

**Cimarron Monthly Status Teleconference Notes**  
**March 23, 2022**

**Attendees:**

<u>NRC - HQ</u>	<u>DEQ</u>	<u>EPM (or Contractors to the Trust)</u>
Jim Smith	Paul Davis	Jeff Lux
Ian Irvin	Mike Broderick	
Christine Pineda	David Cates	
John Saxton	Anna Fernow	
Robert Evans	Jon Reid	
Linda Gersey	Pam Dizikes	
Evan Anderson	Kelly Dixon	

**Proposed Scope of Work and Budget for 2022**

The scope of work and budget for 2022 was approved by both the NRC and the DEQ. EPM sent the approved scope of work and budget to those agencies listed in the Trust Agreement on February 25, 2022.

**Review of Teleconference Notes**

Draft notes for monthly teleconferences are sent only to those who attended the teleconference for review and comment. If and when comments are received, notes are finalized and distributed to a broader list of NRC and DEQ personnel, as well as to contractors to EPM. It has become apparent that meeting notes are not considered official agreements, but EPM directs contractors to perform work based on these teleconferences. Consequently, it is important that agency personnel who are engaged in the topics addressed in the teleconference review and comment on the notes.

**Reduction of NRC Fees**

NRC fees have represented approximately one fourth of the total expenditures from the Federal Cost Account, and both the DEQ and EPM have asked if it would be possible to obtain a reduction or elimination of NRC fees to increase the possibility that license termination could be achieved with available funding. James Smith explained that he is aware of the situation, that he took this issue up with NRC management, and was told there would be no reduction in fees. The DEQ indicated that they would consider writing a letter to NRC management about this issue.

**Clarification of NRC Pre-Application Audit Comments**

Jim Smith noted that the NRC received a telephone call from Jeff Lux stating that EPM sent emails on January 12<sup>th</sup> and February 1<sup>st</sup> requesting clarification of NRC comments resulting from the pre-application audit of the draft *Facility Decommissioning Plan – Rev 3*. After checking his emails, he believed that the NRC had responded to those requests for clarification. Jeff Lux said he will send the NRC a list of the comments for which clarification is needed.

**Groundwater Flow Model**

The DEQ stated that they would like to meet with the NRC and EPM to discuss each of their groundwater flow models. Discussion centered around whether this would require a public meeting.

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The NRC sent EPM and the DEQ files containing presentation slides prepared by John Saxton. The DEQ requested copies of the slides John Hessemann presented. Those slides will be sent to both the NRC and the DEQ.

During the Thursday, March 10<sup>th</sup> public meeting, Mr. Saxton presented the groundwater flow model he had developed, identifying several input parameters for which he did not have site-specific information that could improve the quality of the model. EPM requested Mr. Saxton to provide a list of information needed. EPM received the list of information on March 22<sup>nd</sup> and will provide whatever information is available in the CERT repository.

In addition, EPM stated that Burns & McDonnell will revise the groundwater flow model in the Burial Area #1 (BA1) transition zone to better simulate the 3-dimensional depiction of the Upper Gully Fill, Lower Gully Fill, and the Intra-Gully Sand Deposits presented in the 2018 ESS report.

**Addition of Injection Between BA1 Extraction Trenches**

The remediation infrastructure presented in the decommissioning plan (DP) includes two groundwater extraction trenches in BA1. Both the NRC and the DEQ have expressed concern that if both extraction trenches are pumped continuously, drawdown between the two trenches will create a significant unsaturated zone in which uranium will not desorb into groundwater, and upon shutting down extraction, uranium concentrations in that area will rebound.

EPM stated that Burns & McDonnell has been instructed to add a treated water injection component extending along the midway between the two extraction trenches. The revision of the groundwater flow model, in conjunction with the addition of treated water injection between the extraction trenches, should yield the following benefits to the estimated duration of remediation:

1. The transmissive pore volume will decrease significantly. Instead of extending the volume of material requiring remediation throughout the transition zone, the transmissive pore volume will be estimated as the volume of higher permeability material. The result is that a smaller total volume of groundwater will need to be extracted to produce the number of pore volumes for which removal is required to achieve the NRC criterion.
2. The injection of treated water between the extraction trenches will result in a constant, much steeper hydraulic gradient replacing the asymptotically-decreasing gradient in the current design. The steeper gradient will increase the amount of water that can be extracted from the transition zone material. This will result in the removal of more pore volumes per year.
3. The injection of treated water between the extraction trenches will result in a much smaller vadose zone (likely above the top of the high permeability material), so the potential for sorbed uranium to remain in the vadose zone is significantly reduced. This will significantly reduce the potential for uranium concentrations to rebound when remediation systems are shut down.

The result of all of these is that the duration of remediation may decrease significantly, increasing the potential for existing funding to achieve license termination.

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### **Decommissioning Cost Estimate**

The decommissioning cost estimate (DCE) will be revised in the decommissioning plan that will be submitted within the next few months. The most significant change will be that the DCE will not present the cost for all subsequent years in 2022 dollars (this assumes that the rate of return is equal to the rate of price increases). Instead, costs will be escalated each year, and the estimated return on Trust investments will be 1%, which is the NRC's recommended rate of return for long-term maintenance.

### **Schedule & Budget Impact**

The decommissioning plan and radiation protection plan have already been revised to address both the NRC's August 11, 2021, request for supplemental information and the January 31, 2022, comments resulting from the pre-application audit. EPM has requested Burns & McDonnell to provide a schedule and estimated cost for revision of 1) the groundwater flow model, 2) the decommissioning plan text, figures, and tables, and 3) the groundwater remediation design drawings. This will impact both the schedule for submission of the decommissioning plan and the cost to respond to agency comments.

This work will absorb more than the funding approved by the NRC and the DEQ for revision of the decommissioning plan and responding to RAIs, because the proposed funding was based on the assumption that revision of the design and groundwater flow models would not be required. Because the schedule is extending to address these issues, much of the work required to advance the design and specifications in response to RAIs will not be performed in 2022. Consequently, some of the funding for advancing to "issue for bid" design status will instead be used to revise the decommissioning plan and then respond to RAIs later this year.

### **Annual Environmental Monitoring Sampling Event**

Collection of groundwater and surface water samples for the annual environmental monitoring program stipulated in Section 15 of the Radiation Protection Program will be conducted the week of July 11 – 14. This involves the collection of groundwater samples from 29 monitor wells and surface water samples from two locations (the Cimarron River at the upstream and downstream ends of the site). NRC Region IV personnel have this scheduled on their calendar, and an NRC inspection may be conducted that week.

### **Regularly-Scheduled Future Public Meetings**

The need for periodic discussions of technical issues was discussed, and uncertainties regarding what kind of information or NRC guidance can or cannot be provided outside of a public meeting were discussed. Mr. Smith stated that he would initiate the scheduling of biweekly public meetings, which the NRC, the DEQ, and EPM (and contractors) can engage in technical discussions and receive feedback from the NRC in place of a more protracted process of formal submittals and agency responses.

### **Site Maintenance Issues**

The contractor who has been performing site maintenance has experienced staffing difficulties, and all the personnel who have received the training needed to work at the Cimarron site have left the company. EPM has contacted some local construction companies who perform the kind

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of work needed to maintain access to monitor wells, repair fences and monitor wells, etc. Burns & McDonnell will evaluate and select a contractor to subcontract site maintenance. The primary goal is to enable sampling crews (and NRC personnel) to access all monitor wells, dosimeters, cairns, etc., before July.

**Next Monthly Status Teleconference**

The next monthly project status teleconference will be schedule for 2:30 Eastern Time on Wednesday, April 20<sup>th</sup>.