NFSDEACEm Resource

From: kristen hite [hiteka@hotmail.com]
Sent: Friday, December 31, 2010 10:55 PM
To: NuclearFuel_DraftEA Resource
Subject: RE: Docket ID NRC-2009-0435 NFS-Erwin EA comments
Attachments: EA comments Hite.docx

Please find amended comments to the EA for the NFS facility in Erwin. These comment supercede the version sent earlier today. This document replaces the previous document.

Thank you,
Kristen Hite, J.D., M.S.

From: hiteka@hotmail.com
To: nuclearfuel_draftea@nrc.gov
Subject: Docket ID NRC-2009-0435 NFS-Erwin EA comments
Date: Sat, 1 Jan 2011 03:35:17 +0000

Thank you for the opportunity to submit comments. Please find my comments attached. If you have any questions, do not hesitate to contact me at this email address.

Sincerely,
Kristen Hite, J.D., M.S.

Federal Register Notice: 75FR63519
Comment Number: 20

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To: NRC staff
From: Kristen Hite
Re: Docket ID NRC-2009-0435
Date: December 31, 2010

Thank you for the opportunity to submit comments on the Environmental Assessment (EA) for the Nuclear Fuel Service (NFS) facility in Erwin, TN. A recreational user of the Nolichucky River who has visited Erwin on a regular basis and who intends to visit the area in the future, I have kayaked, rafted, floated in innertubes, and swam on the river dozens of times. I have also guided hundreds of children down the river through activities associated with Buffalo Mountain Camp. I am concerned that the environmental assessment lacks key information necessary to determine whether there is a significant impact and ask the Nuclear Regulatory Commission (NRC) to reconsider its finding of no significant impact. Specifically, I am concerned that key safety and public health information is incomplete for the following reasons:

1. The EA does not adequately consider the cumulative effects of surface water and groundwater contamination from radionuclides associated with the facility, insufficiently accounting for exposure risks downriver of the facility in the area of the Nolichucky that I use for recreational purposes. The EA recognizes that the Nolichucky River is the primary pathway for surface runoff (page 2-6) and radionuclides would be expected in liquid effluents (page 2-8). The document also indicates that the River is suitable for fish and aquatic life, livestock watering, wildlife, irrigation, and recreation (page 3-13). Recognizing that the NoIichucky River is only 0.2 miles from the site boundary, with bodies of water adjacent to the plant that empty directly into the Nolichucky, there is significant risk of exposure to any contaminants either leaking into the water or of cumulative low-level exposure for contaminants not removed by the wastewater treatment process. The EA states that surface water includes isotopic U-234, U-235, and U-238, and additional discharges were documented for gross alpha and beta materials. According to the EA, there is no permit limit for these discharges (pages 2-5 to 2-6). Further, for those discharges which are regulated by permit, TDEC's NPDES permit TN000238 expired 8/31/2010 and its renewal appears to be merely "pending" (page 1-4). The EA presumes that all activities will be undertaken "in accordance with permits" (page 4-9), but fails to analyze the impact of cumulative impact based on accumulation of sediments/pollutants over time even if NFS complies with all permits. Furthermore, the EA does not consider the possibility that the permits will not be renewed or that the limits will be exceeded (which has happened in recent years for nitrate/nitrite nitrogen, magnesium, and aluminum concentration), see page 2-6. Moreover, the EA is unable to analyze the potential environmental impacts of compliance with the requirements permits that are pending, but that have not even been issued at the time of the EA.

According to the EA, "[t]he predominant radiological contaminant in groundwater beneath the site is uranium" (page 3-18). Groundwater flow in the alluvium (where the uranium and chlorinated solvent plumes are located, page 3-19) flows predominantly north/northwest towards the river, and both the alluvium and shallow bedrock contain groundwater under unconfined conditions, including several faults and fractured zones (page 3-17). As such, groundwater contamination can also impact the river. The EA already recognizes that the uranium plume and chlorinated solvent exceed permissible levels (page 4-9). While the ATSDR study failed to identify household or public groundwater users, <u>the EA clearly states that the town of Erwin obtains its water supply from the groundwater, and the closest well is less than a mile from the facility</u>. **An EIS should be undertaken to identify existing contamination (particularly uranium) in the Nolichucky and estimates**

should be made for cumulative exposure based on groundwater and surface water contamination for 40 years, in addition to existing levels of contamination.

2. I am concerned that the EA insufficiently considers risks associated with groundwater contamination. I have visited Erwin in the past and intend to visit Erwin in the future, including restaurants in town. I frequently drink tap water with my meals. I note that the "Town of Erwin's public water is supplied from groundwater pumped from one spring and three wells (Erwin Utilities, 2009), with the closest of these sources, the Railroad Well, located approximately 0.8 km (0.5 mi) from the NFS site" (page 3-13). Groundwater is under remediation "sitewide" (page 3-19) and contains contaminated plumes of uranium and chlorinated solvents, as well as barium, cadmium, chromium, and lead (page 3-18 to 3-19). Yet the EA's analysis for radioactive effluent contamination was calculated based on data for flow in the Nolichucky River (page 3-27). Given that current soil contamination is above background levels (page 2-2), an analysis of Erwin's drinking water supply (in addition to the analysis of river water) would appear to be necessary. **As such, it appears that the public health of those drinking tap water in Erwin was not adequately considered, and must be assessed in an EIS before any decision is issued regarding environmental impacts.**

3. I am concerned that impacts from accidents have not been adequately considered.

According to the EA, NRC staff determined that material control and accountability, critical safety controls, equipment failures, plant building stability, seismic risk analysis, safety culture, terrorism, license violations, NRC enforcement actions , and requests for cancer studies "were beyond the scope of this EA." P. 1-5 to 1-6. As numerous federal courts have held, critical safety controls, the ability of NRS to comply with its permit conditions, seismic risk, acts of terrorism, and cancer studies are all relevant to consideration of environmental impacts and should be considered.

A. The impact section does not consider the possibility that a weather or security event could cause more than one type of accident at the same time. The discussion of accidents on page 4-16 and 4-17 notes that an extreme weather event or security event could cause nuclear chain reactions, UF6 releases, uranium solution releases, and/or a major fire. Yet the analysis of impacts does not consider what happens if weather or security events amounts to more than one of these accidents at the same time. Additional analysis should be undertaken to consider this.

B. The waste disposal section does not consider the impact associated with an accidental leak. There are an 980 55-gallon drums of radioactive hazardous waste estimated to be added onsite over the course of a new 40-year permit period, and stored for an indefinite period of time (page 4-19), and that presumes there is somewhere else for the low-level radioactive waste whose disposal facility is estimated to cease disposal activities in 2023 (see page 4-19). NFS offers annual estimates of 1,832 shipments of decommissioning wastes, 267 shipments of radioactive materials, and 74 shipments of hazardous materials (page 2-7). Assuming NFS' estimate is accurate (NRC has not undertaken any independent analysis), over a 40-year period, this amounts to 86,920 shipments. The environmental assessment should consider impacts based on accidents related to this full volume of shipments as opposed to annual impacts.

According to the EA, "[t]he NFS site appears within the 100-year floodplain of the Nolichucky River and Martin Creek (page 3-13). Over 16% of the site is "former waste ponds and solid waste burial grounds" (page 3-1). Among the materials produced and at least temporarily stored/located onsite are polychlorobenzene,

tetrachloroethylene, and laboratory wastes (page 2-6), as well as ammonium hydroxide, hydrogen, nitric acid, sodium hydroxide, sodium hydrosulfide, sulfuric acid, perchloroethylene, trichloroethylene, 1,20dichlorethylene, vinylchloride, and tributylphosphate (page 3-29). NFS also produces mixed waste, which is both hazardous and radioactive, including radioactive and mercury-contaminated laboratory waste, contaminated lead, pyridine, and radioactively contaminated polychlorbenzene which is stored on site indefinitely (page 2-7). At least part of the site is unlined (page 3-19). Additional, detailed analysis, such as that appropriate for an EIS, should be undertaken to determine both potential leakage from storage as well as necessary mitigation measures (beyond locked in controlled storage, see page 4-18).

Further, the EA's view that "accordance with regulations means no environmental impact" is based on a number of flawed assumptions. First, this view incorrectly assumes that discharges of pollutants or contaminants into the environment will have "no environmental impact" simply if they are occur in accordance with a government permit. Contrary to the EA's view, however, a government permit cannot erase or nullify the effects of the discharge of a pollutant or contamination; it can simply allow (or "permit") such discharges to occur, opening the door to negative environmental impacts that should be analyzed in this case under an EIS. Second, the EA's view assumes that all future effluents will be "in accordance with" operating permits (page 2-3). It further presumes that prior to any wastewater discharge, wastewater will be in compliance with the Facility's NPDES permit, although that permit was expired at the time the NRC issued the draft EA (see Table 1-1). The assessment trusts NFS to monitor itself, to investigate any exceedances, to implement corrective actions, and to notify the appropriate regulatory authority (page 2-8). However, NFS does not have a strong track record of compliance and NRC should not depend primarily on NFS' self-monitoring for assurance that there will be no migration of radioactive, hazardous, toxic, or otherwise environmentally damaging material. Some facility operations were suspended in recent years due to violation of regulations and illegal spills and discharges. Yet NRC determined that accidents are "highly unlikely due to the existence of NRC regulations" (page 4-18). Based on its past performance, NFS has not demonstrated it is fully capable of complying with all regulations. Based on NFS' past behavior, NRC should also consider impacts if/when NFS effluents are not in full accordance with operating permits and regulations.

4. The Safety Environmental Report (SER) has not been adequately considered in the preparation of the environmental assessment. Page 1-1 indicates that the NRC staff "is also performing a detailed safety analysis of the NFS proposal to assess compliance with 10 CFR Parts 20 and 70." Page 1-3 reinforces that the SER "will be prepared" and will contribute to evaluating the potential impacts to public health and the environment associated with the proposed continuation of licensed operations at the NFS site. Given that the SER is relevant to public health and environmental impact considerations, and particularly to impacts associated with accidents, it appears premature to issue a FONSI ("Finding of No Significant Impact") until the SER is incorporated into the agency's own analysis of significant impacts.

The facility has a history of accidents over the last ten years of operation, and these appear to not be taken into account when considering the likelihood of future accidents. One of the reasons cited for no significant impact is that NFS "has a program" to keep radiological exposures and effluents "as low as reasonably achievable" (page 2-8). However, NFS' history of spills and exposures – leading to operational suspensions in the past - indicates either that this "program" has not been followed in the past, or that it is inadequate to ensure no significant impact. "Many of the items found to be safety and/or enforcement issues

are addressed in the SER" (page 1-5 to 1-6). Yet, as noted by the EA itself, the SER is not considered as a part of the EA (page 1-3).

Finally, given that NFS does not plan for substantive maintenance activities (and availability of funds seems to impact maintenance activities, see page 2-9), it seems premature to grant a 40-year license in lieu of a 10-year license, since maintenance cannot be anticipated beyond 10 years. This seems to be a substantive difference that warrants further consideration in an EIS.

5. The impacts associated with the "no action" decommissioning alternative should be included in the 10- and 40-year alternatives as well. At some point, current activities will cease, and it is logical that impacts associated with decommissioning activities to date, *plus* the proposed future activities, would be at least as great as the decommissioning associated with only those activities to date. For example, the 40 year alternative does not consider the impacts of future decommissioning. It seems odd that the decommissioning alternative (described on p.1-3) could have more impacts in some cases than continuing operations for decades and <u>eventually</u> terminating activities. As such, it seems most appropriate for the 10- and 40-year alternatives to also include the decommissioning impacts identified in the "no action" alternative.

6. While the EA bases its conclusion on past permits, it appears some new activities have been undertaken since the last permit application. Specifically, the BLEU Project facility (page 3-1) and processing of Uranium Hexaflouride in a new process line are new activities undertaken less than ten years ago subsequent to previous permit applications. Also, NFS intends to undertake new remediation activities in 2010 where the former plutonium building once stood (page 2-2). Additionally, NFS fully enclosed a creek in an underground pipe in 2005, and the endangered species analysis should consider whether that could have otherwise been habitat of the elktoe mussel. Moreover, "NFS is in the process of completing activities onsite to address impacts " and is currently investigating onsite contamination (page 4-11). This current permit application should fully consider whether these additional activities change any of the last 10-year permit analysis. For example, the permit considers the previous analysis of waste management impacts (page 4-20) and concludes only a "small" impact, but it is unclear whether the permit included additional waste considerations associated with the BLEU and Uranium Hexaflouride activities.

7. The assessment of environmental impacts does not adequately consider what is "significant," as local impacts could nevertheless significantly impact the environment whether or not characterized as "large" in the ratings scale. It could be that an environmental impact is significant even if it does not fully destabilize the broader environment. For example, slow leakage of contaminants into groundwater may cause significant impacts based on migrating material that accumulates over time or that reacts with other chemicals in the environment. As such, the ratings scale seems unable to fully consider impacts related to the accidents and waste leakage, especially since those accumulate over time and are potentially irreversible, given the migration of groundwater and surface waters combined with the half life of some of the radionuclides. It was particularly notable that the ratings scale did not rate impacts by "significant" but rather by "small-medium-large" categories.

For all the reasons described above, it appears an environmental impact statement is warranted. NRC should withdraw its preliminary finding of no significant impact and instead proceed with an environmental impact statement to address the comments described above.

Respectfully submitted,

Kristen Hite, J.D., M.S.
hiteka@hotmail.com