Center for Health, Environment & Justice
Citizens' Environmental Coalition
Nuclear Information & Resource Service

Rebecca Tadesse, Chief
Materials Decommissioning Branch
Division of Waste Management and Environmental Protection
Office of Federal and State Materials and Environmental Management Programs
Nuclear Regulatory Commission
Washington, DC 20555-0001 March 31, 2009

Dear Ms. Tadesse,

We are writing to submit comments on the NRC's proposed Decomissioning Plan in relation to the West Valley nuclear waste site.

As you know, the Department of Energy (DOE) and NYS Energy Research & Development Authority's (NYSERDA) Draft Environmental Impact Statement (DEIS) focused on four cleanup options for the West Valley nuclear waste site: 1) Sitewide Removal; 2) Sitewide Close-In Place; 3) Phased Decision Making; and 4) No Action. In the DEIS, the agencies recommend adoption of the Phased Decision Making Alternative. The problem is that this option would only remediate an estimated 1% of the site's radioactivity in the short-term and delay cleanup decisions for the remaining waste for up to 30 years.

This letter briefly summarizes our comments on the remedial options and the preferred alternative which is the focus of the NRC Decomissioning Plan. We respectfully request a public meeting and separate public hearing to enable many interested community, environmental, conservation, religous and civic groups to speak with NRC officials on the proposed plan. Thank you.

Our organizations, the national Center for Health, Environment & Justice (CHEJ) and Nuclear Information and Resource Service (NIRS), and the statewide Citizens' Environmental Coalition (CEC), urge NRC to support the Sitewide Removal Alternative, a full waste excavation cleanup, and to oppose leaving buried waste on site as it is a serious environmental and public health risk and trying to contain waste for thousands of years is very expensive. We urge NRC to reject the Phased Decision-Making option, DOE and NYSERDA's Preferred Alternative, since it cleans up only 1% of the site's radioactivity and delays a cleanup decision on the remaining 99% radioactivity up to 30 years.

We urge NRC to support the Sitewide Removal Alternative as it achieves the following objectives.
1) Provides a complete cleanup of the entire site through excavation of radioactive and toxic waste.
2) Provides a permanent and safe solution that removes radioactive waste from a site with serious erosion problems, earthquake hazards, and a sole source aquifer.
3) Prevents any catastrophic releases which could pollute community drinking water supplies, Lakes Erie and Ontario, harm public health and cost billions of dollars.
4) Significantly lowers health risks to nearby communities.
5) Provides the most cost-effective approach over the long term according to a recent study. An independent, state-funded study, *The Real Costs of Cleaning Up Nuclear Waste: A Full Cost Accounting of Cleanup Options for the West Valley Nuclear Waste Site,* revealed leaving buried waste at the site is both high risk and expensive while a waste excavation cleanup presents the least risk to a large population and the lowest cost. Over 1000 years, waste excavation costs $9.9 billion while onsite buried waste costs $13 billion, and $27 billion if a catastrophic release occurred. (Visit www.besafenet.com or www.nirs.org or www.cectoxic.org for the full report)

We urge NRC to oppose leaving buried waste on site for the following reasons.
1) Erosion is a powerful and fast moving force at the West Valley site as it sits on a geologically young landscape which is undergoing a relatively rapid rate of erosion. Michael P. Wilson, Ph.D., SUNY Fredonia Professor of Geosciences found in the FCA study that "Nuclear wastes, radioactive for tens of thousands of years, will be consumed by erosion and discharged downstream to Lakes Erie and Ontario in less than 3,000 years and may be dangerously exposed in less than 200 or 300 years."

2) Scientists found the site poses a significant danger to people who live along nearby creeks, Buffalo residents and people living along the shores of Lakes Erie and Ontario. If just 1% of radioactivity leaked from the site, Lake Erie water users would be exposed to substantial radiation, causing hundreds of cancer deaths, and Buffalo and Erie County water replacement would cost hundreds of millions of dollars.

3) The DEIS ignores the fact that the site must be maintained into perpetuity if buried waste is left on site. In this case, perpetuity is not a dozen years, or even two or three generations—the buried radioactive waste would have to be monitored, tracked, and maintained in place for tens of thousands of years with burdensome and expensive maintenance costs. The EIS failed to analyze long term costs of monitoring and maintaining controls at the site for even 1,000 years.

4) NYSERDA raised serious problems with ksey aspects of the DEIS. Essentially NYSERDA stated that the DOE's environmental assessments are scientifically indefensible for long term erosion, engineering controls and health impacts, as summarized below from the Forward of the DEIS.
a) The soil erosion analysis over the long term is not scientifically defensible and should not be used for long-term decision making. Using the current erosion models, predictions of population doses will not be accurate for the long term.

b) The groundwater contaminant transport analysis and modeling cannot be relied on in predicting public radiation doses and long term cleanup decisions.
c) Engineered barriers performance has not been substantiated and may be overly optimistic. Such barriers (caps, slurry walls, etc.) are critical to waste containment, and over the long term public radiation doses could be underestimated.
d) The DEIS should be reframed to reflect the applicable federal requirements. The DEIS should be reframed to reflect the applicable federal requirements. The License Termination Rule (LTR) is the applicable federal regulation, not portions of NRC's low-level disposal regulations. It is not logical to assess the impacts from decommissioning actions that must meet the LTR requirements, but use other, not applicable regulations, to structure the analysis.
e) The waste exhumation analysis is overly conservative and based on extreme conditions, resulting in maximal costs. Alternative methods could reduce the costs of exhumation and waste disposal.
f) The long-term performance assessment for the in-place Closure alternative is "seriously flawed and scientifically indefensible."

We urge NRC to reject the Phased Decision Making Preferred Alternative. Under this Alternative, Phase 1 would include moving vitrified high-level waste to a new storage facility. The Phase 1 new cleanup work includes demolishing the process building in order to excavate the strontium plume source area, cleaning up the lagoons and installing barriers for groundwater contamination. (Some question whether the plume is from leaking tanks.) All of this new cleanup work addresses only 1.2% of the total radioactivity on the site. Decisions on a majority of the waste, or 99% of the radioactivity, will be addressed in Phase 2 including high-level waste tanks, and both radioactive waste burial areas (NDA and SDA), or approximately 600,000 curies. Public participation on the Phase 2 decision making process is not explained or guaranteed.

The potential environmental and health impacts of leaving 99% of the radioactivity on site for another 30 years was not studied. For instance, the high-level waste tanks, with 320,000 curies of radioactivity, are nearing the end of their useful life (50 years) and any leaks could seriously pollute the sole source aquifer. The Decommissioning Plan (DP) claims that the high-level waste tanks will be empty at the start of Phase I, yet neither the DEIS or DP state how and when the tanks would be actually emptied.

Given the past record of decades of delay, the two phased approach with a lengthy 30 year timetable is not responsive or responsible in addressing dangerous contamination. The site sits on top of a sole source aquifer and has been plagued with problems, such as radioactive contaminated groundwater, and radioactivity from the site has been found as far away as the shore at the juncture of the Niagara River and Lake Ontario demonstrating a potential for the leaking site to contaminate drinking water supplies. For instance, the buried high-level waste area (NDA) has been undergoing measures to limit water flow, and a large amount of high-level radioactive waste is buried in deep holes 50 to 70 feet deep which pose a significant risk of leaks to the sole source aquifer.

The public was provided with almost no information on the data collection under Phase I,

which is essential to determining the extent of future decontamination work in Phase 2. If data collection is inadequate, a safe cleanup in Phase 2 is less likely. There is no plan for future public participation on Phase 2 activities.

Lastly, we urge NRC to recommend that DOE and NYSERDA address the following serious flaws in the DEIS.

1) Information Needed on Monitoring and Institutional Controls. The DEIS includes cleanup options where long-lasting radioactive waste is left buried on site, yet there is a serious lack of information on the monitoring and maintenance of engineering and institutional controls to ensure radioactive waste is safely contained. Funds and procedures should also be described that will be in place to respond immediately to any toxic releases. This information is absolutely critical to evaluate whether or not the site can be safely maintained if waste is left buried on site. The full monitoring, maintenance and institutional control program needs to be described in detail under each alternative.

2) Public Disclosure is Inadequate. There appears to be a major discrepancy in the two documents; the DEIS states that DOE will be involved in both Phase I & 2 of the Phased Decision Making Alternative. But, the Decommissioning Plan appears to describe a situation where DOE could leave the site and any responsibility at the end of Phase I in approximately 30 years. If this were the case, it could leave New York State with the responsibility for cleaning up an estimated 99% of the site's radioactivity. This would obviously be a major change, yet there are only a few references in the Plan. It is critical that DOE confirm they will continue their responsibility and commitment to fully remediate the site.

3) State Law Requires a Complete Plan in DEIS. The Phased Decision Making Alternative not only fails to tell us about key elements of Phase I, such as data collection, but it is unclear about what future actions would be done in Phase 2, which could be a violation of the State Environmental Quality Review Act (SEQRA). The SEQRA law requires that a DEIS have a complete plan and that all potential impacts be examined in detail in the DEIS; it does not allow segmentation of an action and an incomplete plan such as the phased decision making proposal.

4) Eliminate Discounting. The agencies inappropriately use discounting in their cost analysis of the cleanup options. The total costs of their analysis should be an undiscounted cost. The economic technique known as 'discounting' undervalues important environmental resources like the Great Lakes and sole source aquifers, as well as future generations. The economists who authored the FCA Study critiqued the use of discounting in nuclear waste cleanups over long time periods for the following reasons. In standard capital investments, a discount rate is applied to account for future interest earnings. For instance, at a 3 percent discount rate, $103 next year has a present value of $100 today, because $100 is the amount one would have to put in the bank today at 3 percent interest, in order to end up with $103 next year. But, since West Valley's waste is radioactive for tens of thousands of years, a cost analysis should start out with at least a review over the next 1,000 years as a first step.

Over periods of 1000 years, any substantial discount rate implies that the health and wellbeing of future generations has no present value—or no worth to us today. Since the cleanup options are meant to protect the public for many generations, we cannot reasonably assume that there is no value to public heath in the year 1000. Also, the existence of regulatory requirements for protection of sites that will remain dangerous for 1,000 years must imply that we care today about health hazards that will be experienced in 3008. Costs and benefits incurred in that distant year must have a significant present value; otherwise, we could ignore them and we could "prove" via discounting that it is not cost-effective to spend anything today on our successors a thousand years down the road. At a discount rate of 1.4 percent, considered low by many economists, $1 million in 3008 has a present value of $1 today. Thus it would not be worth spending more than $1 today to prevent $1 million of harm in 3008. To validate the commonsense idea that outcomes in 3008 matter today, the discount rate must be no more than zero. If we care about the long-term impacts of today's nuclear waste, then the only supportable discount rate is zero. While the choice of a discount rate for short term decisions is an economic question, the choice of an intergenerational discount rate is a matter of ethics and policy. The value of future lives is a strong argument for not using an economic discount rate in this analysis.

Thank you for considering our views. Please let us know if you have any questions or need additional information. Again, we respectfully request a public meeting and separate public hearing to enable many interested community, environmental, conservation, religous and civic groups to speak with NRC officials on the proposed plan.

Sincerely,

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