, Wyoming 82717

Mr. David Finley Wyoming Department of Environmental Quality Solid and Hazardous Waste Division 122 W. 25th Street Cheyenne, Wyoming 82002

Land Quality Division Wyoming Department of Environmental Quality 122 W. 25th Street Cheyenne, Wyoming 82002

Wyoming Radiation Control Program Director

ENCLOSURE

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U.S. NUCLEAR REGULATORY COMMISSION REGION IV

Docket No.:	40-8584
License No.:	SUA-1350
Report No.:	40-8584/96-01
Licensee:	Kennecott Uranium Company
Facility:	Sweetwater Uranium Mill
Location:	Sweetwater County, Wyoming
Dates:	July 30-31, 1996
Inspector:	Robert J. Evans, P.E., Health Physicist Nuclear Materials Inspection and Fuel Cycle/Decommissioning Branch Division of Nuclear Materials Safety
Accompanied By:	William H. Radcliffe, Radiation Specialist Nuclear Materials Inspection and Fuel Cycle/Decommissioning Branch Division of Nuclear Materials Safety
Approved By:	Charles L. Cain, Technical Assistant Division of Nuclear Materials Safety
ATTACHMENTS:	
Attachment 1:	Partial List of Persons Contacted List of Items Opened, Closed, and Discussed List of Acronyms
Attachment 2:	Photographs Taken at the Sweetwater Uranium Mill

EXECUTIVE SUMMARY

Sweetwater Uranium Mill NRC Inspection Report 40-8584/96-01

This inspection included a review of site status; management organization and controls; site operations; and the licensee's radiation protection, waste management and environmental protection programs. The facility continues in standby status as it has for several years.

Management Organization and Controls

- The licensee's organizational structure was consistent with previous inspections, and it appeared that adequate oversight had been provided for site activities (Section 2).
- Procedures had been established at the site. The procedures were deemed adequate for the work in progress (Section 2).

Operations Review

• Site activities appeared to have been conducted in accordance with the applicable license and regulatory requirements. The mill and other onsite structures appeared to have been maintained in excellent condition. Site fences were in good condition, and perimeter postings were appropriate. No significant health or safety concern was identified during site tours (Section 3).

Radiation Protection

- The licensee had implemented a radiation protection program that met the requirements established in 10 CFR Part 20 and the license, with one minor exception. A non-cited violation was identified involving the licensee's failure to document all semi-annual calibrations of the site's area air samplers (Section 4).
- Occupational exposures at the site appeared to be small fractions of the limits established in 10 CFR 20. Program areas deemed satisfactory included the training, radiation work permit, and ALARA programs. (Section 4).

Radioactive Waste Management/Environmental Protection

• A review of the licensee's environmental and groundwater monitoring program, and the annual land use survey, indicated that the licensee was in compliance with license requirements, with one exception. A noncited violation was identified involving the licensee's failure to analyze environmental air samples for lead-210 content (Section 5).

Radioactive Waste Management/Environmental Protection, continued

- All reports related to the groundwater and environmental monitoring programs had been submitted to the NRC as required, and the reports were thorough and technically accurate. A review of the reports and the original laboratory documentation revealed that releases of radioactive materials to the environment were within regulatory limits during 1995 (Section 5).
- Discrepancies were identified with the lower limits of detection for groundwater constituents as reported by the licensee's contractor laboratory. The licensee planned to implement corrective actions as needed to resolve the discrepancies. An Inspection Followup Item was issued to verify that the discrepancies have been resolved (Section 5).

Report Details

1 Site Status

The Sweetwater Uranium Mill was constructed in 1979-1980 by the Minerals Exploration Company. The facility operated between 1981 to 1983. At the time of the inspection, the facility was in the standby mode of operation. Structures in place at the site included the uranium mill, maintenance shop, administrative building, tire/lube building, and other miscellaneous structures. A 60-acre tailings impoundment was also located at the site. Roughly two and a half million tons of tailings were being stored in the impoundment.

In accordance with License Condition 9.3, the licensee is authorized to operate an ion exchange uranium recovery facility. According to information provided by the licensee, the ion exchange equipment had not been operated since July 1994. Actions completed by the licensee during the previous year included general maintenance and preservation work, groundwater and environmental monitoring oversight, and other license compliance-related activities.

2 Management Organization and Controls (88005)

2.1 Inspection Scope

The organizational structure was reviewed to ensure that the licensee had established an organization with defined responsibilities and functions. The site standard operating procedures were reviewed, and the licensee's implementation of these procedures were assessed to evaluate the effectiveness of the licensee's control of site activities.

2.2 Observations and Findings

a. Management Organization

Site staffing requirements are established in License Condition 9.15. At the time of the inspection, the site staffing consisted of five employees, including the facility supervisor, senior facility technician, mill foreman, radiation safety officer, and office manager. In addition, one contract security guard provided oversight of the facility during non-standard work hours. The onsite staffing was comparable to the structure in place during the previous inspection and agreed with license requirements.

b. Management Controls

License Condition 9.20 states that standard operating procedures (SOP) shall be established and implemented for all operational process activities involving radioactive materials that are handled, processed, or stored. Additionally, SOPs shall be established and implemented for

all aspects of the radiation safety and environmental monitoring programs. Overall, site procedures had been established and were adequate for the amount of work in progress at the site. In addition, the site procedures had been updated for the eventual resumption of mill operations. Records existed that indicated that the site procedures had been reviewed on an annual basis.

2.3 Conclusions

The licensee's site organizational structure was consistent with structures in place during previous inspections, and it appeared that adequate oversight had been provided for the current mode of plant operations.

Procedures had been established at the site. These procedures had been adequately documented and were appropriate for the amount of work in progress at the site.

3 Operations Review (88020)

3.1 Inspection Scope

A facility tour was performed to verify that site activities were being conducted in accordance with applicable regulations and the conditions of the license, and to ensure that operational controls were adequate to protect the health and safety of the workers and members of the general public.

3.2 Observations and Findings

During the plant tour, site buildings, fences, gates, and operating equipment were observed. Site fences were in good condition and were properly posted in accordance with License Condition 9.6. Site structures and mill components appeared to have been properly preserved and maintained. Housekeeping was adequate in all structures. Around 20,000 pounds of material containing U_3O_8 was being stored in 55-gallon drums in the mill. The material was being maintained in a slurry form. Access to the material was controlled by locked doors.

Gamma exposure rate measurements were obtained at several locations around the site property. The exposure rates were measured using a Ludlum Model 19 microroentgen meter calibrated to a cesium-137 source. The ion exchange equipment was being stored in the tire/lube building. One particular location on the ion exchange equipment was measured at 600 microroentgen per hour (μ R/hr) at 1 foot. The precipitation agitator in the mill area measured 1500 μ R/hr on contact and 600 μ R/hr at 1 foot. These measurements were well below the limits for posting the areas as radiation areas (5000 μ R/hr or above, measured at 1 foot).

License Condition 9.20 states in part that a current copy of each standard operating procedure shall be kept in the mill area in which it applies. One out-of-date procedure was found in the mill. This procedure provided mill preservation instructions to site workers (i.e., instructions for maintaining plant and equipment while in the standby status). Although the procedure was not the most current revision available, the guidance provided in the out-of-date procedure was similar to the guidance provided in a current procedure. Therefore, potential mis-operation of plant equipment would not have occurred if site personnel had used the out-of-date procedure. The licensee planned to update the procedure in a timely manner.

The inspector visited the tailings impoundment. The groundwater enhanced evaporation system was in service. The enhanced evaporation system consisted of a drip system and spray lines. A sufficient amount of freeboard existed between the top of the pond surface and the top of the pond embankments. The gamma exposure rate at the edge of the tailings cell measured 45 μ R/hr, with a general area background of around 25 μ R/hr.

License Condition 10.4 states that the licensee shall maintain a minimum of 5 feet of freeboard between the top of the tailings dam and the tailings pond level. According to information provided by the licensee, the top of the dam was about elevation 6684 feet above sea level while the average pond level during 1995 was 6620 feet above sea level. Therefore, the pond level did not come close to exceeding the freeboard limit established in the license during 1995.

License Condition 11.6 states that a weekly inspection of the tailings area shall be performed during the period of mill shutdown. The licensee produced records during the inspection that documented the performance of the weekly inspection.

3.3 <u>Conclusions</u>

Site activities generally appeared to have been conducted in accordance with applicable license and regulatory requirements. Site fences were in good condition and perimeter postings were appropriate. The mill and other site structures appeared to be in excellent condition. One outof-date mill preservation procedure was found in the plant, although this finding was considered inconsequential. No significant health or safety hazards were identified.

4 Radiation Protection (83822)

4.1 Inspection Scope

The purpose of this portion of the inspection effort was to determine if the licensee's radiation protection program was in compliance with the requirements established in the license and 10 CFR Part 20 regulations.

4.2 Observations and Findings

a. Employee Exposures

To ensure that personnel had been properly monitored for potential exposures to radioactive materials, the licensee's internal and external monitoring programs were reviewed. The licensee's personnel monitoring program consisted of intermittent air sampling and external radiation measurements. Also, the licensee performed bioassay sampling on a quarterly basis, although they were not specifically required to by the license.

During 1995, site personnel submitted a total of 20 urine samples for laboratory analysis between February 1995 and May 1996. None of the sample results exceeded the lowest action level of 15 micrograms per liter of uranium. In addition, each sample batch included spiked blank samples for quality control purposes.

License Condition 11.4 states that the licensee shall obtain air samples and external radiation measurements semiannually in the ore crushing and yellowcake areas of the mill, and the air samples shall be analyzed for natural uranium and radon daughter concentrations. Through record review and interviews with personnel, the inspectors verified that the samples and measurements had been obtained at appropriate intervals, and the exposures were assessed as required.

Natural uranium concentrations based on area air samples ranged from less than 1.0 to 1.24 percent of the derived air concentration (DAC) limit listed in 10 CFR 20, Appendix B. Radon daughter concentrations, determined using a modified Kusnetz method, ranged from 0.001 to 0.031 Working Levels. External radiation exposure rates ranged from 9-800 μ R/hr. With the exception of the roller room, fixed and removable contamination levels in the mill were maintained below the guidelines used for unrestricted release of equipment. As a precaution, the roller room was controlled by lock and key. Readings taken by the inspectors during a tour of the facility confirmed the licensee's results.

Also. in accordance with industry standard practices, the licensee monitored individuals with breathing zone samplers. Natural uranium concentrations based on breathing zone air samples were less than 11 percent of the DAC limit.

Based on these results and the amount of time personnel spend in the mill. the licensee had determined that employees had received less than 10 percent of the occupational dose limit established in 10 CFR 20.1201 from either external or internal exposures.

b. Employee Training

License Condition 9.12 states that the licensee shall conduct and document initial and annual refresher training for all mill process or maintenance employees, and that the training shall include the topics listed in Section 5.3.1 of the March 1984 renewal application. The inspectors confirmed that the licensee had conducted annual training that included all employees. Although documentation did not clearly state that all of the required topics were covered, through interviews with the site staff, the inspectors concluded that the training was sufficient to cover current operations. In addition to this training, the licensee also conducted monthly radiation meetings which included topics such as the "as low as reasonably achievable" (ALARA) concept, new monitoring techniques, and NRC enforcement actions.

c. Equipment Calibrations

License Condition 10.9 requires the licensee to calibrate all radiation monitoring, sampling and detection equipment as recommended by the manufacturer or annually, whichever is more frequent. The licensee had established an instrument calibration program in which all instruments including survey meters, laboratory instruments, and air samplers were to be calibrated on a semi-annual basis. A precision orifice set, used to calibrate area air samplers, was being calibrated on an annual basis.

All calibrations were conducted by contract facilities except for the calibration of the area air samplers. Licensee personnel calibrated these components in accordance with standard procedures. The inspectors verified the implementation of this program by cross-checking usage dates indicated on survey records with calibration certificates. For survey instruments, the inspectors also noted that constancy tests had been conducted each day of use.

The only item of noncompliance noted was the licensee's failure to document the results of calibrations that had been conducted for the area air samplers. License Condition 11.1 states in part that the results of calibration of equipment shall be documented. With the exception of the calibration conducted on October 20, 1995, the licensee had not documented any area air sampler calibrations since the last NRC inspection. The licensee's failure to document all air sampler calibrations was identified as a violation of License Condition 11.1 (40-8584/9601-01). This failure constitutes a violation of minor significance and is being treated as a Non-Cited Violation, consistent with Section IV of the <u>NRC Enforcement Policy</u>. Although the licensee had performed the calibrations.

d. Radiation Work Permits

License Condition 9.21 requires, in part, that the licensee use radiation work permits (RWPs) for all operation or maintenance jobs where the potential for significant exposure to radioactive material exists and for which no standard operating procedure exists. The licensee appeared to have not conducted any operations which would have required RWPs. The inspectors verified this during interviews with licensee personnel and during a tour of the facility. However, the inspectors did review the last RWP, issued on April 14, 1993, and verified that all of the information required by License Condition 9.21 was present on that RWP.

e. Release of Equipment for Unrestricted Use

License Condition 9.7 requires that the release of equipment or packages from the restricted area be in accordance with the NRC report, "Guidelines for Decontamination of Facilities and Equipment Prior to Release for Unrestricted Use or Termination of Licenses for Byproduct or Source Materials," dated September 1984. Two items (two sheets of corrugated fiberglass) were the only components that had been released from the restricted area since the last inspection. After discussion with the personnel who had performed the surveys, the inspectors concluded that the surveys conducted to support the release of the fiberglass were in accordance with the licensee's procedure, and the levels of contamination recorded were well within the guidelines set forth in the NRC report.

f. Annual ALARA Audit

License Condition 11.7 requires the licensee to perform an annual ALARA audit and also states that the audit contain the information specified in Section 2.3.3 of NRC Regulatory Guide 8.31, "Information Relevant to Ensuring that Occupational Radiation Exposures at Uranium Mills Will Be As Low As Reasonably Achievable."

The inspectors reviewed the licensee's ALARA audit program to verify that the program was consistent with regulatory requirements and conditions of the license. The inspectors confirmed that the ALARA audit had been conducted as required. The annual report had been submitted to the NRC on March 7, 1996, as required by License Condition 12.4. The report contained all of the information discussed in Section 2.3.3 of the Regulatory Guide. The inspectors also noted that the licensee included discussion of the audit in one of their monthly radiation safety meetings.

4.3 Conclusions

The licensee had implemented a radiation protection program that met requirements established in 10 CFR Part 20 and the conditions of the license, with one minor exception. A non-cited violation was identified involving the licensee's failure to document all semi-annual calibrations of the air samplers. The licensee's personnel monitoring program appeared to confirm that occupational exposures were well below 10 percent of the Part 20 limits.

The licensee's procedure for the release of equipment to unrestricted areas appeared that it would be effective in preventing the release of contaminated items. Other program areas deemed satisfactory included the training, radiation work permit, and ALARA programs.

5 Radioactive Waste Management (88035) And Environmental Protection (88045)

5.1 Environmental Protection

a. Inspection Scope

The environmental monitoring program at the site was reviewed to assess the effectiveness of the licensee's program and to evaluate the effects, if any, of site activities on the local environment.

b. Observations and Findings

Environmental monitoring program requirements are identified in License Condition 11.5. During mill shutdown, air particulate, radon, and gamma monitoring are required to be conducted downwind of the tailings cell. Also, radon monitoring is required to be conducted at an upwind location. While the facility remained in the interim shutdown mode of operation, the licensee was not required to perform surface water, sediment, or soil sampling.

Air samples were continuously obtained at the environmental monitoring sample station 4A downwind of the site. Sample station 4A was visited during the site tour. The air sampler pump motor was inoperable at that time because of a burned-out motor. The air sampler was returned to service by the end of the inspection.

During 1995, the air sample filters were composited and analyzed quarterly for natural uranium, thorium-230, and radium-226. The laboratory results for 1995 indicate that all samples were less than one percent of the effluent limits established in 10 CFR 20, Appendix B.

According to License Condition 11.5, the environmental monitoring sample frequency and analysis shall be in accordance with Table C-3, "Environmental Monitoring Program." (This table was attached to the licensee's submittal dated July 2, 1984.) Table C-3 states that the licensee shall measure the air samples for natural uranium, thorium-230, radium-226, and lead-210. The licensee had not analyzed the air samples for their lead-210 content, contrary to the Table C-3 requirements.

When this discrepancy was pointed out to the licensee, they stated that License Condition 53, incorporated into License SUA-1340 during September 1983, did not require the air samples to be analyzed for lead-210. However, License Condition 53 was superseded by License Condition 11.5 in the early 1990's when the license was reformatted; therefore, the requirement to analyze the air samples for their lead-210 content was reinserted into the license.

A review of the licensee's records suggested that the licensee had not analyzed the environmental air samples for lead-210 since 1983 (the mill suspended operations in April 1983). The licensee's failure to analyze the air samples for all radionuclides listed in Table C-3 was identified as a violation of License Condition 11.5 (40-8584/9601-02). This failure constitutes a violation of minor significance and is being treated as a Non-Cited Violation, consistent with Section IV of the <u>NRC Enforcement Policy</u>. Although the licensee had failed to analyze the air samples for lead-210 during the past few years, the licensee had sampled the air for three other radionuclides. Since the natural uranium, radium-226, and thorium-230 levels in the air were less than 1 percent of the limits during 1995, the lead-210 concentrations in the samples would have most likely been extremely low also. In response to this inspection finding, the licensee planned to analyze air samples for lead-210 in the future.

The ambient gamma exposure rates were measured at sample station 4A and a control location. The 1995 data indicated that station 4A measured 220 millirems of exposure for the year, or 65 millirems above the control location.

Radon-222 samples were obtained at four locations, including station 4A downwind of the tailings cell, station 2 upwind of the tailings cell, the onsite security trailer, and at an employee's house. The highest radon measurement, 4.8 picocuries per liter (4.8 E-9 microcuries per milliliter), was obtained at sample station 4A upwind of the site during the fourth quarter of 1995. In addition, the upwind sample station measured higher levels of radon during three out of four quarters in 1995 than the downwind station. Regardless. all sample results were less than the 10 CFR 20, Appendix B, effluent concentration limit of 1.0 E-8 microcuries per milliliter for radon-222 with daughters removed.

The licensee is required by License Condition 12.1 to submit the results of all effluent and environmental monitoring to the NRC on a semiannual basis. Overall, the licensee's semiannual reports for 1995 were noted to be thorough and complete. All environmental monitoring samples required by the license (with the exception of lead-210 in the air particulate samples) were obtained and were documented in the reports.

Calibration of the sampler is required by License Condition 10.9. The air sampler is required by site procedures to be calibrated at least quarterly and following pump maintenance. The environmental air sampler calibration records were reviewed. Records indicated that the licensee had been performing the calibration check monthly or more frequently, depending on whether or not maintenance had been performed on the pump by the licensee. The flow orifice, used to calibrate the air sampler pump, had been calibration checked on an annual basis.

5.2 Groundwater Compliance Monitoring Program

a. <u>Inspection Scope</u>

The groundwater compliance monitoring program was reviewed to verify that the program was consistent with the requirements specified in the license.

b. Observations and Findings

A groundwater compliance monitoring program is required to be implemented by License Condition 11.10. The groundwater compliance program consists, in part, of sampling four point of compliance wells for a number of chemical constituents, maintaining several pumpback wells, and operating an enhanced evaporation system at the tailings cell. In summary, a review of the licensee's and laboratory's documentation revealed that the licensee had obtained all groundwater samples as required by the license.

The information provided in the semi-annual reports for 1995 indicated that groundwater cleanup had not yet attained the protection standards as evidenced at the four point-of-compliance wells. Parameters still above the standards included radium-226, radium-228, lead-210, natural uranium, and gross alpha. The licensee continues to operate the pumpback system in an attempt to further remediate the groundwater. In addition, the licensee submitted a license amendment request to the NRC in February 1996 to update the groundwater protection standards. This amendment request had not been approved by the NRC at the time of the inspection.

During a review of the original laboratory documentation, problems or inconsistencies were identified between the groundwater protection standards and the lower limits of detection (LLD) that were listed in License Condition 11.10. Using one monitoring well (TMW-16) as an

example, the LLD requirements for lead, molybdenum, nickel, and nitrate were higher on the laboratory analysis sheet than the required LLD specified in the license. Also, the laboratory's LLD was higher than the protection standard limits for molybdenum, nickel, and thallium. As an example, the laboratory's LLD for thallium was 0.015 milligrams per liter (mg/l), and the reported results for thallium was "less than 0.015 mg/l." However, the protection standard for thallium was 0.01 mg/l. Therefore, it was not clear if the standard was being met (thallium was less than 0.01 mg/l) or was not being met (thallium was between 0.011 and 0.015 mg/l).

Since other parameters were above their associated protection standards and since groundwater remediation would continue, the need to rectify this problem was not immediate. The licensee also pointed out that their outstanding license amendment request was to raise or delete the values of many of the protection standards, such as for thallium:

A conference call was held with the licensee after the conclusion of the inspection. During this call, the licensee explained that the errors in the laboratory documentation originated at the contract laboratory. The laboratory did not consistently use the licensee's requested LLDs. In response to this finding, the licensee requested that the laboratory provide them with updated documentation. The licensee stated during the call that updated documentation had been received and that additional updated documentation would be forthcoming in the near future. Reanalysis of samples, if necessary and if possible, was one possible alternative that would be explored by the licensee. The licensee stated that the documentation discrepancies would be corrected in a timely manner. An Inspection Followup Item (40-8584/9601-03) is being issued to ensure that the corrective actions have been effectively implemented.

In accordance with License Condition 12.7, a groundwater corrective action program review is required to be submitted to the NRC on an annual basis. The licensee's annual corrective action program report dated February 5, 1996, was briefly reviewed during the inspection. Overall, the annual report discussed the progress made toward attaining the groundwater protection standards.

According to the information provided in the report, the groundwater pumpback system extracted 18,149,000 gallons of water from the area in the vicinity of the site. The amount of groundwater recovered was down from the 1994 level of 18.5 million gallons. License Condition 10.7.A limits the amount of liquid added to the tailings impoundment to 25 million gallons per year.

5.3 Annual Land Use Survey

License Condition 11.8 stipulates that a land use survey be performed annually. The land use survey is required to be submitted to the NRC on an annual basis by License Condition 12.3. The most recent annual land

use survey, dated February 1, 1996, was submitted to the NRC on February 9, 1996. The report stated that there were no changes in land use within a five mile radius of the site. A spot check was performed to confirm the accuracy of the report. No discrepancies were identified during the spot check.

5.4 Conclusions

A review of the annual land use survey, groundwater, and environmental monitoring programs indicated that the licensee was in compliance with license and regulatory requirements, with one exception. A non-cited violation was identified involving the licensee's failure to analyze environmental air samples for the lead-210 content.

All reports related to the groundwater and environmental monitoring programs had been submitted to the NRC as required. The reports were thorough and technically accurate. A review of the reports and the original laboratory documentation revealed that the site had not released significant amounts of radioactive materials to the environment during 1995.

One problem area was identified involving the LLDs that were reported on the contract laboratory's documentation. The licensee committed to implement corrective actions in a timely manner to resolve the LLD discrepancies.

6 EXIT MEETING SUMMARY

The inspectors presented the inspection results to the representatives of the licensee at the conclusion of the inspection on July 31, 1996. Licensee representatives acknowledged the findings as presented.

A conference call was held with the licensee on August 15, 1996. The purpose of the call was to allow the licensee to provide an explanation of the reasons for the LLD discrepancies.

ATTACHMENT 1

PARTIAL LIST OF PERSONS CONTACTED

Licensee

- O. Paulson, Facility Supervisor
 G. Worman, Senior Health, Safety and Environmental Quality Representative and Radiation Safety Officer

ITEMS OPENED, CLOSED AND DISCUSSED

Opened

40-8584/9601-01	NCV	Failure to document all air sampler calibrations.
40-8584/9601-02	NCV	Failure to sample environmental air samples for lead-210 content.
40-8584/9601-03	IFI	Ensure implementation of corrective actions taken is appropriate to resolve the LLD discrepancies.
Closed		

LIUSEU

40-8584/9601-01	NCV	Failure to document all air sampler calibrations.
40-8584/9601-02	NCV	Failure to sample environmental air samples for lead-210 content.

Discussed

None

LIST OF ACRONYMS USED

ALARA	As Low As Reasonably Achievable
DAC	Derived Air Concentrations
LLD	Lower Limit of Detection
µR/hr	Microroentgen per Hour
RWP	Radiation Work Permit
SOP	Standard Operating Procedure

PHOTOGRAPHS TAKEN AT THE SWEETWATER URANIUM FACILITY



Photograph 1 - Entrance sign to the Sweetwater Uranium Mill.



Photograph 2 - The Sweetwater Uranium Mill (right) and support buildings.



Photograph 3 - The Sweetwater Pit, a former open pit mine.



Photograph 4 -

The tailings impoundment.





UNITED STATES

REGIONIV

611 RYAN PLAZA DRIVE, SUITE 400 ARLINGTON, TEXAS 73011-8064 July 31, 1997

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1.4.8.

Mr. Oscar Paulson Kennecott Uranium Company P.O. Box 1500 Rawlins, Wyoming 82301

SUBJECT: NRC INSPECTION REPORT 40-8584/97-01

Dear Mr. Paulson:

On July 9, 1997, the NRC completed an inspection of your Sweetwater Uranium Facility. The enclosed report presents the results of that inspection. The inspection disclosed that you have continued to maintain the mill in a standby status, although plans are underway to resume milling operations in the future. No violations or deviations were cited; therefore, no response to this letter is required.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be placed in the NRC Public Document Room.

Should you have any questions concerning this inspection, please contact Mr. Robert Evans at (817) 860-8234 or Mr. Charles L. Cain at (817) 860-8186.

Sincerely,

P^{CC}Ross A. Scarano, Director Division of Nuclear Materials Safety

Docket No.: 40-8584 License No.: SUA-1350

Enclosure: NRC Inspection Report 40-8584/97-01

cc w/enclosure: Mr. Michael H. Gibson Kennecott Uranium Company Caller Box 3009 Gillette, Wyoming 82717

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Kennecott Uranium Company

Mr. David Finley Wyoming Department of Environmental Quality Solid and Hazardous Waste Division 122 W. 25th Street Cheyenne, Wyoming 82002

Land Quality Division Wyoming Department of Environmental Quality 122 W. 25th Street Cheyenne, Wyoming 82002

Mr. Pat Mackin, Assistant Director Systems Engineering & Integration Center for Nuclear Waste Regulatory Analyses 6220 Culebra Road San Antonio, Texas 78238-5166

Wyoming Radiation Control Program Director

-2-

ENCLOSURE

U.S. NUCLEAR REGULATORY COMMISSION REGION IV

Docket No.:	40-8584
License No.:	SUA-1350
Report No.:	40-8584/97-01
Licensee:	Kennecott Uranium Company
Facility:	Sweetwater Uranium Facility
Location:	Sweetwater County, Wyoming
Dates:	July 8-9, 1997
Inspector:	Robert J. Evans, P.E., Health Physicist Nuclear Materials Licensing Branch Division of Nuclear Materials Safety
Approved By:	Charles L. Cain, Chief Nuclear Materials Licensing Branch Division of Nuclear Materials Safety
Attachments:	 Supplemental Inspection Information Photographs Taken at the Sweetwater Uranium Facility

EXECUTIVE SUMMARY

Sweetwater Uranium Facility NRC Inspection Report 40-8584/97-01

This inspection included a review of site status; management organization and controls; site operations; and the licensee's radiation protection, waste management and environmental protection programs. The facility continues to be in a standby status as it has for several years.

Management Organization and Controls

- The licensee's organizational structure was consistent with the conditions of the license, and it appeared that adequate oversight had been provided for site activities (Section 2).
- Procedures had been established at the site. The procedures were deemed adequate for the work in progress (Section 2).

Operations Review

• Site activities appeared to have been conducted in accordance with the applicable license and regulatory requirements. The mill and other onsite structures appeared to have been maintained in good condition. Site fences were in good condition, and perimeter postings were appropriate. No significant health or safety concern was identified during the site tours (Section 3).

Radiation Protection

- The licensee had implemented a radiation protection program that met the requirements established in 10 CFR Part 20 and the license (Section 4).
- Occupational exposures at the site during 1996 appeared to be small fractions of the limits established in 10 CFR Part 20 (Section 4).

Radioactive Waste Management/Environmental Protection

 A review of the licensee's environmental and groundwater monitoring program, and the annual land use survey, indicated that the licensee was in compliance with license requirements (Section 5). Radioactive Waste Management/Environmental Protection, continued

• All reports related to the groundwater and environmental monitoring programs had been submitted to the NRC as required, and the reports were thorough and technically accurate. A review of the reports and the original laboratory documentation revealed that releases of radioactive materials to the environment were within regulatory limits during 1996 (Section 5).

Report Details

1 Site Status

The Sweetwater Uranium Facility was constructed in 1979-1980 by the Minerals Exploration Company. The facility operated between 1981-1983. At the time of the inspection, the facility was in standby. Structures in place at the site included the uranium mill, maintenance shop, administrative building, tire/lube building, and other miscellaneous structures. A 60-acre tailings impoundment was also located at the site. Roughly two and a half million tons of tailings were being stored in the impoundment.

The licensee plans to restart the mill in the next several years. In anticipation of the eventual startup of the mill, the licensee submitted a performance-based license request to the NRC on June 11, 1997. In addition, the licensee was in the process of submitting a final tailings design to the NRC for review and approval. A new tailings impoundment and evaporation pond will have to be constructed before the mill can be restarted.

Since the previous inspection, the licensee or its contractors have performed geotechnical drilling, wildlife/archeological studies, surveys utilizing a global positioning system, and generation of a terrain model. All of this work was related to the preparation of the mill for eventual operation. Routine actions completed by the licensee during the previous year included general maintenance and preservation work, groundwater and environmental monitoring oversight, and other license compliance-related activities. Six tails monitoring pumpback wells were in service during 1996, pumping at a combined average flowrate of 35.3 gallons per minute. The tailings impoundment sprays and evaporation system were placed into service for the season in early May 1996. The system was secured for the winter in early December 1996. The system was restarted during March 1997 and was in service during the inspection.

Tank and roof repairs were in progress during the inspection. Also, the licensee was installing secondary containment devices for areas that contained petroleum products. Minor upgrades were being performed on the fire and domestic water systems. Furthermore, the licensee had received and was storing contaminated material on site. This material had been obtained from another company and may be used in the plant at a later date. The licensee does not plan to dispose of this material in the tailings impoundment.

In other areas, the licensee was in the process of developing the Jackpot Mine, a mine in the Crooks Gap Mining District. The Jackpot Mine will be the primary source of ore when the mill is restarted. Mine development work began in December 1996, and construction of the mine shaft decline began in June 1997. This work was not within the scope of the NRC license but is necessary for future operation of the mill.

2 Management Organization and Controls (88005)

2.1 Inspection Scope

The organizational structure was reviewed to ensure that the licensee had established an organization with defined responsibilities and functions. The site standard operating procedures were reviewed, and the licensee's implementation of these procedures was assessed to evaluate the effectiveness of the licensee's control of site activities.

2.2 Observations and Findings

a. Management Organization

Site staffing requirements are established in License Condition 9.15. At the time of the inspection, the site staffing consisted of four employees, including the facility supervisor, senior facility technician, mill foreman, and office manager. In addition, one contract security guard provided oversight of the facility during non-standard work hours.

On November 1, 1996, the licensee formally requested NRC permission to reassign the duties and responsibilities of the radiation safety officer (RSO), and alternate RSO, to new individuals. This change was necessary because the former RSO left the company during the Fall of 1996. The NRC approved the licensee's request on December 23, 1996. The duties of the RSO were subsequently assigned to the facility supervisor, while the duties of the alternate RSO were assigned to the mill foreman.

On April 14, 1997, the licensee submitted a revised organization chart to the NRC for review and approval. The licensee requested permission to change the reporting relationship of the facility supervisor from the director of planning and engineering services to the technical services director. The revised organizational structure did not affect the onsite staff. This request was approved by the NRC and was incorporated into Condition 9.15 of the license. At the time of the inspection, the site organizational staffing was in accordance with the requirements of the license and the commitments made in the licensee's letter dated April 14, 1997.

b. Management Controls

License Condition 9.20 states that standard operating procedures (SOP) shall be established and implemented for all operational process activities involving radioactive materials that are handled, processed, or stored. Additionally, SOPs shall be established and implemented for all aspects of the radiation safety and environmental monitoring programs. Overall, site procedures had been established and were adequate for the work in progress at the site. In addition, the site procedures had been updated for the eventual resumption of mill operations. Records existed that indicated that the site procedures had been reviewed on an annual basis.

2.3 <u>Conclusions</u>

The licensee's site organizational structure was consistent with the requirements of the license, and it appeared that adequate oversight had been provided for the current mode of plant operations. Procedures had been established at the site. These procedures were adequately documented and were appropriate for the amount of work in progress at the site.

3 Operations Review (88020)

3.1 Inspection Scope

A facility tour was performed to verify that site activities were being conducted in accordance with applicable regulations and the conditions of the license and to ensure that operational controls were adequate to protect the health and safety of the workers and members of the general public.

3.2 Observations and Findings

During the plant tour, site buildings, fences, gates, and operating equipment were observed. Site fences were in good condition and were properly posted in accordance with License Condition 9.6. Site structures and mill components appeared to have been properly preserved and maintained. Housekeeping was adequate in all structures. Around 20,000 pounds of material containing U_3O_8 was being stored in 55-gallon drums, and in a tank, in the mill. The material was being maintained in a slurry form. Access to the material was controlled by the licensee.

In accordance with License Condition 9.3, the licensee is authorized to operate an ion exchange uranium recovery facility. The ion exchange equipment had not been operated since July 1994. The ion exchange equipment was being stored in the tire/lube building. Furthermore, contaminated material from another company was being stored inside of the licensee's restricted area. The equipment included fiberglass and steel tanks, pressure vessels, an air dryer, and other miscellaneous equipment. Some of this material will eventually be utilized by the licensee when the mill is restarted.

The inspector visited the tailings impoundment. The groundwater enhanced evaporation system was in service. The enhanced evaporation system consisted of a drip system and spray lines. A sufficient amount of freeboard existed between the top of the pond surface and the top of the pond embankments in compliance with the requirements of License Condition 10.4. License Condition 11.6 states that a weekly inspection of the tailings area shall be performed during the period of mill shutdown. The licensee produced records during the inspection documenting the performance of weekly inspections.

3.3 Conclusions

Site activities generally appeared to have been conducted in accordance with applicable license and regulatory requirements. Site fences were in good condition, and perimeter postings were appropriate. The mill and other site structures appeared to be in good condition. No significant health or safety hazards were identified.

4 Radiation Protection (83822)

4.1 Inspection Scope

The purpose of this portion of the inspection effort was to determine if the licensee's radiation protection program was in compliance with the requirements established in the license and 10 CFR Part 20 regulations.

4.2 Observations and Findings

a. Employee Exposures

To ensure that site workers had been properly monitored for potential exposures to radioactive materials, the licensee's internal and external monitoring programs were reviewed. The licensee's personnel monitoring program consisted of intermittent air sampling, surface contamination monitoring, and external radiation measurements. Also, the licensee performed bioassay sampling on a quarterly basis although they were not specifically required by the license to obtain these samples.

During 1996, site personnel submitted a total of 14 urine samples for laboratory analysis. An additional 21 samples were obtained during the first 5 months of 1997. The personnel tested included contract workers, but not the office manager, because this individual was not routinely exposed to radioactive materials. None of the sample results exceeded the lowest action level of 15 micrograms of uranium per liter of urine.

License Condition 11.4 states that the licensee shall obtain air samples and external radiation measurements semiannually in the ore crushing and yellowcake areas of the mill, and the air samples shall be analyzed for natural uranium and radon daughter concentrations. Through record reviews and interviews with personnel, the inspector verified that the airborne samples and gamma measurements had been obtained at the appropriate intervals.

The air sample results indicated that the natural uranium concentrations in the air remained at less than one percent of the derived air concentration (DAC) limit listed in 10 CFR Part 20, Appendix B. Radon daughter concentrations, determined using a modified Kusnetz method, remained below 0.018 Working Levels, or 5 percent or less of the DAC limit of 0.33 Working Levels. Also, in accordance with industry standard practices, the licensee monitored individuals with breathing zone samplers on a quarterly basis. The natural uranium concentrations in these samples were less than 23 percent of the DAC limit.

External radiation exposure rates were also measured by the licensee on a semiannual basis. The exposure rates varied from background levels up to 800 microroentgens per hour. There were no areas identified in the plant that met the definition of a radiation area (at or above 5000 microroentgens per hour). With the exception of the roller room, fixed and removable contamination levels in the mill were below the guideline values used for unrestricted release of equipment. As a precaution, the roller room was controlled by lock and key by the licensee.

Based on these sample results and the amount of time personnel spend in the mill, the licensee determined that site employees had received less than 10 percent of the occupational dose limit (5000 millirems) established in 10 CFR 20.1201 from either external or internal exposures.

A rough, conservative estimate of site doses was made by the inspector. The dose to the mill foreman was estimated to be around 200 millirems from all internal and external sources (most was from airborne sources). All other site workers had received less exposure than the mill foreman. In summary, the inspector confirmed the licensee's conclusion that site workers had received less than 10 percent of the occupational limit.

b. Employee Training

License Condition 9.12 states that the licensee shall conduct and document initial and annual refresher training for all mill process or maintenance employees and that the training shall include the topics listed in Section 5.3.1 of the March 1984 renewal application. The inspector confirmed that the licensee had conducted annual training to all employees. Formal training had been held on May 28, 1996, and on February 14, 1997. In addition to annual training, the licensee also conducted monthly radiation safety meetings which included current topics of interest.

c. Equipment Calibrations

License Condition 10.9 requires the licensee to calibrate all radiation monitoring, sampling and detection equipment as recommended by the manufacturer or annually, whichever is more frequent. The licensee had established an instrument calibration program in which all instruments including survey meters, laboratory

instruments, and air samplers were to be calibrated on a semi-annual basis. A precision orifice set, used to calibrate area air samplers, was being calibrated on an annual basis. A review of the licensee's records revealed that the instruments had been calibrated at the required frequencies since the last inspection.

During the previous inspection (documented in NRC Inspection Report 40-8584/09-01), a Non-Cited Violation was identified related to the licensee's failure to document all air sampler calibrations. Specifically, the high volume air sampler was being calibrated, but this calibration was not being adequately documented. During the current inspection, the licensee was noted to have performed and documented the calibration of the air sampler since the last inspection.

As documented in the most recent As Low As Reasonably Achievable (ALARA) report, the licensee self-identified the improper use of a breathing zone air sampler. The sampler was used in September and October 1996 to obtain several required samples although the calibration of the sampler had expired in August 1996. The licensee noted that these problems had occurred at about the same time that the former radiation safety officer left the site. Corrective actions taken included calibration of the instrument and obtaining additional air samples during December 1996 with a calibrated air sampler. The licensee's corrective actions were deemed appropriate for the circumstances.

d. Radiation Work Permits

License Condition 9.21 requires, in part, that the licensee use radiation work permits (RWPs) for all operation or maintenance jobs where the potential for significant exposure to radioactive material exists and for which no standard operating procedure exists. The licensee appeared to have not conducted any operations which would have required the use of RWPs during 1996 and 1997. The inspector verified this during interviews with licensee personnel and during a tour of the facility. The last RWP was issued in April 1993.

e. Release of Equipment for Unrestricted Use

License Condition 9.7 requires that the release of equipment or packages from the restricted area be in accordance with the NRC report, "Guidelines for Decontamination of Facilities and Equipment Prior to Release for Unrestricted Use or Termination of Licenses for Byproduct or Source Materials," dated September 1984. A review of the licensee's equipment release records did not identify any component that had been inappropriately released by the licensee during 1996.

f. Annual ALARA Audit

License Condition 11.7 requires the licensee to perform an annual ALARA audit. License Condition 12.4 states that the report shall be submitted to the NRC. The most current report, submitted to the NRC on February 12, 1997, was reviewed. The report was noted to be thorough and provided information that was relevant including analysis of trends.

4.3 Conclusions

The licensee had implemented a radiation protection program that met requirements established in 10 CFR Part 20 and the conditions of the license. The licensee's personnel monitoring program appeared to confirm that occupational exposures were well below 10 percent of the Part 20 limits. Other program areas deemed satisfactory included the training, equipment calibration, radiation work permit, and ALARA programs.

5 Radioactive Waste Management (88035) and Environmental Protection (88045)

5.1 Environmental Protection

a. Inspection Scope

The environmental monitoring program was reviewed to assess the effectiveness of the licensee's program and to evaluate the effects, if any, of site activities on the local environment.

b. Observations and Findings

Environmental monitoring program requirements are identified in License Condition 11.5. During mill shutdown, air particulate, radon, and gamma monitoring are required to be conducted downwind of the tailings cell. Also, radon monitoring is required at an upwind location. While the facility remained in the interim shutdown mode of operation, the licensee was not obligated to perform vegetation, sediment, or soil sampling.

An air sample was continuously obtained at the environmental monitoring sample station No. 4A located downwind of the site. During 1996, the air sample filters were composited and analyzed quarterly for natural uranium, thorium-230, lead-210 and radium-226. The laboratory results for 1996 indicate that all samples were less than two percent of the effluent concentration limits established in 10 CFR Part 20, Appendix B.

During the previous inspection (documented in NRC Inspection Report 40-8584/96-01), a Non-Cited Violation was identified related to the licensee's failure to sample the air particulate samples for lead-210 content. The licensee apparently discontinued this particular sample analysis during 1983. Following the previous NRC inspection, the licensee reanalyzed the filters for the first two quarters of 1996, and began analyzing subsequent filter samples for lead-210 content. The
licensee included the values for lead-210 in the semi-annual environmental monitoring report submitted to the NRC in February 1997 for the second half of 1996.

The ambient gamma exposure rates were measured at sample station No. 4A and a control location in the Administrative Building. The 1996 data indicated that station No. 4A measured 209 millirems for the year, or 71 millirems above the control location.

Radon-222 samples were obtained at two sample stations. The highest radon measurement, 4.1 picocuries per liter (41 percent of the 10 CFR Part 20, Appendix B, effluent concentration limit), was obtained at sample Station 2 upwind of the site during the third quarter of 1996. The downwind station measured 3.1 picocuries per liter (31 percent of the limit) during the same time frame. All other 1996 sample results varied between 19 to 34 percent of the 10 CFR Part 20, Appendix B, effluent concentration limit for radon-222 with daughters removed.

The licensee is required by License Condition 12.1 to submit the results of all effluent and environmental monitoring to the NRC on a semiannual basis. Overall, the licensee's semiannual reports for 1995 were noted to be thorough and complete. All environmental monitoring samples required by the license had been obtained and were documented in the reports.

Calibration of the air particulate sampler is required by License Condition 10.9. The air sampler is required by site procedures to be calibrated at least quarterly and following pump maintenance. The environmental air sampler calibration records were reviewed. The records for 1996 indicated that the licensee had been performing the calibration check as required, or more frequently, depending on whether or not maintenance had been performed on the pump by the licensee. The flow orifice, used to calibrate the air sampler pump, had been calibration checked on an annual basis.

A comparison of the 1996 environmental monitoring data to the 1995 data was performed. The sample results for 1996 were noted to be comparable to the 1995 sample results. No adverse trends were identified in the environmental monitoring program.

5.2 Groundwater Compliance Monitoring Program

a. Inspection Scope

The groundwater compliance monitoring program was reviewed to verify that the program was consistent with the requirements specified in the license.

b. Observations and Findings

A groundwater compliance monitoring program is required by License Condition 11.10. The groundwater compliance program consists, in part, of sampling 42 tailings monitoring wells (including four point of compliance wells) for a number of chemical and radiological constituents, running six pumpback wells to extract groundwater, discharging the fluid into the tailings impoundment, and operating an enhanced evaporation system to dispose of the groundwater in the tailings impoundment. In summary, the licensee had obtained the samples and operated the pumps and evaporation system as required by the license during 1996.

The licensee's groundwater program data were reviewed, including the reports previously submitted to the NRC as well as the original laboratory documentation. The information provided in the semi-annual reports for 1996 indicated that groundwater cleanup had not yet attained the protection standards at the four point-of-compliance wells. Parameters still above the standards included radium-226, radium-228, lead-210, natural uranium, and gross alpha. The licensee continues to operate the pumpback system in an attempt to further remediate the groundwater.

The licensee submitted a license amendment request to the NRC in February 1996 to update the groundwater protection standard limits. For example, the licensee requested that seven chemical constituents be dropped from the protection standards list. This amendment request had not been approved by the NRC at the time of the inspection.

In accordance with License Condition 12.7, a groundwater corrective action program review is required to be submitted to the NRC on an annual basis. The licensee's annual corrective action program report dated February 11, 1997, was briefly reviewed during the inspection. Overall, the annual report discussed the progress made toward attaining the groundwater protection standards.

According to the information provided in the report, the groundwater pumpback system extracted about 18.6 million gallons of fluid from the area in the vicinity of the site during 1996. This volume was up from the 1995 season when 18.1 million gallons of water was collected. The increase was attributed to the licensee's program of cleaning/chlorination of the pumpback wells. The 1996 volume was comparable to the 1994 volume of roughly 18.5 million gallons. License Condition 10.7.A limits the amount of liquid added to the tailings impoundment to 25 million gallons per year.

5.3 Annual Land Use Survey

License Condition 11.8 stipulates that a land use survey be performed annually. The land use survey is required to be submitted to the NRC on an annual basis by License Condition 12.3. The most recent annual land use survey, dated February 6, 1997, was reviewed. The report stated that there were no changes in land use within a 5-mile radius of the site. A spot check was performed to confirm the accuracy of the report. No discrepancies were identified during the spot check.

5.4 Decommissioning Recordkeeping

During the inspection, the requirements of 10 CFR 40.36, "Financial Assurance and Recordkeeping for Decommissioning," was discussed with the licensee. This regulation was made effective during October 1993, and a copy of the <u>Federal Register</u> notice announcing this regulation was provided to the licensee. The licensee has developed a stand-alone file for decommissioning records. Since the plant has been in a standby status since October 1993, no new records of unusual occurrences or spills have been recently added to the file. A windblown material cleanup report will be submitted to the NRC in the near future. The licensee stated that this report will eventually be added to the decommissioning files.

5.5 Conclusions

A review of the annual land use survey, groundwater, and environmental monitoring programs indicated that the licensee was in compliance with license and regulatory requirements. All reports related to the groundwater and environmental monitoring programs had been submitted to the NRC as required. The reports were thorough and technically accurate. A review of the reports and the original laboratory documentation revealed that the site had not released significant amounts of radioactive materials to the environment during 1996.

6 Followup (92701)

6.1 (Closed) Inspection Followup Item 40-8584/9601-03: Resolution of Lower Limits of Detection Discrepancies.

During the previous inspection, discrepancies were identified with the licensee's lower limits of detection (LLD) used for analysis of several chemical constituents in the groundwater. For example, the LLD values used were higher on the laboratory analysis sheets for lead, molybdenum, nickel, and nitrate than was specified in the license. The cause of the problem was most likely attributed to the contract laboratory's failure to adhere to the LLD requirements that had been previously established by the licensee.

During the current inspection, a representative laboratory analysis sheet was reviewed in detail, the January 1997 groundwater sample results for tailings monitoring well No. TMW-16. All LLD discrepancies had been resolved but two, the thallium and nitrate LLDs. By letter dated March 13, 1997, the laboratory informed the licensee that they would lower their LLD for thallium to agree with the license requirements. The laboratory began groundwater sampling at the new, lower LLD value during March 1997. The discrepancy with the nitrate LLD was identified by the licensee as an error in the license. In response, the licensee submitted a license amendment request to the NRC to revise the LLD to a value recommended by the contract laboratory. As of the end of this inspection period, the NRC had not formally approved the change in the nitrate LLD.

7 Exit Meeting Summary

The inspector presented the inspection results to the representatives of the licensee at the conclusion of the inspection on July 9, 1997. Licensee representatives acknowledged the findings as presented. The licensee did not identify any information reviewed during the inspection as proprietary information.

Attachment 1

PARTIAL LIST OF PERSONS CONTACTED

<u>Licensee</u>

F. Craft, Vice President, Operations, Yellowstone Fuels, Inc.

G. Dooley, Vice President, Milling, Plateau Resources, Ltd.

G. Palochak, Mill Shift Foreman/Alternate Radiation Safety Officer

O. Paulson, Facility Supervisor/Radiation Safety Officer

ITEMS OPENED, CLOSED AND DISCUSSED

<u>Opened</u>		
None		
<u>Closed</u>		

40-8584/9601-03 IFI Ensure implementation of corrective actions taken is appropriate to resolve the LLD discrepancies.

Discussed

None

LIST OF ACRONYMS USED

ALARA	As	Low	/ As	Reason	abl	уA	chie	vab	le
·	-			~					

DAC Derived Air Concentrations

LLD Lower Limit of Detection

RSO Radiation Safety Officer

RWP Radiation Work Permit

SOP Standard Operating Procedure

Attachment 2 PHOTOGRAPHS TAKEN AT THE SWEETWATER URANIUM FACILITY



Photo 1 - The Sweetwater Uranium Mill (right) and support buildings.



Photo 2 - Building housing the uranium milling equipment.



Photo 3 - The tailings impoundment, looking north.



Photo 4 - The tailings impoundment, looking east.

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Photo 5 - The tailings impoundment, as seen from the county road.



UNITED STATES

REGION IV 611 RYAN PLAZA DRIVE, SUITE 400 ARLINGTON, TEXAS 76011-8064 August 14, 1998



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Mr. Oscar Paulson Kennecott Uranium Company P.O. Box 1500 Rawlins, Wyoming 82301

SUBJECT: NRC INSPECTION REPORT 40-8584/98-01

Dear Mr. Paulson:

On July 22, 1998, the NRC completed an inspection of your Sweetwater Uranium Facility. The enclosed report presents the results of that inspection. The inspection disclosed that you have continued to maintain the mill in a standby status. No violations or deviations were cited; therefore, no response to this letter is required.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be placed in the NRC Public Document Room.

Should you have any questions concerning this inspection, please contact Mr. Louis C. Carson II at (817) 860-8221 or Dr: D. Blair Spitzberg at (817) 860-8191.

Sincerely,

Wincent Verott for DBS

//Dr. D. Blair Spitzberg, Ph.D., Chief Fuel Cycle and Decommissioning Branch Division of Nuclear Materials Safety

Docket No.: 40-8584 License No.: SUA-1350

Enclosure: NRC Inspection Report 40-8584/98-01

cc w/enclosure: Mr. Michael H. Gibson Kennecott Uranium Company Caller Box 3009 Gillette, Wyoming 82717

Kennecott Uranium Company

Mr. David Finley Wyoming Department of Environmental Quality Solid and Hazardous Waste Division 122 W. 25th Street Cheyenne, Wyoming 82002

Mr. Mark Moxley District II Supervisor Land Quality Division Wyoming Department of Environmental Quality 250 Lincoln Street Landers, Wyoming 82520

Mr. Pat Mackin, Assistant Director Systems Engineering & Integration Center for Nuclear Waste Regulatory Analyses 6220 Culebra Road San Antonio, Texas 78238-5166

Wyoming Radiation Control Program Director

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ENCLOSURE

U.S. NUCLEAR REGULATORY COMMISSION REGION IV

Docket No.:	40-8584
License No.:	SUA-1350
Report No.:	40-8584/98-01
Licensee:	Kennecott Uranium Company
Facility:	Sweetwater Uranium Facility
Location:	Sweetwater County, Wyoming
Dates:	July 21-22, 1998
Inspector:	Louis C. Carson II, Health Physicist Fuel Cycle and Decommissioning Branch Division of Nuclear Materials Safety
Approved By:	Dr. D. Blair Spitzberg, Ph.D.,Chief Fuel Cycle and Decommissioning Branch Division of Nuclear Materials Safety
Attachments:	Supplemental Inspection Information

EXECUTIVE SUMMARY

Sweetwater Uranium Facility NRC Inspection Report 40-8584/98-01

This inspection included a review of site status; management organization and controls; site operations; and the licensee's radiation protection, waste management and environmental protection programs. The facility continues to be in a standby status as it has been for 15 years.

Management Organization and Controls

• The licensee's organization structure was consistent with the conditions of the license. Adequate oversight had been provided for site activities. Procedures were deemed adequate for the work in progress. The licensee had reviewed and appropriately responded to NRC Information Notice 96-70 (Section 2).

Operations Review and Radioactive Waste Management

 Site activities had been conducted in accordance with the applicable license and regulatory requirements. The mill and other onsite structures were maintained in good condition. Site fences were in good condition. Perimeter postings were appropriate. No significant health or safety concerns were identified during the site tours (Section 3).

Radiation Protection

 The licensee had implemented a radiation protection program as required by 10 CFR Part 20 and the license. Occupational exposures during 1997 and 1998 were below the limits established in 10 CFR Part 20 (Section 4).

Environmental Protection

• The licensee had conducted the environmental and groundwater monitoring programs and the annual land use survey in compliance with license requirements. All reports related to the groundwater and environmental monitoring programs had been submitted to the NRC as required. The reports were thorough and technically accurate. Laboratory documentation demonstrated that releases of radioactive materials to the environment were within regulatory limits in 1997 and during 1998 (Section 5).

Report Details

1 Site Status

The Sweetwater Uranium Facility was built by the Minerals Exploration Company in 1980 and operated until 1983 when the facility was shutdown and placed in a standby mode. Structures in place at the site included the uranium mill, maintenance shop, administrative building, and other miscellaneous structures. A 60-acre tailings impoundment was also located at the site, with approximately 2 ½ million tons of tailings being stored.

Site activities included general maintenance and preservation work, groundwater and environmental monitoring oversight, and other license related activities

2 Management Organization and Controls (88005)

2.1 Inspection Scope

The organization structure was reviewed to ensure that the licensee had established an organization with defined responsibilities and functions. The site standard operating procedures (SOP) were reviewed. The licensee's implementation of these procedures was assessed to evaluate the effectiveness of the licensee's control of site activities.

2.2 Observations and Findings

a. Management Organization

Site staffing requirements are established in License Condition 9.15. Site staffing consisted of four employees, including the facility supervisor, senior facility technician, mill foreman, and office manager. In addition, one contract security guard provided oversight of the facility during non-standard work hours. The site organization and staff were in accordance with the requirements of License Condition 9.15.

b. Management Controls

License Condition 9.20 requires SOPs to be established and implemented for all operational process activities involving radioactive materials that are handled, processed, or stored. SOPs were also required for all aspects of the radiation safety and environmental monitoring programs. Overall, site procedures had been established and were adequate for the work in progress at the site. SOPs had been updated and records indicated that the procedures had been reviewed on an annual basis.

c. Year 2000 Computer Software Issue

The inspector evaluated the effect of the Year 2000 computer issue on NRC-related computer databases and software. The inspector found that the licensee was aware of

the issue and had received NRC Information Notice 96-70, "Year 2000 Effect Computer System Software." The licensee had determined that the Year 2000 computer issue had no impact on NRC-related activities at the site.

2.3 Conclusions

The licensee's organization structure was consistent with the conditions of the license. Adequate oversight had been provided for site activities. Procedures were deemed adequate for the work in progress. The licensee had reviewed and appropriately responded to NRC Information Notice 96-70.

3 Operations Review (88020) and Radioactive Waste Management (88035)

3.1 Inspection Scope

A facility tour was performed to verify that site activities were being conducted in accordance with applicable regulations and the conditions of the license and to ensure that operational controls were adequate to protect the health and safety of the workers and members of the general public.

3.2 Observations and Findings

During the plant tour, site buildings, fences, gates, and operating equipment were observed. Site fences were in good condition and were properly posted in accordance with License Condition 9.6. Site structures and mill components appeared to have been properly preserved and maintained. Around 20,000 pounds of material containing U_3O_8 was being stored in 55-gallon drums and in a tank in the mill. The material was being maintained in a slurry form. Access to the material was controlled by the licensee.

The inspector visited the tailings impoundment and noted that the groundwater enhanced evaporation system was in service. The enhanced evaporation system consisted of a drip system and spray lines. The inspector observed that a sufficient amount of freeboard existed between the top of the pond surface and the top of the pond embankments in compliance with the requirements of License Condition 10.4.

Six tails monitoring pumpback wells were in service in 1997 and during 1998. The tailings impoundment sprays and evaporation system were placed into service May 1997 and secured for the winter in early December 1997. The system was restarted in the spring of 1998 and was in service during the inspection.

License Condition 11.6 requires that a weekly inspection of the tailings area be performed during the period of mill shutdown. The licensee produced records which documented the performance of weekly inspections.

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3.3 Conclusions

Site activities had been conducted in accordance with the applicable license and regulatory requirements. The mill and other onsite structures were maintained in good condition. Site fences were in good condition. Perimeter postings were appropriate. No significant health or safety concerns were identified during the site tours.

4 Radiation Protection (83822)

4.1 Inspection Scope

The licensee's radiation protection program was reviewed for compliance with the requirements established in the license and 10 CFR Part 20 regulations.

4.2 Observations and Findings

a. Employee Exposures

To ensure that site workers had been properly monitored for potential exposures to radioactive materials, the licensee's internal and external monitoring programs were reviewed. The licensee's personnel monitoring program consisted of Intermittent air sampling, surface contamination monitoring, and external radiation measurements. The licensee performed bioassay sampling on a quarterly basis.

During 1997, site personnel submitted urine samples for laboratory analysis. Additional samples were obtained during the first half of 1998. Personnel tested included contract workers and individuals who were potentially exposed to radioactive materials. No sample results exceeded the lowest action level of 15 micrograms of uranium per liter of urine.

License Condition 11.4 requires the licensee to obtain air samples and external radiation measurements semiannually in the ore crushing and yellowcake areas of the mill. Air samples were to be analyzed for natural uranium and radon daughter concentrations. Record reviews and interviews with personnel confirmed that the airborne samples and gamma measurements had been obtained at the appropriate intervals.

The air sample results indicated that the natural uranium concentrations in the air remained less than one percent of the derived air concentration (DAC) limit listed in 10 CFR Part 20, Appendix B. Radon daughter concentrations remained below 0.018 working levels, or 5 percent or less of the DAC limit of 0.33 working levels. The licensee monitored individuals with breathing zone samplers on a quarterly basis. The natural uranium concentrations in these samples were less than 10 percent of the DAC limit.

External radiation exposure rates were measured by the licensee on a semiannual basis. The exposure rates varied from background levels up to 0.8 millirem per hour.

There were no areas in the plant that met the 10 CFR 20.1003 definition of a radiation area (i.e. 5 millirem per hour).

Based on these sample results and the amount of time personnel spent in the mill, the licensee determined that site employees had received less than 10 percent of the occupational dose limit (5000 millirem) established in 10 CFR 20.1201 from either external or internal exposures.

b. Employee Training

License Condition 9.12 requires the licensee to conduct initial and annual refresher training for all mill process or maintenance employees. The training was required to include the topics listed in Section 5.3.1 of the March 1984 renewal application. License Condition 11.1 requires the licensee to document all employee radiation safety training. The inspector confirmed that the licensee had conducted and documented annual training to all employees. Formal training had been held on February 19, 1998, for 15 employees. The radiation safety officer (RSO) had completed the biennial RSO retraining on November 13, 1997. The inspector determined that the licensee was in compliance with License Conditions 9.12 and 11.1.

c. Equipment Calibrations

License Condition 10.9 requires the licensee to calibrate all radiation monitoring, sampling and detection equipment as recommended by the manufacturer or annually, whichever is more frequent. The licensee had established a semiannual instrument calibration program for all instruments including survey meters, laboratory instruments, and air samplers. A precision orifice set, used to calibrate area air samplers, was being calibrated on an annual basis. A review of the licensee's records revealed that the instruments had been calibrated at the required intervals.

d. Release of Equipment for Unrestricted Use

License Condition 9.7 requires that the release of equipment or packages from the restricted area be in accordance with the NRC report, "Guidelines for Decontamination of Facilities and Equipment Prior to Release for Unrestricted Use or Termination of Licenses for Byproduct or Source Materials," dated September 1984. A review of the licensee's equipment release records indicated all components had been appropriately released by the licensee during 1997.

e. <u>Annual As Low As is Reasonably Achievable (ALARA) Audit</u>

License Condition 11.7 requires the licensee to perform an annual ALARA audit. License Condition 12.4 requires the report to be submitted to the NRC. The most current report, submitted to the NRC on February 12, 1997, was reviewed. The report was thorough and provided relevant information including analysis of trends.

4.3 Conclusions

The licensee had implemented a radiation protection program as required by 10 CFR Part 20 and the license. Occupational exposures during 1997 and 1998 were below the limits established in 10 CFR Part 20. Other program areas deemed satisfactory included the training, equipment calibration, radiation work permit, and ALARA programs.

5 Environmental Protection (88045)

5.1 Inspection Scope

The environmental monitoring program was reviewed to assess the effectiveness of the licensee's program and to evaluate the effects, if any, of site activities on the local environment. The groundwater compliance monitoring program was reviewed to verify that the program was consistent with the requirements specified in the license.

5.2. Observations and Findings

a. Environmental Protection

License Condition 12.1 requires the licensee to submit the results of all effluent and environmental monitoring to the NRC on a semiannual basis. Environmental monitoring program requirements are identified in License Condition 11.5. During mill shutdown, air particulate, radon, and gamma monitoring are required to be conducted downwind of the tailings cell. Also, radon monitoring is required at an upwind location.

The inspector reviewed the licensee's 1997 semiannual effluent reports dated August 15, 1997, and February 23, 1998. The licensee's semiannual reports for 1997 were thorough and complete. All environmental monitoring samples required by the license had been obtained and results were documented in the reports. The inspector noted that the licensee maintained a color-coded chart and computer database for tracking when specific environmental monitoring sample station No. 4A located downwind of the site. During 1997, the air sample filters were composited and analyzed quarterly for natural uranium, thorium-230, lead-210 and radium-226. Laboratory results for 1997 indicate that all samples were less than two percent of the effluent concentration limits established in 10 CFR Part 20, Appendix B.

Ambient gamma exposure rates were measured at Sample Station No. 4A and a control location in the administrative building. Data collected in 1997 indicated that Station No. 4A measured less than background for the year.

Radon-222 samples were obtained at two sample stations. The highest radon measurement in 1997 was obtained at Sample Station No. 2 upwind of the site. The sample measured 3.9 picocurles per liter which was 40 percent of the 10 CFR Part 20,

Appendix B, effluent concentration limit. Other radon sample results measured 20 to 35 percent of the 10 CFR Part 20, Appendix B, effluent concentration limit for radon-222 with daughters removed.

The inspector's comparison of 1997 environmental monitoring data to 1996 data indicated that the results were comparable. No adverse trends were identified in the environmental monitoring program.

b. Groundwater Compliance Monitoring Program

A groundwater compliance monitoring program is required by License Condition 11.10. The groundwater compliance program encompassed sampling 38 tailings monitoring wells and four point-of-compliance wells. The program analyzed the wells for chemical and radiological constituents, operated six pumpback wells to extract groundwater, discharged fluids into the tailings impoundment, and operated an enhanced evaporation system to dispose of the groundwater in the tailings impoundment. The licensee had obtained the samples and operated the pumps and evaporation system as required by the license during 1997.

The licensee's groundwater program data was reviewed, including the reports previously submitted to the NRC and the original laboratory documentation. The information provided in the semiannual reports for 1997 indicated groundwater cleanup had not yet attained the protection standards at the four point-of-compliance wells. Parameters still above the standards included radium-226, radium-228, lead-210, natural uranium, and gross alpha. The licensee continued to operate the pumpback system to further remediate the groundwater. The licensee submitted a license amendment request to the NRC in February 1996 to remove seven chemical constituents from the groundwater protection standards list. The amendment request had been approved by the NRC on May 28, 1998.

A groundwater corrective action program review is required to be submitted to the NRC on an annual basis in accordance with License Condition 12.7. The licensee's annual corrective action program report dated, February 23, 1998, was briefly reviewed during the inspection. The annual report discussed the progress made toward attaining the groundwater protection standards. License Condition 10.7(A) limits the amount of liquid added to the tailings Impoundment to 25 million gallons per year. According to the information provided in the groundwater report, the pumpback system extracted approximately 16.2 million gallons of fluid during 1997. This volume was lower than the 1996 value of 18.6 million gallons. The lower pumpback volume was attributed to lower pump flowrates. During 1997 the total pump flowrate was 30.8 gallons per minute as compared to 35.3 gallons per minute in 1996. The inspector determined that the licensee was in compliance with License Conditions 10.7, 11.10, and, 12.7.

c. Annual Land Use Survey

License Condition 11.8 stipulates that a land use survey be performed annually. The land use survey is required to be submitted to the NRC on an annual basis by License

Condition 12.3. The most recent annual land use survey dated, February 23, 1998, was reviewed. No changes in land use within a 5-mile radius of the site were identified.

5.3 <u>Conclusions</u>

The licensee had conducted the environmental and groundwater monitoring programs and the annual land use survey in compliance with license requirements. All reports related to the groundwater and environmental monitoring programs had been submitted to the NRC as required. The reports were thorough and technically accurate. Laboratory documentation demonstrated that releases of radioactive materials to the environment were within regulatory limits in 1997 and during 1998.

6 Exit Meeting Summary

The inspector presented the inspection results to the representatives of the licensee at the conclusion of the inspection on July 22, 1998. Licensee representatives acknowledged the findings as presented. The licensee did not identify any information reviewed during the inspection as proprietary information.

Attachment 1

PARTIAL LIST OF PERSONS CONTACTED

<u>Licensee</u>

G. Palochak, Mill Shift Foreman/Alternate Radiation Safety Officer

O. Paulson, Facility Supervisor/Radiation Safety Officer

INSPECTION PROCEDURES USED

- IP 83822 Radiation Protection
- IP 88005 Management Organization Control
- IP 88020 Operations Review
- IP 88035 Radioactive Waste Management
- IP 88045 Environmental Monitoring

ITEMS OPENED, CLOSED AND DISCUSSED

Opened

None

Closed

None

Discussed

None

LIST OF ACRONYMS USED

- ALARA as low as is reasonably achievable
- DAC derived air concentrations
- RSO radiation safety officer
- SOP Standard Operating Procedure



JIM GERINGER GOVERNOR

Department of Employment

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DONALD G. STAUFFENBERG STATE INSPECTOR OF MINES OFFICE OF MINE INSPECTOR P.O. BOX 1094 ROCK SPRINGS, WYOMING 82902 TELEPHONE 307-362-5222

INSPECTION REPORT

November 6, 2000 Pintel 1112

INSPECTION DATE: November 2, 2000

OPERATOR: Kennecott Uranium Co., Box 1500, Rawlins, WY 82301

FACILITY: Sweetwater Uranium Mill

INSPECTION PARTY: George Palochak, Mill Foreman; and Don Stauffenberg, State Inspector of Mines

An inspection was made for compliance with the Wyoming State Safety Rules and Regulations and the following conditions were observed:

First Aid: Present Fire Protection: Present Communications: Phone, Cellular Phone and Radio Housekeeping: Good Safety Clothing: Worn by all Inspection Reports: Posted

There are four employees working one, ten hour shift a day, four days a week. They have had no lost time accidents in 2000. There is a security guard at the site during the off shift hours.

They are operating the perimeter pump back/corrective action wells and the tailings cell evaporation system.

They are still in a care and maintenance mode with the mill and mine property.

The contract to reclaim the pit and waste dump has been completed.

Corrective Actions Requested: 1 There were six fabric slings in the main shop that are not safe to use. There is damage to the slings and the wear cord indicator is exposed on all six slings. WR 56.14000(b)

Cooperation gratefully acknowledged.



JIM GERINGER GOVERNOR

Department of Employment

DONALD G. STAUFFENBERG STATE INSPECTOR OF MINES OFFICE OF MINE INSPECTOR P.O. BOX 1094 ROCK SPRINGS, WYOMING 82902 TELEPHONE 307-362-5222 S 1 1 2

June 12, 2000

INSPECTION REPORT

INSPECTION DATE: June 8, 2000

OPERATOR: Kennecott Uranium Co., Box 1500, Rawlins, WY 82301

FACILITY: Sweetwater Uranium Mill

INSPECTION PARTY: Oscar Paulson, Facilities Supervisor; George Palochak, Mill Foreman; and Don Stauffenberg, State Inspector of Mines

An inspection was made for compliance with the Wyoming State Safety Rules and Regulations and the following conditions were observed:

First Aid: Present Fire Protection: Present Communications: Phone, Cellular Phone and Radio Housekeeping: Good Safety Clothing: Worn by all Inspection Reports: Posted

There are four employees working one, eight hour shift a day, five days a week. They have had no lost time accidents in 2000. There is a security guard at the site during the off shift hours.

They are operating the perimeter pump back/corrective action wells and the tailings cell evaporation system.

They are still in a care and maintenance mode with the mill and mine property.

They have contractors on site reclaiming the pit and waste dump areas.

Corrective Actions Requested: 0 None at this time.

Cooperation gratefully acknowledged.

PLEASE READ. INITIAL & PASS ON: JIM GERINGER GOVERNOR OF WYOMING THE STATE Dend loyment 21 DONALD G. STAUFFENBERG .BOX 1094 STATE INSPECTOR OF MINES **ROCK SPRINGS, WYOMING 82902** TELEPHONE 307-362-5222 June 14', 1999

INSPECTION REPORT

INSPECTION DATE: June 11, 1999

OPERATOR: Kennecott Uranium Co., Box 1500, Rawlins, WY 82301

FACILITY: Sweetwater Uranium Mill

INSPECTION PARTY: George Palochak, Mill Foreman; and Don Stauffenberg, State Inspector of Mines

An inspection was made for compliance with the Wyoming State Safety Rules and Regulations and the following conditions were observed:

First Aid: Present Fire Protection: Present Communications: Phone, Radio & Cellular Housekeeping: Good Safety Clothing: Worn by all Inspection Reports: Posted

There are four employees working one, ten hour shift a day, four days a week. They have had no lost time accidents in 1999. There is a security guard at the site during the off shift hours.

They are operating the perimeter pump back/corrective action wells. The tailings cell evaporation system has been activated for the summer. I checked several of the electrical switch gear installations for the pump Back Wells. All appeared to be safe to operate.

They are still in a care and maintenance mode with the mill and mine property. The pit pumps and the IX circuit are not in use.

The Corrective Action requested during my last inspection has been addressed.

Corrective Actions Requested: 1

Mr. Palochak and I discussed the procedure for checking the water pump in the tails cell, and for checking for damage to the cell liner. It is evident that a life vest is needed while performing this task. In order to check the liner the employee must walk along the slope of the tails cell. This task is done on a regular basis and usually involves only one person. That person could easily slip and fall into the water within the tails cell. WR.15020

Cooperation gratefully acknowledged.



16 JIM GERINGER GOVERNOR

Department of Employment

DONALD G. STAUFFENBERG STATE INSPECTOR OF MINES OFFICE OF MINE INSPECTOR P.O. BOX 1094 ROCK SPRINGS, WYOMING 82902 TELEPHONE 307-362-5222

January 25, 1999

INSPECTION REPORT

INSPECTION DATE: January 14, 1999

OPERATOR: Kennecott Uranium Co., Box 1500, Rawlins, WY 82301

FACILITY: Sweetwater Uranium Mill

INSPECTION PARTY: George Palochak, Mill Foreman; and Don Stauffenberg, State Inspector of Mines

An inspection was made for compliance with the Wyoming State Safety Rules and Regulations and the following conditions were observed:

First Aid: Present Fire Protection: Present Communications: Phone, Radio & Cellular Housekeeping: Good Safety Clothing: Worn by all Inspection Reports: Posted

There are four employees working one, ten hour shift a day, four days a week. They have had no lost time accidents in 1999. There is a security guard at the site during the off shift hours.

They are operating the perimeter pump back/corrective action wells. The tailings cell evaporation system has been shut down until spring.

They are still in a care and maintenance mode with the mill and mine property.

The pit pumps and the IX circuit are not in use.

Corrective Actions Requested: 1 A berm should be placed near the edge of the water, at the end of the ramp into the pit, to prevent someone from accidently driving off into the water. Someone travels to this area several times a month to take water quality samples. WR 56.9300

Cooperation gratefully acknowledged.

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THE STATE OF WYOMING		NOV 9 9
Department of	l'Employment	O. PAULSON

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DONALD G. STAUFFENBERG STATE INSPECTOR OF MINES OFFICE OF MINE INSPECTOR P.O. BOX 1094 ROCK SPRINGS, WYOMING 82902 TELEPHONE 307-362-5222

INSPECTION REPORT

INSPECTION DATE: October 30, 1997

OPERATOR: Kennecott Uranium Co., Box 1500, Rawlins, WY 82301

FACILITY: Sweetwater Uranium Mill

INSPECTION PARTY: Oscar Paulson, Facilities Supervisor; George Palochak, Mill Foreman; and Don Stauffenberg, State Inspector of Mines

An inspection was made for compliance with the Wyoming State Safety Rules and Regulations and the following conditions were observed:

First Aid: Present Fire Protection: Present Communications: Phone, Cellular Phone and Radio Housekeeping: Good Safety Clothing: Worn by all Inspection Reports: Posted

There are four employees working one, ten hour shift a day, four days a week. They have had no lost time accidents in 1997. There is a security guard at the site during the off shift hours.

They are operating the perimeter pump back/corrective action wells and the tailings cell evaporation system. The wells will operate all winter, the evaporation system will operate until it freezes up.

They are still in a care and maintenance mode with the mill and mine property.

The pit pumps and the IX circuit are idle for the winter. They plan to operate both next spring.

Corrective Actions Requested: 0 None at this time.

Cooperation gratefully acknowledged.

November 5, 1997



JIM GERINGER GOVERNOR

Department of Employment

DONALD G. STAUFFENBERG STATE INSPECTOR OF MINES OFFICE OF MINE INSPECTOR P.O. BOX 1094 ROCK SPRINGS, WYOMING 82902 TELEPHONE 307-362-5222

May 27, 1997

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INSPECTION REPORT

INSPECTION DATE: May 21, 1997

OPERATOR: Kennecott Uranium Co., Box 1500, Rawlins, WY 82301

FACILITY: Sweetwater Uranium Mill

INSPECTION PARTY: Oscar Paulson, Facilities Supervisor; George Palochak, Mill Foreman; and Don Stauffenberg, State Inspector of Mines

An inspection was made for compliance with the Wyoming State Safety Rules and Regulations and the following conditions were observed:

First Aid: Present Fire Protection: Present Communications: Phone, Cellular Phone and Radio Housekeeping: Good Safety Clothing: Worn by all Inspection Reports: Posted

There are four employees working one, eight hour shift a day, five days a week. They have had no lost time accidents in 1996. There is a security guard at the site during the off shift hours.

They are operating the perimeter pump back/corrective action wells and the tailings cell evaporation system.

They are still in a care and maintenance mode with the mill and mine property.

They plan to operate the pit pumps and the IX circuit long enough to use up some process chemicals that have been stored at the site.

Corrective Actions Requested: 0 None at this time.

Cooperation gratefully acknowledged.



JIM GERINGER JAN GOVERNOR Department of Employment. PA

DONALD G. STAUFFENBERG STATE INSPECTOR OF MINES OFFICE OF MINE INSPECTOR P.O. BOX 1094 ROCK SPRINGS, WYOMING 82902 TELEPHONE 307-362-5222

December 20, 1996

INSPECTION REPORT

INSPECTION DATE: December 18, 1996

OPERATOR: Kennecott Uranium Co., Box 1500, Rawlins, WY 82301

FACILITY: Sweetwater Mill

INSPECTION PARTY: Oscar Paulson, Facilities Supervisor; George Palochak, Mill Foreman; and Don Stauffenberg, State Inspector of Mines

An inspection was made for compliance with the Wyoming State Safety Rules and Regulations and the following conditions were observed:

First Aid: Present Fire Protection: Present Communications: Phone, Cellular Phone and Radio Housekeeping: Good Safety Clothing: Worn by all Inspection Reports: Posted

There are four employees working one, eight hour shift a day, five days a week. They have had no lost time accidents in 1996 There is a security quard at the site during the off shift hours.

The tails basin evaporation system is idle. They are operating the perimeter pump back/corrective action wells.

They are still in a care and maintenance mode with the mill and mine property.

The pit pumps and the IX circuit idle and have not operated this year.

Corrective Actions Requested: 0 None at this time.

Cooperation gratefully acknowledged.





JIM GERINGER GOVERNOR

Department of Employment

DONALD G. STAUFFENBERG STATE INSPECTOR OF MINES OFFICE OF MINE INSPECTOR P.O. BOX 1094 ROCK SPRINGS, WYOMING 82902 TELEPHONE 307-362-5222

August 22, 1996

INSPECTION REPORT

INSPECTION DATE: August 22, 1996

OPERATOR: Kennecott Uranium Co., Box 1500, Rawlins, WY 82301

FACILITY: Sweetwater Mill

INSPECTION PARTY: Oscar Paulson, Facilities Supervisor; George Palochak, Mill Foreman; George Worman, Safety and Don Stauffenberg, State Inspector of Mines

An inspection was made for compliance with the Wyoming State Safety Rules and Regulations and the following conditions were observed:

First Aid: Present Fire Protection: Present Communications: Phone, Cellular Phone and Radio Housekeeping: Good Safety Clothing: Worn by all Inspection Reports: Posted

There are five employees working one, eight hour shift a day, five days a week. They have had no lost time accidents in 1996 There is a security guard at the site during the off shift hours.

. . .

The tails basin evaporation system and perimeter pump back/corrective action wells are operating.

They are still in a care and maintenance mode with the mill and mine property. The pit pumps and the IX circuit are not operating.

Corrective Actions Requested: 0 None at this time.

Cooperation gratefully acknowledged.



Figure 1. Aerial View of the Sweetwater Uranium Project - 1980

Page 17.



Figure 2. Aerial Photograph of the Facility and Surrounding Area Taken in November 1996



Figure 3. Mill Building Interior – Semi Autogenous Grinding Mill



Figure 4. Mill Building Interior - Leaching Area



Figure 5. Mill Building Interior - Counter Current Decantation (CCD) Area

Page 20.



Figure 6. Solvent Extraction (SX) Building Interior



Figure 7. Pumps in Mill Building

KENNECOTT URANIUM COMPANY SWEETWATER URANIUM PROJECT Source Material License SUA-1350

CONTINUOUS LOW-VOLUME AIR PARTICULATE ANALYSIS

Quarter/Date Sampled Air Volume	Radionuclide	Concentration µCi/ml	Error Estimate µCi/ml	LLD μCi/ml	Effluent Conc.* pCi/ml	% Effluent Concentration	
				1.00 1.16	0.00 E 14	1.27 5.01	
1st Quarter	U-nat	1.23 E-16	N/A	1.00 E-16	9.00 E-14	1.37 E-01	
1/3 - 4/3/00	Th-230	<1.00 E-16	N/A	1.00 E-16	3.00 E-14	<3.33 E-01	
Air Vol in mLs	Ra-226	<1.00 E-16	N/A	1.00 E-16	9.00 E-13	<1.11 E-02	
4.68 E+10	Pb-210	9.91 E-15	5.94 E-16	2.00 E-15	6.00 E-13	1.65 E+00	
2nd Ouarter	U-nat	1.39 E-16	N/A	1.00 E-16	9.00 E-14	1.54 E-01	
4/3 - 6/30/00	Th-230	<1.00 E-16	N/A	1.00 E-16	3.00 E-14	<3.33 E-01	
Air Vol in mLs	Ra-226	<1.00 E-16	N/A	1.00 E-16	9.00 E-13	<1.11 E-02	
4.31 E+10	Pb-210	3.38 E-15	2.87 E-16	2.00 E-15	6.00 E-13	5.63 E-01	
2.10	TT	1 10 E 16	NT/A	1 00 E 16	0.00 E 14	1 22 E-01	
3rd Quarter	U-nat	1.10 E-10	IN/A	1.00 ± 10	9.00 E-14	1.22 E-01	
6/30-10/1/00	Th-230	1.75 E-16	3.88 E-17	1.00 E-16	3.00 E-14	5.82 E-01	
Air Vol in mLs	Ra-226	<1.00 E-16	N/A	1.00 E-16	9.00 E-13	<1.11 E-02	
4.87 E+10	Pb-210	6.26 E-15	5.98 E-16	2.00 E-15	6.00 E-13	1.04 E+00	
4th Ouarter	U-nat	<1.00 E-16	N/A	1.00 E-16	9.00 E-14	<1.11 E-01	
10/1 - 1/2/01	Th-230	<1.00 E-16	N/A	1.00 E-16	3.00 E-14	<3.33 E-01	
Air Vol in mLs	Ra-226	<1.00 E-16	N/A	1.00 E-16	9.00 E-13	<1.11 E-02	
4.78 E+10	Pb-210	1.41 E-14	7.71 E-16	2.00 E-15	6.00 E-13	2.35 E+00	
LLD's are as published in Reg. Guide 4.14 *Effluent Concentration from the NEW 10 CFR Part 20 - Appendix B - Table 2 Year for Natural Uranium Year for Thorium-230 Week for Radium-226 Day for L and 210							

STATION 4A - 2000

Notes:

The results for natural uranium, thorium-230 and radium-226 were all below the lower limit of detection (LLD) for the fourth quarter of 2000 because the ground surface was snow covered for most of the quarter, resulting in extremely low levels of airborne particulates.

KENNECOTT URANIUM COMPANY SWEETWATER URANIUM PROJECT **Source Material License SUA-1350**

CONTINUOUS LOW-VOLUME AIR PARTICULATE ANALYSIS

DATE	RADIO- NUCLIDE	CONC. µCi/ml	ERROR EST μCi/ml	LLD µCi/ml	*Reg. Limit μCi/ml	% Reg. Limit
1st Quarter	U-nat	<1.00 E-16	N/A	1.00 E-16	9.00 E-14	<1.11 E-01
1/4 - 4/1/99	Th-230	1.47 E-16	3.09 E-17	1.00 E-16	3.00 E-14	4.90 E-01
Air Vol in mls	Ra-226	<1.00 E-16	N/A	2.00 E-16	9.00 E-13	<1.11 E-02
4.89 E+10	Pb-210	1.25 E-14	6.49 E-16	2.00 E-15	6.00 E-13	2.09 E+00
2nd Quarter	U-nat	2.27 E-16	N/A	1.00 E-16	9.00 E-14	2.52 E-01
4/1 - 6/28/99	Th-230	3.85 E-16	3.92 E-17	1.00 E-16	3.00 E-14	1.28 E-00
Air Vol in mls	Ra-226	<1.00 E-16	N/A	1.00 E-16	9.00 E-13	<1.11 E-02
5.57 E+10	Pb-210	1.08 E-14	4.20 E-16	2.00 E-15	6.00 E-13	1.79 E+00
3rd Quarter	U-nat	4.30 E-16	N/A	1.00 E-16	9.00 E-14	4.78 E-01
6/28 - 10/3/99	Th-230	3.86 E-16	1.24 E-17	1.00 E-16	3.00 E-14	1.23 E-00
Air Vol in mls	Ra-226	<1.00 E-16	N/A	1.00 E-16	9.00 E-13	<1.11 E-02
4.57 E+10	Pb-210	6.60 E-15	5.46 E-16	2.00 E-15	6.00 E-13	1.10 E-00
4th Quarter	U-nat	2.45 E-16	N/A	1.00 E-16	9.00 E-14	2.73 E-01
10/3 - 1/3/00	Th-230	2.55 E-16	2.92 E-16	1.00 E-16	3.00 E-14	8.50 E-01
Air Vol in mls	Ra-226	<1.00 E-16	N/A	1.00 E-16	9.00 E-13	<1.11 E-02
4.59 E+10	Pb-210	1.57 E-14	7.33 E-16	2.00 E-15	6.00 E-13	2.62 E+00
LLD's are listed as published in Reg. Guide 4.14 *Regulatory Limit from the NEW 10 CFR Part 20 - Appendix B - Table 2 Year for Natural Uranium Year for Thorium 230						

STATION 4A - 1999

Week for Radium 226

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KENNECOTT URANIUM COMPANY SWEETWATER URANIUM PROJECT Source Material License SUA-1350

CONTINUOUS LOW-VOLUME AIR PARTICULATE ANALYSIS

DATE	RADIO- NUCLIDE	CONC. µCi/ml	ERROR EST μCi/ml	LLD µCi/ml	*Reg. Limit µCi/ml	% Reg. Limit
1st Quarter	U-nat	<1.00 E-16	N/A	1.00 E-16	9.00 E-14	<1.11 E-01
1/3 - 3/30/98	Th-230	1.41 E-16	3.52 E-17	1.00 E-16	3.00 E-14	4.70 E-01
Air Vol in mls	Ra-226	<1.00 E-16	N/A	1.00 E-16	9.00 E-13	<1.11 E-02
4.61 E+10	Pb-210	1.06 E-14	4.88 E-16	2.00 E-15	6.00 E-13	1.77 E+00
2nd Quarter	U-nat	3.15 E-16	N/A	1.00 E-16	9.00 E-14	3.50 E-01
3/30 - 6/29/98	Th-230	1.91 E-16	1.91 E-17	1.00 E-16	3.00 E-14	6.38 E-01
Air Vol in mls	Ra-226	1.57 E-16	1.49 E-17	1.00 E-16	9.00 E-13	1.75 E-02
4.708 E+10	Pb-210	6.32 E-15	4.26 E-16	2.00 E-15	6.00 E-13	1.05 E+00
3rd Quarter	U-nat	1.19 E-16	N/A	1.00 E-16	9.00 E-14	1.33 E-01
6/29 - 9/30/98	Th-230	<1.00 E-16	N/A	1.00 E-16	3.00 E-14	<3.33 E-01
Air Vol in mls	Ra-226	<1.00 E-16	N/A	1.00 E-16	9.00 E-13	<1.11 E-02
5.28 E+10	Pb-210	3.04 E-15	2.20 E-16	2.00 E-15	6.00 E-13	5.07 E-01
4th Quarter	U-nat	1.86 E-16	N/A	1.00 E-16	9.00 E-14	2.07 E-01
9/30/98-1/4/99	Th-230	3.29 E-16	3.10 E-17	1.00 E-16	3.00 E-14	1.10 E+00
Air Vol in mls	Ra-226	<1.00 E-16	N/A	1.00 E-16	9.00 E-13	<1.11 E-02
6.12 E+10	Pb-210	9.59 E-15	3.42 E-16	2.00 E-15	6.00 E-13	1.60 E+00

STATION 4A - 1998

LLD's are listed as published in Reg. Guide 4.14 *Regulatory Limit from the NEW 10 CFR Part 20 - Appendix B - Table 2 Year for Natural Uranium Year for Thorium 230 Week for Radium 226

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KENNECOTT URANIUM COMPANY SWEETWATER URANIUM PROJECT Source Material License SUA-1350

CONTINUOUS LOW-VOLUME AIR PARTICULATE ANALYSIS

ERROR EST LLD *Reg. Limit % RADIO-CONC. uCi/ml **Reg.** Limit µCi/ml µCi/ml NUCLIDE µCi/ml DATE <1.11 E-01 9.00 E-14 U-nat <1.00 E-16 N/A 1.00 E-16 **1st Quarter** 7.05 E-02 1.41 E-16 3.52 E-17 1.00 E-16 2.00 E-14 Th-230 1/97-4/97 Ra-226 1.00 E-16 9.00 E-13 <1.11 E-02 <1.00 E-16 N/A Air Vol in mls 2.00 E-15 6.00 E-13 1.18 E+00 7.07 E-15 4.93 E-16 Pb-210 5.90 E+10 <1.11E-01 9.00 E-14 <1.00E-16 N/A 1.00 E-16 2nd Quarter U-nat 2.00 E-14 6.25 E-01 1.25 E-16 2.66 E-17 1.00 E-16 4/97 - 7/97 Th-230 <1.11 E-02 <1.00 E-16 N/A 1.00 E-16 9.00 E-13 Air Vol in mls Ra-226 3.09 E-16 2.00 E-15 6.00 E-13 8.47 E-01 5.08 E-15 Pb-210 4.88 E+10 1.86 E-01 N/A 1.00 E-16 9.00 E-14 1.67 E-16 3rd Quarter U-nat 1.71 E+00 1.00 E-16 2.00 E-14 Th-230 3.41 E-16 4.51 E-17 7/97 - 10/97 9.00 E-13 <1.11 E-02 Ra-226 <1.00 E-16 N/A 1.00 E-16 Air Vol in mls 1.41 E+00 3.88 E-16 2.00 E-15 6.00 E-13 4.66 E+10 Pb-210 8.49 E-16 1.00 E-16 9.00 E-14 3.25 E-01 N/A 4th Quarter U-nat 2.93 E-16 2.00 E-14 2.04 E-00 1.00 E-16 Th-230 4.09 E-16 6.35 E-17 10/97 - 12/97 <1.11 E-02 9.00 E-13 N/A 1.00 E-16 Ra-226 <1.00 E-16 Air Vol in mls 2.19 E-00 6.00 E-13 2.00 E-15 1.32 E-14 6.66 E-16 5.36 E+10 Pb-210

STATION 4A - 1997

LLD's are listed as published in Reg. Guide 4.14

*Regulatory Limit from the NEW 10 CFR Part 20 - Appendix B - Table 2

Year for Natural Uranium

Year for Thorium 230

Week for Radium 226

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KENNECOTT URANIUM COMPANY

SWEETWATER URANIUM PROJECT Source Material License SUA-1350

CONTINUOUS LOW-VOLUME AIR PARTICULATE ANALYSIS

STATION 4A - 1996

DATE	RADIO- NUCLIDE	CONC. µCi/ml	ERROR EST μCi/ml	μCi/ml	μCi/ml	Reg. Limit
1st Quarter	U-nat	<1.00 E-16	N/A	1.00 E-16	9.00 E-14	<1.11 E-01
1/1/96 - 4/1/96	Th-230	3.78 E-16	4.93 E-17	1.00 E-16	2.00 E-14	1.89 E-00
Air Vol in mls	Ra-226	1.35 E-16	1.28 E-17	1.00 E-16	9.00 E-13	1.50 E-02
5.21 E+10	Pb-210	5.65 E-15	3.28 E-16	2.00 E-15	6.00 E-13	9.42 E-01
2nd Quarter	U-nat	2.98 E-16	N/A	1.00 E-16	9.00 E-14	3.32 E-01
4/8/96 - 7/1/96	Th-230	5.50 E-16	4.63 E-17	1.00 E-16	2.00 E-14	2.75 E-00
Air Vol in mls	Ra-226	<1.00 E-16	N/A	1.00 E-16	9.00 E-13	<1.11 E-02
5.13 E+10	Pb-210	1.00 E-14	4.23 E-16	2.00 E-15	6.00 E-13	1.67 E-00
3rd Quarter 7/1/96 -9/30/96 Air Vol in mls	U-nat Th-230 Ra-226 Ph-210	1.25 E-16 2.49 E-16 <1.00 E-16 7.13 E-15	N/A 3.72 E-17 N/A 2.97 E-16	1.00 E-16 1.00 E-16 1.00 E-16 2.00 E-15	9.00 E-14 2.00 E-14 9.00 E-13 6.00 E-13	1.38 E-01 1.25 E-00 <1.11 E-02 1.19 E-00
4th Quarter	U-nat	<1.00 E-16	N/A	1.00 E-16	9.00 E-14	<1.11 E-01
9/30/96 - 1/2/97	Th-230	3.60 E-16	1.57 E-16	1.00 E-16	2.00 E-14	1.80 E-00
Air Vol in mls	Ra-226	<1.00 E-16	N/A	1.00 E-16	9.00 E-13	<1.11 E-02
5.92 E+10	Pb-210	7.69 E-15	4.50 E-16	2.00 E-15	6.00 E-13	1.28 E-00

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Year for Natural Uranium

Year for Thorium 230

Week for Radium 226

No.

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AMERICAN MINING CONGRESS

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Secretary U.S. Nuclear Regulatory Commission Washington, D.C. 20555

Attn: Docketing and Service Branch

Re: Comments on Timeliness in Decommissioning of Materials Facilities (RIN 3150-AD85)

Dear Secretary:

On January 13, 1993, the Nuclear Regulatory Commission (NRC) published a proposed rule that would require timely decontamination and decommissioning of the facilities of nuclear material licensees, including uranium recovery facilities other than waste disposal areas associated therewith. 58 Fed. Reg. 4099, 4101-02. The proposed rule would amend 10 C.F.R. Part 40 and establish specific time periods for decommissioning unused portions of operating uranium recovery facilities and for decommissioning the entire site upon termination of operations. These comments on the proposed rule are submitted by the American Mining Congress (AMC).

AMC is a national trade association representing: (1) producers of most of the United States' metals, uranium, coal, and industrial and agricultural minerals; (2) manufacturers of mining and mineral processing machinery, equipment and supplies; and (3) engineering and consulting firms and financial institutions that serve the mining industry. Many of AMC's member companies will be significantly and directly affected by the proposed rule.

AMC generally supports the idea of reasonable guidelines, and even milestones for certain appropriate decommissioning events. Such guidelines/milestones, if properly developed, can provide the public and NRC licensees with a framework to direct such activities. The time frames and assumptions that underly the current proposal, however, do not adequately address: (1) the detailed and comprehensive requirements applicable to uranium recovery facilities, (2) the nature of the uranium marketplace, (3) the impracticality of piece-meal closure at such facilities, or (4) the realistic likelihood that NRC

April 19, 1993

can fulfill its responsibilities in a timely manner based upon the past experience and the proposed closure of the Uranium Recovery Field Office (URFO). AMC, therefore, strongly urges NRC to build more flexibility into the proposed revisions to Part 40 affecting uranium recovery facilities. This flexibility is necessary to allow for consideration of site-specific and/or process-specific conditions. It would reflect a presumption that prolonged "standby status" adequately protects public health and safety, unless NRC makes an affirmative finding to the contrary.

I. General Comments.

AMC recognizes that there is value in setting milestones for decommissioning activities. NRC licensees need to know what is expected of them as they begin to cease operations and prepare to close and decommission their facilities and terminate their licenses. AMC notes that the concept of an explicit time frame for decommissioning with milestones to measure progress toward closure is reflected currently in the context of decommissioning and closure of uranium mill tailings impoundments in both an NRC/Environmental Protection Agency (EPA) Memorandum of Understanding, 56 Fed. Reg. 55434 (October 25, 1991) (MOU), and in a proposed settlement agreement between AMC, EPA and the Environmental Defense Fund (EDF) relating to closure of such sites. 58 Fed. Reg. 17230 (April 1, 1993).

Both of the above referenced documents, however, address uranium mill tailings impoundment closure and decommissioning. The fact that tight time frames were developed for these facilities does not justify a similar, inflexible approach for other facilities. As discussed before, AMC requests that the proposed rule be revised to provide for more flexibility in the time frame for decommissioning. In addition, NRC must recognize that, for many sites, a longer time frame will be required than that which is proposed.

II. The Rule Must Provide Flexible and Reasonable Time Frames.

Radon emissions from uranium mill tailings impoundments have been judged by both NRC and EPA to be the dominant potential threat to public health from uranium recovery operations.¹ Thus, as a result of its concerns about prompt closure of inactive tailings impoundments, EPA supported timeliness criteria. 54

¹See NRC Final Generic, Environmental Impact Statement on Uranium Milling ("GEIS"), NUREG-0706, Vol. I at 4, 6-72-74; Vol. II at A-15, 17, 25, 31, 35 (hereinafter "NRC GEIS"); <u>See also</u>, EPA, <u>Final Environmental Impact</u> <u>Statement for Remedial Action Standards for Inactive Uranium Processing Sites</u>, Vol. I at 63 (1982). Fed. Reg. 51654, 51683 (December 15, 1989).² Even the public health risks from inactive tailings facilities are insignicant, however, and the risk from other aspects of uranium recovery operations is considerably smaller. Indeed, there is no suggestion that inactive uranium milling facilities or surface facilities at <u>in situ</u> leach (ISL) sites pose an equivalent public health concern. Therefore, tight time frames for decommissioning are not appropriate or necessary. This is particularly true in light of the multitude of regulatory controls and reporting requirements applicable to such facilities while operating at maximum capacity or on standby--even uranium mill tailings impoundments must meet the 20 pCi/m²/sec radon flux limit in 40 C.F.R. Part 61, Subpart W during standby conditions.

Both the EPA/NRC MOU and the proposed settlement agreement recognize the need for flexibility due to site specific conditions, including those beyond the control of the licensee. These documents provide licensees with protection with respect to meeting milestones or completing final closure when circumstances beyond a licensee's control affect its capability to comply in a timely fashion. The proposed settlement agreement even provides the licensees with the flexibility to keep portions of the tailings pile open to receive waste for an essentially open-ended time frame, so long as compliance with the flux limit is demonstrated. Thus, NRC and EPA have demonstrated more apparent flexibility towards closure of inactive tailings impoundments (which pose a greater potential risk), than the NRC does in the proposal related to decommissioning the related, but less risky, uranium recovery facilities.

Additionally, section 84(c) of the Uranium Mill Tailings Radiation Control Act (UMTRCA) explicitly provides licensees with the right to propose alternatives based on site specific factors (such as local or regional conditions, including geology, topography, hydrology and meteorology).³ This kind of flexibility is necessary as site-specific and/or process-specific conditions may not fit neatly with generic requirements and assumptions. AMC believes that the NRC's proposed rule does not provide the necessary flexibility for uranium recovery licensees.

²Although, as NRC has noted, even the potential radiation exposure to the public from uranium mill tailings piles presents no acute health hazard because "long and sustained exposure to radioactivity in the tailings pile would be required to produce any significant chance of adverse effect." NRC GEIS Vol. I at 12-31.

³"The NRC is obligated to consider site specific alternatives proposed by licensees by law and agency rules." <u>See Memorandum from Herzel Plaine</u>, General Counsel, USNRC, to the NRC Commissioners re: Uranium Mill Tailings--Jurisdictional Bases for EPA's standards, SECY-85-125 (April 10, 1985).

By fashioning timetables that do not take into account sitespecific circumstances, factors beyond the control of the licensee, and the problematic nature of the international market place for the sale of uranium, the proposed rule as presently drafted could undermine the energy security of the United States. Forcing premature decommissioning of uranium production facilities which may be required in the future to provide uranium for electric power generation would be both unwise and unnecessary.

The proposed rule acknowledges the Commission may grant an extension to the 18-month time limit for decommissioning because of the problems with the availability of waste disposal facilities, reductions in dose or waste volume due to radioactive decay, technical feasibility of decommissioning, regulatory requirements of other government agencies, lawsuits, groundwater treatment activities, or monitored natural groundwater restoration. 58 Fed. Reg. at 4101. AMC believes that this time frame is wholly inadequate for application to uranium recovery facilities. Closure and final decommissioning of uranium milling facilities, or portions thereof, may necessarily have to await completion of certain tailings impoundment closure activities before they can be properly and appropriately accomplished. Portions of the milling facility may be necessary for groundwater remediation, and tailings closure (to include burying portions of the dismantled mill) generally has to wait for proper physical conditions. These events alone can take several years. Similarly, at ISL sites, surface facilities are necessary for groundwater restoration that can take years. Thus, a much more reasonable time frame is needed for uranium recovery facilities.

AMC also believes that whatever more reasonable time frame is adopted for uranium recovery facilities, the regulations still need to explicitly provide for flexibility in meeting timetables for any factors beyond the control of the licensee. Assuming the licensee is undertaking good faith efforts to achieve compliance, factors that should allow for delay in schedules include the following:

- site-specific physical conditions;
- inclement weather or climatic conditions (including an act of God);
- a judicial or administrative order or decision; or change to the statutory, regulatory, or other legal requirements applicable to the licensee's facility that would preclude or delay the performance of activities required for compliance;
- labor disturbances;
- any modification, cessation or delay ordered by state, federal or local agencies;

- delays that result from NRC failure to take final action after the licensee has made a good faith, timely effort to submit legally sufficient applications, responses to requests (including relevant data requested by NRC), or other information, including approval of the closure plan by NRC or the affected Agreement state; and
- an act or omission of any third party over whom the licensee has no control.

The regulations should make clear that the Commission will grant extensions of time for decommissioning schedules because of the above listed factors.

UMTRCA already provides the uranium recovery licensees with the right to propose alternatives, but the regulations for <u>all</u> licensees should explicitly provide for licensee-proposed alternative timetables that allow for site-specific and/or process-specific considerations and market fluctuations. Alternative timetables should be acceptable provided the licensee is substantially in compliance with 10 C.F.R. Part 20 and other parts applicable to the type of license held by the facility and the facility represents no significant potential hazard to employees, the public or the environment.

III. Stand-By Situations and the Nature of the Uranium Marketplace Must Be Considered.

The proposed rule states that "with respect to making business decisions on further use of inactive facilities, the Commission considers a period of approximately 24 months to be reasonable." 58 Fed. Reg. 4101. The 24-month period, however, is entirely inadequate for the uranium production industry, and it does not represent a reasonable business cycle for virtually any kind of mining.

As a general matter, the mining industry is very cyclic. Mineral production from beginning to end can be a lengthy process. Many deposits that are being mined may have been under development for years before production began. Often, development and production are put on "standby" due to economic conditions in the international commodity marketplace where most minerals are traded. Market prices over which the mine operator has no control ultimately drive the pace of development and production until the mineral resource is exhausted, at which time reclamation begins. It is not at all unusual for a mining operation to be inactive for five to ten years and then resume operations when the market cycle allows a return to profitability. With respect to the uranium industry, the depressed nature of the market has been exacerbated by the changes in the Commonwealth of Independent States and the subsequent effects of its product in the United States market.

Licensees must be given the option to wait out down-turns in the market by "idling" the facilities and placing them on standby under an appropriate care and maintenance program until such time as operations can profitably be restarted. Uranium mills and ISL facilities represent large investments. The proposed rule could threaten operators' ability to recover necessary and appropriate returns on such investments. If NRC determines that a facility (or even portions thereof) must be decommissioned within 24 months, it essentially could result in NRC controlling and dictating the fate of the domestic uranium production industry.⁴ Given the nature of the uranium production industry and in particular its current "nonviability," the proposed regulations should allow for a longer period than 24 months to commence decommissioning for a uranium production facility that is on standby.

Whatever the time frame that is ultimately promulgated for such facilities, there should be an explicit provision for uranium recovery licensees to, in effect, get an <u>automatic</u> renewal or extension for an equivalent time frame upon application to NRC, unless NRC makes an affirmative finding that a licensee's standby operation poses a threat to public health. The current emphasis in the proposal on licensees demonstrating that extensions would not be "detrimental to the public health and safety" and are "otherwise in the public interest" does not reflect reality. If such facilities do not protect public health and safety and the public interest, then they should not be licensed in the first place. Since they are licensed and subject to comprehensive controls, whether operating at maximum capacity or on standby, the presumption should be that NRC has acted appropriately in the public interest by licensing such facilities initially. Unless NRC finds to the contrary that as a result of changed circumstances, its initial licensing decision is no longer valid, the presumption should be that such facilities can remain on standby indefinitely.

Incorporating this kind of flexibility for uranium production facilities would not pose a hazard to employees, the public, or the environment. The proposed rule suggests that "[i]f decommissioning is delayed for long periods following cessation of operations, there is a risk that safety practices at the inactive facility or the inactive portion of the operating facility may become lax as key personnel relocate and management interest wanes." 58 Fed. Reg. 4100. The Commission further expresses concern that bankruptcy may further delay commissioning. These concerns are unfounded. As noted above, uranium production facilities must be bonded for decommissioning, and NRC

⁴<u>See</u> the comments of the Rio ALGOM Mining Corp. and Quivera Mining Company on the "Timeliness in Decommissioning of Material Facilities" for discussion on the effects of the proposed rule on the Quivera Mining Company's Ambrosia Lake, New Mexico facility and the Smith Ranch Wyoming facility.

licensed facilities are heavily monitored and regulated by the NRC. Thus, renewal of a facility license on standby can be conditioned on ongoing protection of public health.

Facilities on standby are subject to the same rules and regulations as operating ones. To illustrate, these facilities are:

- (1) inspected by the NRC or Agreement State;
- (2) bonded and have adequate surety in place;
- (3) subject to reporting requirements including environmental reporting, ALARA reporting, land use reporting, annual surety updates, corrective action program reviews, and updates to environmental reports;
- (4) required to request license amendments for even minor changes in operations;
- (5) subject to environmental monitoring requirements including groundwater monitoring, air particulate monitoring, upwind and downwind radon gas monitoring, maintenance of a meteorological station, and ambient gamma radiation monitoring;
- (6) subject to health physics monitoring requirements including bioassay (urinalysis) programs for specific employees, workplace gamma radiation monitoring, workplace alpha radiation monitoring, workplace radon gas monitoring, workplace dust sampling, and employee personal breathing zone sampling;
- (7) subject to other health physics requirements such as issuance of radiation work permits for special or nonroutine work by employees within specific areas of the facility and radiation training for employees; and
- (8) subject to EPA radon gas emission limits.

These requirements and regulations more than adequately ensure that an idle facility will not pose a threat to human health or the environment. It is not necessary to require automatic reclamation of any facility because of a lack of a "principal activity" when the facility does not present a danger to the public and is in compliance with the applicable regulations. Therefore, it is appropriate to allow facilities to propose their own alternative time schedules and to seek renewal as economic circumstances dictate with a presumption that such renewal will be granted.

IV. The End-of-Use Concept Is Inappropriate for Many Facilities.

The practicality of the "end-of-use" decommissioning concept has major problematic implications at uranium recovery facilities. The proposed regulations focus on end-of-use as a trigger point for decommissioning. Defining end-of-use, however, and applying it in practical terms is often very difficult. At many facilities it is not possible to decontaminate certain buildings or outdoor areas because everything is thoroughly interconnected. Piecemeal decommissioning in all cases of "endof-use" may not be possible if final decommissioning is to be accomplished. For example, if a uranium mill is on standby then by definition, its crushing, leaching, and solvent extraction circuits are not in use. If these portions of the mill must be decommissioned for that reason, it essentially means the entire mill must be decommissioned, as a mill cannot function without these circuits.

Also as noted above, it is possible at a conventional mill or ISL site to use facilities that are not technically in production, and which may therefore fall within the end-of-use definition, to remediate groundwater. Indeed, at ISL sites, it is also possible to be producing from some well fields and restoring others at the same time. In reality, it would be enormously expensive, time consuming, burdensome, impractical (and maybe even impossible) to decommission certain of these nonproducing facilities or portions thereof.

The proposed rules should be modified to reflect reality at many of the uranium recovery facilities potentially subject to the proposed regulations. The 56-month proposed time frame for completing the decommissioning process is unrealistic for some uranium milling facilities as well as ISL facilities. Groundwater restoration (which requires the ongoing operation of surface processing facilities) is the major decommissioning element for <u>in-situ</u> facilities and can often take seven to ten years to complete. Groundwater corrective action at conventional milling facilities can often require equal or greater time frames. The proposed regulations should be revised to address these concerns.

V. Specific Comments

A. Redundant Regulations.

Redundant requirements should be carefully charted and removed. For example, the proposed rule requires a decommissioning plan to be submitted to NRC 12 months prior to cessation of principal activities. This requirement, however, is already contained in existing regulations and is generally included as a license condition.

B. Section 40.42(d)(3) and (4).

As noted in the above discussion, the 24 month time frame is not realistic for mineral recovery activities and, in particular, for the domestic uranium industry in light of its "nonviability." In light of the limited risk associated with such facilities and the comprehensive regulatory oversight applicable to them, ongoing "standby" status should be presumptively extended unless NRC affirmatively makes a finding otherwise in light of the limited risks associated with such facilities and the comprehensive regulatory oversight applicable to them.

C. Section 40.42(e).

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For the reasons set forth in A above, the Commission should presumptively grant extensions to uranium recovery facilities.

D. Section 40.42(e).

This section should be rewritten to explicitly provide that uranium recovery licensees have a right to propose alternative schedules for decommissioning in accordance with section 83(c) of UMTRCA and that the Commission will presume that such alternatives will protect "public health and safety" and are "otherwise in the public interest" absent an affirmative finding to the contrary.

E. Section 40.42(f)(4)(vi).

Eighteen months is generally not sufficient to complete decommissioning of uranium recovery facilities and portions thereof. This provision should be modified to state that decommissioning will be completed as soon as practicable after a final decision to cease operations. Specific milestones can be added to facility licenses according to site-specific realities.

F. Section 40.42 g(1) and (2).

See comments on D above.

G. Section 40.42(h).

See comments on C,D & E above.

H. Section 40.42(k).

This provision allegedly exempts "waste disposal areas at uranium recovery facilities" because of the applicability of the provisions of Criterion 9 of Appendix A to 10 C.F.R. Part 40 and the requirements of Subpart T of 40 C.F.R. Part 61. 58 Fed. Reg. at 4101. However, as written, it exempts "specific licenses for uranium milling." <u>Id</u>. at 4107. This discrepancy would not cover waste disposal areas at ISL sites and in any event is too limited for the reasons set forth above.

I. Commission Review Period.

The proposal indicates that Commission review and approval of decommissioning plans is estimated to be six months or less. 58 Fed. Reg. 4101. This assumption appears wildly optimistic in view of industry history, including NRC's failure to approve reclamation plans for time frames in excess of five years. NRC's ability to timely address decommissioning plans from uranium recovery facilities would appear to be in jeopardy in light of the Commission's proposed closure of URFO.

VI. Conclusion.

For all the above reasons, AMC respectfully requests that NRC revise the proposed rule to: (1) explicitly provide for licensee proposed alternative timetables; (2) explicitly allow for the extensions of time for decommissioning schedules for factors beyond the control of the licensee; (3) provide for enough time for restoration of groundwater at <u>in-situ</u> sites; (4) re-define "end-of-use" to recognize that in some situations the facility or area at issue cannot practically be decommissioned because it is so interconnected with the rest of the area or rest of the process; and (5) make the specific changes set forth above.

If you have any questions or would like AMC to provide additional material, please contact me at 202/861-2876 or AMC's counsel on this matter, Anthony J. Thompson of Perkins Coie, at 202/628-6600.

Yours very truly,

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James E. Gilchrist Vice President

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