

NRCREP Resource

From: Sweeney, Katie [KSweeney@nma.org]
Sent: Monday, August 04, 2008 3:30 PM
To: NRCREP Resource
Subject: National Mining Association Comments
Attachments: Mill Guidance Draft Comments.pdf

Attached please find the comments of the National Mining Association regarding DG-3024, Standard Format and Content of License Applications for Conventional Uranium Mills. If you have any questions, please contact me at the number below or at ksweeney@nma.org.

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August 4, 2008

United States Nuclear Regulatory Commission
Officer of Administration
Attn: Rulemaking, Directives, and Editing Branch
Washington, DC 20555-0001

**SUBJECT: National Mining Association (NMA) Comments Regarding
Federal Register Notice Requesting Comments on Draft
Regulatory Guide DG-3024 Entitled *Standard Format and
Content of License Applications for Conventional Uranium Mills***

Dear Sir/Madam:

On May 30, 2008, the United States Nuclear Regulatory Commission (NRC) issued a Federal Register notice¹ on a Draft Regulatory Guide entitled *Draft Regulatory Guide DG-3204: Standard Format and Content of License Applications for Conventional Uranium Mills* (Draft Regulatory Guide or DG-3204). Comments on this Draft Regulatory Guide must be submitted by August 4, 2008.

In response to NRC's request for public comment on this Draft Regulatory Guide, NMA, on behalf of its uranium recovery members, hereby submits these comments. NMA is the national trade association representing the producers of most of America's coal, metals, including uranium, industrial and agricultural minerals; the manufacturers of mining and mineral processing machinery, equipment and supplies; and engineering, transportation, financial and other businesses that serve the mining industry. NMA's uranium recovery members include current conventional and/or *in situ* uranium recovery (ISR) licensees, as well as potential future conventional and/or ISR license applicants.

I. GENERAL COMMENTS

NMA appreciates NRC's efforts to provide a clear process for applicants who intend to submit a license application for new uranium mill facilities. Applicants for such facilities, whether they involve traditional ore processing, heap leaching, ion-exchange (IX) resin stripping and elution or a combination of one or more of these milling approaches, would greatly benefit from a reliable "annotated checklist" consistent with the sequence of health and safety and environmental headings/sub-headings and the content of such headings/sub-headings required for the preparation of a license application. As NRC indicates in the Federal Register

¹ 73 Fed. Reg. 31152 (May 30, 2008).

notice, DG-3024 is intended to provide applicants with an acceptable method for "preparing license applications for the receipt, possession, and use of source and byproduct material for conventional uranium milling."² A clear advantage of such an approach will be submission of high quality applications that satisfy NRC's mandated "acceptance review" which, in turn, may assist NRC in achieving its policy goal of issuing only one set of requests for additional information (RAIs) over the course of its technical and environmental reviews. In these comments, NMA suggests additions to DG-3024 to ensure that applicants have additional critical information to guide them through the licensing process. NMA's suggests DG-3204 be revised to more comprehensively address each identified subject heading/sub-heading as well as to reference *all* applicable existing NRC legal and policy precedent and technical positions. References should encompass reference to (1) existing regulatory programs (e.g., 10 CFR Part 40, Appendix A); (2) existing guidance documents and technical guides; and (3) other existing NRC legal and policy and technical positions. NRC should only reference regulations and policies that are currently in effect and not try to encompass any on-going or anticipated rulemakings or policies, which can be incorporated at a more appropriate future time. To the extent that NRC Staff fails to provide appropriate references, the result may be less-than-complete license applications leading to unnecessary and costly delays, because potential licensees are not presented with adequately detailed guidance.

NMA hopes that the following comments will provide NRC with useful insight as to some of the aspects of DG-3204 that should be reviewed in light of the above general statements:

1. First, DG-3204 provides specific references throughout its text to existing, revised or soon-to-be revised Regulatory Guides and other guidance documents (e.g., NUREG publication series). However, as will be demonstrated in Section II below, there are several additional areas where references to these documents are warranted. In the interest of creating a Regulatory Guide that is as comprehensive and exhaustive as possible and of simplifying and streamlining the licensing process, it is imperative that NRC Staff provide license applicants with complete references to existing NRC guidance as appropriate. For example, DG-3204 does not contain any references to NUREG-0706 entitled *Final Generic Environmental Impact Statement on Uranium Milling*, which provided conventional mill license applicants and licensees and NRC Staff with a generic assessment of the typical site conditions at conventional uranium recovery sites. NUREG-0706 provides useful analyses regarding key health and safety and environmental issues including but not limited to potential public and occupational radiological dose from yellowcake production and tailings facilities, potential groundwater impacts, and decommissioning planning and completion. Given that the regulations applicable to conventional uranium milling facilities were based in large part on NUREG-0706's analyses and all regulatory decisions affecting conventional mills have essentially been guided by them, it appears that NUREG-0706 should be described and referenced in full. In addition, while there may be some aspects of conventional

² *Id.*

uranium milling that have changed since 1980 such as the use of new and innovative technologies and/or processes, neither the physics nor the chemistry relied upon by conventional milling licensees or license applicants therein has changed. Thus, as has been NRC's practice in the past, it is common sense to rely on previously conducted analyses to the extent practicable. Therefore, NMA believes that NRC should reference NUREG-0706 in DG-3204 where appropriate.

Further, DG-3204 does not contain any specific references to extremely critical issues regarding existing Commission legal precedent as determined by the Atomic Safety and Licensing Board (ASLB) and the Commission in administrative litigation over the past several years, most notably in the Hydro Resources, Inc. (HRI) litigation. It is important that NRC Staff provide references, where appropriate, to legal precedent because these administrative proceedings have interpreted provisions of NRC's regulatory program for uranium recovery facilities that are critical to high-quality applications such as financial assurance and site background radiation dose assessments.³ Without appropriate references to legal precedent, license applicants run the risk of omitting important aspects of a complete and defensible license application. Specific references in DG-3204's headings/sub-headings will be discussed in Section II below.

2. NMA also believes that NRC Staff should take into account and provide references to other applicable regulatory programs that will be directly applicable to aspects of conventional uranium recovery sites. Most notably, DG-3204 does not contain any references to the United States Environmental Protection Agency's (EPA's) 40 CFR Part 61, Subpart W *work practice standards* for tailings storage and management and 40 CFR Part 192 tailings impoundment design standards. These regulatory programs are inextricably linked to the contents of a high-quality license application for a new conventional milling facility and failure to ensure that such regulatory requirements are accounted for in license applications potentially could result in unnecessary delays in the licensing process.

3. DG-3204's text does not provide any specific references to the concept of performance-based license conditions (PBLCs) or the use of safety and environmental review panels (SERPs) pursuant to such conditions. Current and former NRC licensees have operated both conventional uranium milling and ISR facilities using standard PBLCs that are well-understood and well-tested. The use of these PBLCs are accompanied by a requirement that licensees form a SERP that can render decisions pursuant to such license conditions without the need for an NRC-approved license amendment. Further, an existing NRC legal decision opines that a PBLC could be useful for receipt and processing of alternate feed materials at a newly constructed or already-licensed conventional uranium milling facility.⁴ Therefore, it may be expedient for a license applicant to request a PBLC for alternate feed materials as part of its initial license application. Thus, NMA believes that DG-3204 should provide adequate information about PBLCs.

³ *In the Matter of Hydro Resources Inc.*, CLI-04-33 (Dec. 8, 2004) and *In the Matter of Hydro Resources, inc.*, CLI-06-09, (Dec. 14, 2006)

⁴ *In the Matter of International Uranium (USA) Corp.* (White Mesa Mill), CLI-02-21, (October 2, 2002)

4. NMA believes that DG-3204 should take into account the developing trends in the uranium recovery industry and tailor its approach to such trends. First, DG-3204 states that, "[t]his regulatory guide applies to applications for the recovery of uranium by conventional milling methods." However, it appears that DG-3204 does not include a specific description of heap leaching or the receipt of uranium-loaded IX resins for stripping and elution. Traditionally, NRC Staff has referred to these forms of uranium processing as uranium "milling," which generates tailings and other wastes that are classified as 11e.(2) byproduct material. Currently, NRC Staff is in possession of one letter of intent regarding the construction of a new conventional uranium milling facility utilizing heap leaching technology and one letter of intent seeking a license amendment to construct and operate an IX resin stripping and elution facility.⁵ NMA is aware that NRC Staff has taken some effort to compile information regarding heap leach facilities and prior NRC Staff policy regarding such facilities. Any relevant policy information regarding such facilities should be referred to in DG-3204. Any relevant policy information regarding the construction and operation of resin stripping and elution facilities from existing NRC guidance (e.g., NUREG-1569 entitled *Standard Review Plan for In Situ Leach Uranium Extraction License Applications*) or other appropriate documentation should also be referenced to in DG-3204.

Second, it has been widely discussed among uranium recovery industry members that the concept of "toll milling" uranium-loaded IX resins from satellite ISR wellfields at conventional uranium mills is likely going to be part of the so-called "nuclear renaissance." NMA believes that NRC Staff possesses or soon will possess significant guidance (e.g., NUREG-1569) and policy analyses (e.g., proposed ISR GEIS) regarding how a license applicant or an existing licensee can apply for permission to engage in "toll milling" of uranium-loaded IX resins under an existing license rather than being required to apply for license amendment each time a new source of loaded resin is identified. This developing trend should be identified in DG-3204 as a proposed method of uranium recovery at conventional mill sites.

Third, some potential license applicants have approached NRC regarding the construction of a new conventional uranium milling facilities on an already-licensed site so that it may utilize existing site-specific data in a license application. NMA believes that NRC should provide a short description of the manner in which a potential applicant can utilize such site-specific data in an application so that NRC Staff may receive a complete application without unnecessary delay.

Fourth, NRC Staff should include a brief reference to and/or a description of the procedures related to its new policy on public access to sensitive unclassified non-safeguards information (SUNSI) and how they relate to the submission of new license applications. As a general matter, recent license applications for new or expansion of existing ISR facilities have demonstrated that SUNSI subject to these new procedures are related to cultural and historic resource preservation data and assessments. Given the potential land use impacts associated with new

⁵ See ADAMS Accession Number ML080920124.

conventional uranium milling sites, it is important that license applicants have a full understanding of the procedures and timelines associated with public access to such information. Thus, NMA believes DG-3204 should contain a reference to NRC Staff's new SUNSI procedures, where appropriate.

Finally, NRC Staff should insert a proposed licensing timeline associated with the licensing of a conventional uranium milling facility that provides license applicants with an understanding of the estimated time required to complete such actions as NRC Staff's "acceptance review," its technical review, and completion of an environmental impact statement (EIS) or environmental assessment (EA). Over the past two years, NRC Staff has presented proposed timelines for various portions of its licensing programs, and NMA believes that it is useful to license applicants and existing licensees to have one resource where all potential timelines for licensing are available.

II. SPECIFIC COMMENTS

1. Section 1: Proposed Activities (Page 7): This section appears to be intended to provide a type of "executive summary" requirement for license applicants to include so that NRC Staff will understand the contents of the submitted license application. As stated above, the "executive summary" should include references to other aspects of the license application, including but not limited to: (1) what type of conventional uranium milling facility the licensing application discusses (e.g., conventional milling, heap leaching, and/or resin stripping and elution); (2) whether the proposed facility(ies) will be constructed on an already-licensed site;⁶ (3) what existing NRC guidance documents were used to prepare the application and its associated analyses (e.g., NUREG-1748 entitled *Environmental Review Guidance for Licensing Actions Associated with NMSS Programs*). NRC Staff also should make clear that the required "detailed discussion" of the specific subject headings/sub-headings should be addressed in light of NUREG-1748's environmental report requirements.

2. Section 2: Site Characteristics (Page 7-8): This section should have specific references to relevant NRC guidance documents such as NUREG-1748 for environmental reports and any relevant Regulatory Guides that are applicable to the mill site's characteristics. In addition, this section should include some reference to the incorporation of existing site characteristics by reference, especially in the case of a request to construct a new milling facility on an already-licensed site. In these instances, it is likely that previously prepared environmental reports by the prior licensee and environmental analyses of past licensing actions performed by NRC or another regulatory agency will provide extremely helpful information to assist NRC during its technical and environmental review.

⁶ With respect to construction of new facilities on already-licensed sites, NRC Staff should reiterate its policy of encouraging license applicants to incorporate existing site information by reference.

Many of the subsections in Section 2 should also include appropriate references to NUREG-0706 as newly proposed conventional milling facilities likely will be sited in geographic areas of the United States that have been assessed by NRC in 1980. For example, NUREG-0706 provides a geographic and topographical analysis of regions such as New Mexico and Wyoming, two areas where new conventional milling facilities are proposed to be constructed (i.e., new heap leaching facility for Uranium Energy Corporation Grants, New Mexico & resin stripping and elution facility at Kennecott Uranium Company's NRC-licensed Sweetwater Mill). Thus, NRC should include references to NUREG-0706 in this Section so that license applicants may include it in their applications as appropriate.

3. Section 3: Mill Process and Equipment (Page 9): This section should include a reference to NUREG-0706 to encourage licensees to incorporate its descriptions of the conventional milling process and any other form of uranium milling that was assessed in its analyses. Descriptions of the mill process also should not be strictly confined to characteristics of ore to be processed, but should include other types of materials created during the mill process such as uranium-loaded IX resins. This description should also assess the receipt of such resins from sources outside the mill site that would have been created at the mill site during routine site operations. NRC Staff should also encourage license applicants to include specific descriptions of new technologies and/or processes that serve to make the traditional milling process more efficient, including those that reduce moisture content in process solutions and tailings, and how those new technologies and/or processes compare to the already-assessed milling process in NUREG-0706.

4. Section 4: Radioactive Waste Management (Pages 9-10): As stated in Specific Comment # 3, NRC Staff should encourage licensees to provide information regarding new gaseous and airborne particulate control technologies and/or processes that serve to minimize, if not eliminate, such emissions and to demonstrate how these new technologies and/or processes serve to provide incremental protection of public health and safety and the environment above and beyond that noted in 10 CFR Part 40, Appendix A and NUREG-0706. Further, with respect to tailings impoundments, NRC should include a reference to EPA's design criteria for such impoundments that essentially require that new facilities be "zero discharge" facilities and how this requirement addresses NRC's requirements for such facilities.

5. Section 5: Operations (Pages 10-14): First, NRC should include a discussion of PBLCs and the construction of a SERP. It is likely that a new conventional uranium milling facility license will, at the very least, include a standard PBLC that will require a SERP, and NRC should provide references to sample SERP panels and descriptions in appropriate NRC guidance and licenses. Second, Section 5.7 entitled *Radiation Safety Controls and Monitoring* should include similar descriptions of new technologies and/or processes that serve to minimize, if not eliminate, potential worker and public radiological dose and, where appropriate, comparisons to the conclusions reached in NUREG-0706. Third, this section should include references to the incorporation of EPA's 40 CFR Part 61, Subpart W *work practice standards* and the effect that such standards will have on

radon emissions and worker health and safety. Lastly, NRC Staff should provide license applicants with adequate references to existing technical guides regarding operational aspects of conventional milling facilities (e.g., DG-3032 entitled *Design, Construction, and Inspection of Embankment Retention Systems at Uranium Recovery Facilities*).

6. Section 8: Decommissioning and Reclamation (Pages 14-15):


First, this section should include references to appropriate NRC legal and policy positions that potentially may have an effect on items such as financial assurance. For example, the recent HRI administrative litigation resulted in an interpretation of 10 CFR Part 40, Appendix A, Criterion 9's requirement that financial assurance for a uranium recovery facility be calculated to reflect the performance of site decommissioning and decontamination (D&D) by an *independent contractor*. This interpretation provides license applicants with information regarding the use of existing site equipment and employee tasks at uranium recovery sites that will be critical to the proper calculation of a financial assurance cost estimate. NRC Staff provide license applicants with a reference to this interpretation.

Second, NRC should include references to additional technical guidance that will provide license applicants with additional support when preparing a reclamation plan. For example, in addition to NUREG-1620, which is sparingly referenced in DG-3204, NUREG-1623 entitled *Design of Erosion Protection for Long-Term Stabilization* is the type of guidance that should be referenced by NRC in this section and license applicants should be encouraged to utilize its analyses and conclusions to the extent applicable.

Lastly, NRC Staff should provide license applicants with a formula by which a license applicant/licensee may calculate the mandatory 10 CFR Part 40, Appendix A, Criterion 10 cost estimate for long-term surveillance and monitoring. Currently, Criterion 10 requires that a conventional uranium mill licensee contribute \$250,000 in 1978 dollars, and it would be useful to license applicants to have an example of the formula by which the calculation can be made so that licensee annual financial assurance update, which are required by 10 CFR Part 40, Appendix A, Criterion 9 in DG-3204.

NMA appreciates NRC's efforts to provide guidance on the content of license applications for uranium mills. We hope our comments are helpful in developing a final guidance that ensures quality license submittals. Thank you for the opportunity to submit these comments. If you have any questions or need additional information, please contact me at 202/263-2627 or ksweeney@nma.org.

Sincerely,



Katie Sweeney
Deputy General Counsel