



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

August 2, 2006

SECRETARY

COMMISSION VOTING RECORD

DECISION ITEM: SECY-06-0117

TITLE: TERMINATION OF NUCLEAR REGULATORY
COMMISSION LICENSE FOR THE HERITAGE
MINERALS INC. SITE IN MANCHESTER TOWNSHIP,
NEW JERSEY

The Commission (with Chairman Klein and Commissioners McGaffigan, Merrifield, and Lyons agreeing) approved the subject paper as recorded in the Staff Requirements Memorandum (SRM) of August 2, 2006. Commissioner Jaczko approved in part and disapproved in part.

This Record contains a summary of voting on this matter together with the individual vote sheets, views and comments of the Commission.

A handwritten signature in black ink, appearing to read "Annette L. Vietti-Cook", written over a horizontal line.

Annette L. Vietti-Cook
Secretary of the Commission

Attachments:

1. Voting Summary
2. Commissioner Vote Sheets

cc: Chairman Klein
Commissioner McGaffigan
Commissioner Merrifield
Commissioner Jaczko
Commissioner Lyons
OGC
EDO
PDR

SECY Note: This Commission Voting Record will be released to the public 5 working days after dispatch of the letter to the licensee.

VOTING SUMMARY - SECY-06-0117

RECORDED VOTES

	APRVD	DISAPRVD	ABSTAIN	NOT PARTICIP	COMMENTS	DATE
CHRM. KLEIN	X					7/9/06
					(additional comments)	7/31/06
COMR. McGAFFIGAN	X				X	5/22/06
					(additional comments)	7/26/06
COMR. MERRIFIELD	X				X	6/6/06
					(additional comments)	7/27/06
COMR. JACZKO	X	X			X	7/11/06
Comr. LYONS	X				X	5/31/06
					(additional comments)	7/27/06

COMMENT RESOLUTION

In their vote sheets, Chairman Klein and Commissioners McGaffigan, Merrifield, and Lyons approved the staff's recommendation and Commissioner Jaczko approved in part and disapproved in part. Subsequently, the comments of the Commission were incorporated into the guidance to staff as reflected in the SRM issued on August 2, 2006.

NOTATION VOTE

RESPONSE SHEET

TO: Annette Vietti-Cook, Secretary

FROM: CHAIRMAN KLEIN

SUBJECT: **SECY-06-0117 - TERMINATION OF NUCLEAR
REGULATORY COMMISSION LICENSE FOR THE
HERITAGE MINERALS INC. SITE IN MANCHESTER
TOWNSHIP, NEW JERSEY**

Approved x Disapproved Abstain

Not Participating

COMMENTS:

No additional comments.

Dale Klein

SIGNATURE

July 9, 2006


DATE

Entered on "STARS" Yes No

Chairman Klein's Supplemental Comments to SECY-06-0117

I am supplementing my vote in response to Commissioner Jaczko's vote on this paper.

My original votes stands regarding the termination of the NRC license for the Heritage Minerals Inc. site. However, I support Commissioner McGaffigan's supplemental vote in its entirety. I believe that this approach will help to avoid the costly and time-consuming situation of having multiple regulators for the same material at one site.


Dale E. Klein 7/31/06
Date Date

NOTATION VOTE

RESPONSE SHEET

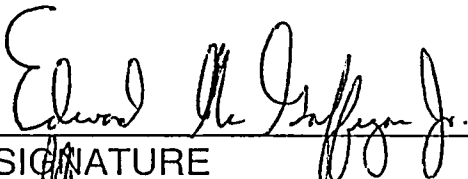
TO: Annette Vietti-Cook, Secretary
FROM: COMMISSIONER MCGAFFIGAN
SUBJECT: **SECY-06-0117 - TERMINATION OF NUCLEAR
REGULATORY COMMISSION LICENSE FOR THE
HERITAGE MINERALS INC. SITE IN MANCHESTER
TOWNSHIP, NEW JERSEY**

Approved ^{w/comments} Disapproved _____ Abstain _____

Not Participating _____

COMMENTS:

See attached comments.



SIGNATURE
May 22, 2006

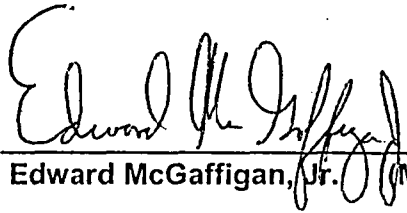
DATE

Entered on "STARS" Yes No _____

Commissioner McGaffigan's Comments on SECY-06-0117

I approve the staff's recommended termination of the license for the Heritage Minerals Inc. site and the release of the site for unrestricted use. I also approve the staff's plans to meet with the New Jersey Department of Environmental Protection and to conduct a public meeting to inform interested stakeholders of NRC's decision.

The staff has performed a thorough review and determined that the site meets the concentration criteria contained in its approved decommissioning plan. The staff also performed a conservative bounding analysis of the potential doses to a resident farmer and found that even under this highly unlikely scenario, the site would not exceed the public dose limit of 100mrem/yr. Therefore, I believe the staff is taking the correct course of action and this site should be released for unrestricted use.



Edward McGaffigan, Jr. (May 22, 2006)

Commissioner McGaffigan's Additional Comments on SECY-06-0117

I am supplementing my vote in response to Commissioner Jaczko's vote on this paper.

In his vote, Commissioner Jaczko supports the tightening of NRC regulatory control over radioactive material containing uranium and thorium. Among other things, he proposes that the Commission revise "the definition of source material to consider a threshold for uranium and thorium concentrations that is based on public health and safety dose implications of the material." This revision would require that we lower the concentration limit of 0.05 weight percent in 10 CFR 40.13(a). This action would only further exacerbate the existing problem of dual-regulation of technologically-enhanced, naturally-occurring radioactive material (TENORM). The Commission, the NRC staff and our partners in other Federal agencies and the States have been deliberating on this matter for years (see SECY-99-0259, SECY-01-0051, and SECY-03-0068). By lowering this concentration, NRC would add untold number of other industries and activities (such as coal ash, petroleum extraction, etc.) to those that already fall under our authority, with no additional regulatory benefit beyond that already provided by oversight by the EPA, OSHA, and the States.

I propose an alternative solution. In my vote on SECY-03-0068 in 2003, in which the staff summarized the many recommendations of the Interagency Jurisdictional Working Group (IJWG) on the matter of the regulation of low-level source material, I supported the staff's recommended Option(1), which was to seek a legislative change to limit NRC authority to uranium or thorium that are extracted or purposely concentrated for the use of uranium or thorium. At that time, the Commission was in general agreement that either a legislative approach to redefine source material, or alternatives that achieve the same ends, such as Memoranda of Understanding with other Agencies, were the right course of action. However, in the SRM we deferred this action so that the staff could "focus on the high priority rulemakings in the materials arena." I believe that now may be the right time for the NRC to reconsider that deferral. If we move forward now with the staff's 2003 recommendation, it would allow EPA, OSHA, and the States to develop a comprehensive control program over all aspects of diffuse NORM and TENORM, in which the uranium- and thorium-bearing material is not being processed primarily for its source material content.

We still have several important rulemakings in the materials arena, which was the reason for deferring this action in 2003. But one of our newer rulemakings, a general license for community water systems that remove uranium from drinking water, is the direct result of the Commission's decision to defer further action on the IJWG's recommendation. If we don't address this problem now, we run the risk of continuing to stumble into regulatory arenas that are better and more comprehensively dealt with by our partners at EPA, OSHA, and the States. The effort we've been expending on these diversions would be put to better use for much more important activities, such as a much-needed and long-delayed rulemaking for in-situ leach uranium recovery facilities.

I believe that the staff should provide the Commission with a plan to accelerate the activities of the IJWG, with a goal toward developing an approach to narrowing NRC's authority over source material to uranium and thorium that is extracted and/or purposely concentrated for the use of uranium and thorium.

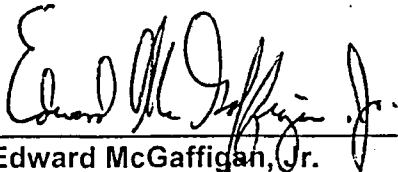
Commissioner Jaczko also charges that Commissioner Lyons and I, in citing the conservative

nature of the staff's dose calculation at the Heritage site, are guilty of an "incomplete use of scientific information." According to Commissioner Jaczko, we ignored "the likely sizeable uncertainties in the dose calculations" associated with the potential future uses of the decommissioned Heritage site. I would like to respond to that charge.

The current computational methodology used by the staff for decommissioning dose assessments does take into account the uncertainties and sensitivities of the many variables that affect future potential dose. This methodology involves an intermediate calculation of the statistical distribution of the total effective dose equivalent, which, of course, is a reflection of the uncertainty and variability of the site characteristics, human behavior, and other factors. In the final analysis, however, the staff requires a single value to compare to the 25 mrem criterion. This value is the "peak of the mean" dose -- a statistical estimate of prospective human dose.

Prospective environmental dosimetry is, by its nature, an imprecise science. It requires, among other things, predictions of the chemistry of natural systems, the physical structure of the subsurface, future meteorology, and future human behavior. To anyone who is familiar with its practice, the question is not, "Exactly how large is the range of possible outcomes," because the range is usually so large as to be completely useless. Rather, we ask, "What is a likely outcome?" The regulation in 10 CFR 20.1402 further narrows the human scope of this question to a small critical group of receptors with specific habits, actions, and characteristics that would lead to the greatest potential dose. Realistic conservatism, therefore, is achieved by calculating a reasonably conservative peak dose to a small critical group, which bounds the dose to other exposure groups. There might conceivably be some hypothetical group in Lakehurst, NJ who eat only homegrown food, including fish from their own backyard ponds, and spend all of the remainder of their time in their basements. But the dose to this hypothetical group populates the extreme right-hand side of the bell curve, which is hardly a reasonable starting point for public policy.

So, knowing what goes into this sort of calculation, I neither incompletely used the peak dose nor ignored the uncertainties associated with it. Rather, I have the requisite reasonable assurance that the peak dose to the critical group is below 100 mrem per year, and the peak dose to everyone else is well below 100 mrem per year.


Edward McGaffigan, Jr. 7/26/06
(Date)

NOTATION VOTE

RESPONSE SHEET


TO: Annette Vietti-Cook, Secretary
FROM: COMMISSIONER MERRIFIELD
SUBJECT: **SECY-06-0117 - TERMINATION OF NUCLEAR
REGULATORY COMMISSION LICENSE FOR THE
HERITAGE MINERALS INC. SITE IN MANCHESTER
TOWNSHIP, NEW JERSEY**

Approved Disapproved Abstain

Not Participating

COMMENTS:

See attached comments.



SIGNATURE

DATE *6/6/6*

Entered on "STARS" Yes No

Comments from Commissioner Merrifield on SECY-06-0117:

I approve the staff recommendations in SECY-06-0117 concerning the termination of the Heritage Minerals, Inc. site in Manchester Township, New Jersey. The criteria for termination of the license is consistent with previous Commission policy. I particularly endorse the staff recommendations to hold meetings with the public and appropriate officials of the State of New Jersey to communicate the basis for this decision. However, there could be some strong public concerns and State concerns about this decision. Therefore, in addition to the staff recommendations, a communications plan should be developed to inform appropriate members of Congress of the basis for this decision.



6/6/6

Commissioner Merrifield's Supplemental Comments to SECY-06-0117

My original vote stands as written concerning the termination of the NRC license for the Heritage Minerals Inc. site. However, I support Commissioner McGaffigan's supplemental vote where it addresses implementing actions originally proposed in the staff requirements memorandum for SECY-03-0068. In my vote for SECY-03-0068, I was opposed to a legislative solution because our past history has not been very successful in attempting to address narrowly focused issues through legislation. I will now support seeking a legislative solution as the best approach to solving this issue permanently. However, as I noted in my vote on SECY-03-0068, although staff should make an earnest attempt for legislation, staff should also pursue alternative approaches as outlined in the staff requirements memorandum and my vote for SECY-03-0068.

NOTATION VOTE

RESPONSE SHEET

REVISED VOTE

TO: Annette Vietti-Cook, Secretary

FROM: COMMISSIONER JACZKO

SUBJECT: **SECY-06-0117 - TERMINATION OF NUCLEAR
REGULATORY COMMISSION LICENSE FOR THE
HERITAGE MINERALS INC. SITE IN MANCHESTER
TOWNSHIP, NEW JERSEY**

Approved X Disapproved X Abstain

Not Participating

COMMENTS: See attached comments.

IRA/

SIGNATURE

7/11/06

DATE

Entered on "STARS" Yes X No

Commissioner Jaczko's Comments on SECY-06-0117
Termination of Nuclear Regulatory Commission License for the Heritage Minerals
Inc. Site in Manchester Township, New Jersey

I approve in part and disapprove in part the license termination for the Heritage mineral site. I approve the staff's approach to determining the areas of the Heritage site that must be decommissioned, although this approach raises significant concerns regarding the regulation of source material. I disapprove, however, the levels of remediation determined by the staff for this site.

With regard to the remediated areas, I am concerned by the inconsistent, complex and confusing regulatory and legal framework governing the decommissioning – and even licensing and operation – of sites containing uranium and thorium in concentrations below 0.05% by weight (the regulatory threshold for description of uranium and thorium as "source material") *and in conditions distinct from a natural state*. In this case, the staff correctly interpreted commission regulations and orders that consider this uranium and thorium to be technologically enhanced naturally occurring radioactive material (TENORM), which Commission regulations and precedents consider a subset of naturally occurring radioactive material (NORM). NORM classes of uranium and thorium are not regulated by the Commission and are excluded by regulation from consideration when analyzing the sources of radioactive materials that could contribute doses to the public and workers.

I am troubled by this situation, because uranium and thorium classified as TENORM often has significant dose implications for the public. At the Heritage site there are some locations where the uranium and thorium material falls below the source material threshold by only a small amount. The threshold for determination of source material is not based on the expected dose contributions from material below this threshold, but from the ability of the uranium and thorium to be useful for commercial nuclear purposes. In many areas at the Heritage site, there could be doses on the order of hundreds of millirem from the uranium and thorium material classified as TENORM.


In fact at the Heritage site, the NRC has required the clean-up of areas containing licensed uranium and thorium source material, but the NRC cannot require the clean-up of areas containing unlicensed uranium and thorium TENORM material directly adjacent to areas containing unlicensed material. In some instances, the dose implications from the licensed and unlicensed materials are comparable. As a result, there are pockets of decontaminated areas in a larger region that still contains significant areas of contamination.

Unfortunately, the arcane nature of the Commission's regulations prevents this material from being properly decommissioned by the NRC. The responsibility for ensuring the further decontamination resides with the Environmental Protection Agency and the states. I do not find this an acceptable alternative, but without a rulemaking initiative or an order, the Commission is unable to impose additional decommissioning requirements on the Heritage site. To address this, the Commission should consider revising the definition of source material to consider a threshold for uranium and thorium concentrations that is based on the public health and safety dose implications of the material.

Regarding the appropriate level of remediation at the licensed areas of the Heritage site, I disapprove the staff recommendation to terminate the license. I am concerned by the potential for doses from this site exceeding the 25 mrem standard in the license termination rule. HMI was one of a handful of sites that the Commission deemed eligible for grandfathering from the new regulatory requirements in the license termination rule, because their decommissioning plan was in the final stage of preparation by the licensee and decision by the NRC. While I recognize that HMI is not required to meet the current license termination rule (LTR) criteria of 25 mrem/yr for unrestricted release of the site, the staff's dose assessment for all but one scenario exceeded the LTR unrestricted release criteria by a factor of two to three. It was precisely for this reason that the Commission directed the staff to seek its approval prior to terminating the licenses of grandfathered sites where the doses from residual radioactivity exceeded the LTR unrestricted release criteria. In this case, I believe the Commission should require the licensee to remediate the site to 25 mrem.

In addition, I have some continued concern with the manner in which the Commission discusses calculated doses for regulatory decision-making. Several of my colleagues indicated in their votes that the dose estimates of the staff, which ranged from approximately 40 to 80 mrem depending on the scenario, were conservative estimates. In my view, this is an incomplete use of scientific information, because it ignores the likely sizeable uncertainties in the dose calculations – uncertainties that could both raise and lower the expected range of the dose calculation.

By reporting to the Commission an exact figure, however, the staff gives the impression that there are no uncertainties in the calculation other than the useful conservatism that would tend to reduce the calculated doses and render them close to the regulatory limit. In the interest of scientific integrity the staff should present – and the Commission should demand – all measurement and calculated information be presented with an appropriate error and uncertainty analysis. Unfortunately, the staff rarely presents dose calculations to the Commission with the calculation uncertainties, measurement and other uncertainties which prevent the Commission from understanding the true implications of the dose determination.



Gregory B. Jaczko 7/11/06
Date

NOTATION VOTE

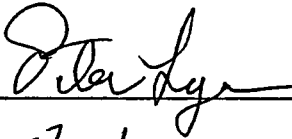
RESPONSE SHEET

TO: Annette Vietti-Cook, Secretary
FROM: COMMISSIONER LYONS
SUBJECT: **SECY-06-0117 - TERMINATION OF NUCLEAR
REGULATORY COMMISSION LICENSE FOR THE
HERITAGE MINERALS INC. SITE IN MANCHESTER
TOWNSHIP, NEW JERSEY**

Approved x Disapproved _____ Abstain _____
w/comments

Not Participating _____

COMMENTS:

Peter B. Lyons 
SIGNATURE
5/31/06
DATE

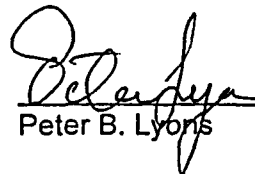
Entered on "STARS" Yes ✓ No _____

Commissioner Lyons Comments on SECY-06-0117

I approve the staff's recommendation to terminate Heritage Minerals Inc. (HMI's) NRC license and release the site for unrestricted use. I also approve staff's plan to: (1) conduct a public meeting in the local vicinity to inform interested stakeholders of the results of the Environmental Assessment and Staff Dose assessment that supported the NRC's decision to terminate the NRC license at the HMI site and (2) meet with New Jersey Department of Environmental protection to discuss the Commission's decision regarding the site.

I want to commend staff for a comprehensive review and assessment of the data to determine that the site meets the Site Decommissioning Management Plan (SDMP) Action Plan criteria in its approved Decommissioning Plan as well as meeting the public dose limit of 100 mrem/yr using the most conservative bounding scenario. However, even though I understand why staff used bounding input assumptions to calculate the dose to the suburban resident (44 mrem/yr), it is important to recognize that some of the input parameters are very conservative. For example, the staff assumes that the suburban resident consumes 10% of his total intake of fruit, vegetables and grain for a year from home-grown produce, which contributes to about 50% of the total dose. Even though it is possible to grow 10% (112 kg) of consumed fruits and vegetables in a home garden, most suburban residents do not engage in such activity. The dose assessment also makes the very conservative assumption that a person stays in his house about 65% of the time, receiving a direct radiation dose from the ground. Therefore I believe that if you use realistic assumptions, the actual dose the suburban resident receives will be much lower.

I appreciate the New Jersey Department of Environmental Protection's suggestion that NRC maintains oversight of the HMI site until the entire property has been remediated to the state clean up standard. I agree, however, with staff that when there is no regulatory, public health, or safety-significance basis to oversee the site, doing so will constitute an undue burden.

 5/31/06
Peter B. Lyons Date

Commissioner Lyons' Supplemental Comments to SECY-06-0117

I am supplementing my vote in response to Commissioner Jaczko's vote on this paper.

My original vote stands as written concerning the termination of the NRC license for the Heritage Minerals Inc. site. However, I support Commissioner McGaffigan's supplemental vote in its entirety.

<u>/RA/</u>	<u>7/27/06</u>
Peter B. Lyons	Date