From: Ramsey, Kevin
Sent: Monday, June 13, 2011 2:49 PM
To: Wheeler, Jennifer K.; Park, James; Riffle, Ashley; Crespo, Manuel; James Durham; 'Holley, Robert G.'; Lee, D. Michelle
Subject: Final Summary of 4/26/11 Call w/NFS re: environmental protection issues

On April 26, 2011, a call was conducted with Nuclear Fuel Services (NFS) regarding additional information needed to address environmental protection issues. The following individuals participated:

Kevin Ramsey, NRC/NMSS
James Park, NRC/FSME
Ashley Riffle, NRC/FSME
Manuel Crespo, NRC/RII
James Durham, Center for Nuclear Waste Regulatory Analyses (NRC Contractor)
Jennifer Wheeler, NFS
Robert Holley, NFS
Scott Morie, NFS
Michelle Lee, NFS
Charlynn Buchanan, NFS

Additional Information Needed to Finalize the Environmental Assessment

1. NRC noted that last year the NFS website contained a figure showing the total effective dose equivalent (TEDE) to the maximally exposed individual (MEI) from liquid effluents. However, the semi-annual effluent reports submitted to NRC do not always contain a dose estimate for liquid effluents. NRC asked if NFS has this information for the last 10 years. NFS stated that it had the information in a separate, internal report. Although a dose estimate for airborne effluents is usually provided in the semi-annual effluent reports submitted to NRC, a dose estimate for liquid effluents is included only when the sum of fractions is greater than 1. NFS stated that it could provide the dose estimates for liquid effluents since 2001. A calculation wasn't conducted in 2000, and NFS agreed to provide an explanation why that calculation wasn't done.

2. NRC asked if NFS could provide environmental dosimeter data since 2000. In addition, NRC asked whether background radiation was subtracted from the data already provided, and whether this data was used to calculate dose to the MEI. NFS stated that the data could be provided, background is subtracted, and NFS considers the dosimeter data when the dose to the MEI is calculated. NFS also stated that occupancy factors are not included and this provides additional conservatism. NFS noted that the contribution to the dose estimate depends on the whether the dosimeters are near the location of the MEI.

3. NRC asked for the status of excavating contaminated soil in the tent where the former plutonium building (Building 234) was located. NFS stated that work started in December 2010. The cap has been removed and soil is being excavated. NFS can provide a "ball park" schedule for completing the work.

4. NRC asked why the main stack needs to be replaced in the next five years. NFS stated that work on ventilation fans is necessary and it decided to replace the stack at the same

time for efficiency as a proactive measure. The stack isn't failing. It was installed in the early 80's.

5. NRC asked for information concerning the volume of mixed waste stored onsite. NFS stated that it could provide the current inventory, including the number of containers, and the maximum amount authorized for the site.

6. NRC had asked for information concerning occupational exposures to assess the impact of continued operations on workers. After checking the Radiation Exposure Information and Reporting System (REIRS) database here at NRC, sufficient information was obtained so no further data is needed from NFS.

7. NRC asked if NFS could clarify the major sources of drinking water used in the area as identified in its previous RAI responses. NFS stated that it would look for the information.

8. NRC asked whether storm water is still draining to the Banner Spring Branch which was rerouted and enclosed. NFS said yes. That is one of two storm water drainage pathways. The other is a drainage ditch. NFS explained that the Banner Spring Branch was rerouted to allow decommissioning work in the North Site area.

9. NRC noted that it only had storm water data up to 2008 and asked if more recent data was available. NFS stated that it could provide more recent data.

10. NRC asked why different parameters are used to monitor storm water effluents from the NFS site versus the Blended Low Enriched Uranium (BLEU) Complex. NFS stated that processes are different and it monitors for the isotopes expected from the different processes.

11. NRC asked whether NFS would be willing to state where it ships waste. NFS stated that it would prefer not to specify waste recipients because they tend to change. NFS only ships waste to recipients authorized to receive it.

12. NRC asked whether NFS could provide more specific locations where upstream and downstream samples are taken. NFS stated that the locations can be described in more detail.

13. NRC noted that the Ketterer report addressed samples taken at "Whaley Springs." Does NFS know where that is located? NFS stated that it didn't know the location.

14. NRC asked about the lawsuit filed by Impact Plastics. Was the primary concern radioactive contamination or chemical contamination. NFS stated that the primary concern was chemical contamination.

15. NRC asked about procedural requirements for soil erosion control. NFS stated that storm water permits addressed run-off. Requirements are often specific to a project, with the permits issued by TDEC as based on the acreage disturbed. Decommissioning plans may address it also. NFS can send requirements and an example of a permit.

16. NRC questioned the flow of Martin Creek, North Indian Creek and the Nolichucky. NFS thought Martin Creek and North Indian Creek came together, and then both fed into the Nolichucky River. NRC noted that USGS maps show Martin Creek flowing directly into the Nolichucky River. NFS will review the newest map available and provide feedback to NRC.

17. NRC asked if the Ground Water Treatment Facility (GWTF) was portable and what the difference was between GWTF and WWTF. NFS stated GWTF is not portable and that it is used to treat surface water from the Northsite to enable excavation and/or Final Status Survey activities to be conducted.

Open Issues Regarding the License Renewal SER

NRC explained that an open call would need to scheduled if detailed discussions were needed. However, the open issues could be confirmed during this call.

1. Follow up to RAI 9.4. Additional information is needed to order to make a finding that target minimal detectable concentrations (MDCs) are sufficiently low enough in order to quantify the activity in the effluents. A listing of typical MDCs, or MDCs on a particular date, would provide us with a basis for finding that your program can detect levels approaching regulatory limits.

2. Follow up to RAI 9.3 & 9.7. Samples taken from Martins Creek are being compared to values in 10 CFR 20 Appendix B, however no dilution factor has been factored in. NFS has classified Martins Creek as an effluent, but the primary effluents are coming from the storm water drainage ditches. Martins Creek (surface water) samples are taken weekly, and storm water data is taken once a year. In addition to the annual sampling, NFS takes quarterly samples from the two on-site storm water pathways. The page changes for Chapter 9 of the application will address this issue.

3. Section 9.2.6 in the license application states that at a minimum one up gradient well and ten down gradient wells are sampled quarterly. In response to RAI 9.10, NFS states that 2 monitoring wells are sampled monthly and 19 wells are sampled quarterly as part of their routine groundwater program. Clarification is needed concerning the wells used to demonstrate compliance with NRC requirements, and additional wells used for other purposes. NFS believes it can clarify the various groundwater monitoring requirements it must address and how the wells are used to demonstrate compliance with requirements imposed by NRC and other agencies.

Additional Inspection Issue

NRC asked about the action levels for gross alpha measurements and whether they were adequate to demonstrate compliance with effluent limits for plutonium. NFS stated that it does isotopic analysis in addition to the gross alpha measurements so it can confirm how much plutonium contributes to the gross alpha level. NRC noted that the license only commits to gross alpha and gross beta measurements, not isotopic analysis. NFS agreed to review the issue.

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