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Subject: Possible license amendment application template for the Church Rock repository
Date: Wednesday, May 31, 2017 10:13:00 AM
Attachments: [James Smith.vcf](#)

Hi Roy-

As promised two weeks ago, Hans, Matt, and I set out to find some examples of applications, that you could use as a template for preparing a license application to amend the reclamation plan. Unfortunately, we determined that an application specific to the review of an actual reclamation plan for Mill tailing sites per NUREG-1620, has not been received by the NRC since the date of NUREG 1620's publication in June 2003. Therefore, an analogous application is being provided as an example of the licensee's responses to Standard Review Criteria of regulatory requirements. Although the proposed activities are different, below is a link to an example of a publically-available license amendment application that could be used as a template, "Application for Amendment of USNRC Source Materials License SUA-1601, Ross ISR Project."
<https://www.nrc.gov/docs/ML1509/ML15096A157.pdf>.

Additionally, many of your responses could be answered with either page and paragraph references, or wholesale cut and paste for areas that have not changed, from the original Reclamation Plan approved by the NRC March 1, 1991, and as documented in the Canonic Environmental Document, dated August 1991, ML103230316,

Volume I: Text - Tailings Reclamation Plan as Approved by NRC March 1, 1991, License SUA-1475. Application letter first page under cover sheet. J.Valasquez to RHall.
ML103230255

Volume II: Tables, Figures - Tailings Reclamation Plan as Approved by NRC March 1, 1991, License SUA-1475. ML103230287

Volume III: Appendices - Tailings Reclamation Plan as Approved by NRC March 1, 1991. ML103230306

Sections of your application where you plan to deviate from the original Reclamation Plan, such as use of the Dwyer Report, dated 5/5/2017. ML17130A754, or Appendix I Mill Site Stormwater Controls 60% Design Interim Submittal, MWH, 2017, ML17122A010, would require that you define which regulatory requirement you are claiming to meet, a reference to the section, paragraph, direct quote, etc, with page and paragraph of the report you are using to make the finding of compliance, and discussion as to why you believe this reference supports your claim to compliance with the regulatory requirements.

Relevant documents:

NUREG-1620 "Standard Review Plan for the Review of a Reclamation Plan for Mill Tailings Sites Under Title II of the Uranium Mill Tailings Radiation Control Act of 1978"
<https://www.nrc.gov/docs/ML0322/ML032250190.pdf>

NUREG-1623 "Design of Erosion Protection for Long-Term Stabilization"
<https://www.nrc.gov/docs/ML0225/ML022530043.pdf>

NUREG-2126 “Standard Review Plan for Conventional Uranium Mill and Heap Leach Facilities: Draft Report for Comment”

<https://www.nrc.gov/docs/ML1432/ML14325A634.pdf>

When providing information requested in NUREG-1620 and NUREG-1623, many of the sections in the Strata Energy application could be used as a template for the GE/UNC application. For example, chapters 1, 2, 3, 4, 7, 8, 9, 10, and 11 could have a similar layout and information type in the GE/UNC amendment application:

- Chapter 5 might have a different title, but activities would be occurring and many of the sections would apply and be Part 20 related , e.g., management controls, inspections, qualifications, security, radiation safety training, etc.

As an example of a response to a requirement in the regulations provided by the referenced application is as follows:

5.4 Qualifications for Persons Conducting the Radiation Safety Program

Strata will implement the qualification requirements for persons conducting the radiation safety program as described in Section 5.4 of the approved Ross TR **[GE would reference the section in the approved reclamation plan that is applicable or whatever document applies]** for licensed activities in the KEA. The radiation safety staff qualification requirements were reviewed by NRC staff in the Ross SER and found to be acceptable. In Ross SER Section 5.4.4 the staff found that Strata described qualifications of the Radiation Safety Officer (RSO) and Radiation Safety Technician(s) (RST) that are consistent with Regulatory Guide 8.31. Staff also required in pre-operational LC 12.4 of SUA-1601 that Strata provide for staff review and verification the qualifications of a designee to perform daily inspections and personnel/material release surveys during decommissioning activities. All information required by pre-operational license conditions in license SUA-1601 is incorporated by reference into this application. With the provisions of LCs 9.7 and 12.4, the NRC staff found the qualification requirements of the personnel conducting the radiation safety program to be in accordance with NUREG-1569 Section 5.4.3 and in compliance with 10 CFR §§ 40.32(b) and (c) **[even though these items are approved, they are pertinent to the activity requested. While these items are not going to be reapproved, they will be looked at to ensure they are commensurate with the new requested activity].**

For Chapter 1, sections 1.1 thru 1.5, and 1.8 thru 1.10 could be similar. Sections 1.6 and 1.7 could discuss the mine area and proposed activities. Section 1.11 could summaries Church Rock’s groundwater program and the proposed repository construction program within NRC regulatory context, i.e., what procedures and regulations currently apply and what will change.

[The tables at the end of Chapter 1 (Table 1.1-1) may be difficult for GE/UNC to duplicate; it could be that the amendment is more about adding on to the current license than about changing specific conditions.]

Section 2.6 in Ch. 2 would have a lot of Church Rock characterization information in it, also including information, for example, from the jetty area and characterization data of the mining material to be transported.

Chapter 6 might be lengthy and could have three main components or separate chapters: the groundwater program, repository construction, and jetty or surface water management information.

Of course, not all the primary or secondary sources need to be included in this application. These chapters and their sections could refer to more detailed documentation of studies, tests, or data that support their proposed changes. However, the references should be specific, i.e., should refer to the sections, or the pages numbers, in the document that are relevant to the topic at hand.

The main point is that the license amendment application describes in detail the current NRC and related regulatory framework the Church Rock site is being operated under, and the describes in detail the proposed changes and activities at and to the site and what specific procedures, guidelines, regulations, etc. apply, and how it will be imbedded within the NRC regulatory framework.

The link to the application and all supporting documents (Addenda) can be found in the link below:

<https://www.nrc.gov/docs/ML1509/ML15096A141.html>

Additional document:

NUREG/CR-4075 "Designing Protective Covers for Uranium Mill Tailings Piles: A Review"
<https://www.nrc.gov/docs/ML1025/ML102500245.pdf>

You can contact me and we can schedule another call to discuss any issues/comments you may have.

Thanks

Jim

James Smith

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