

**From:** Diane D'Arrigo [REDACTED]  
**Sent:** Tuesday, June 26, 2012 11:40 PM  
**To:** Moira Maloney; Lee M. Gordon  
**Cc:** Barbara Warren; J Hameister; Kathy McGoldrick; Lynda Schneekloth; Barry Miller;  
[REDACTED] Anne Rabe; [REDACTED] Kathy Duwe; Patricia Shelly;  
[REDACTED] Diane D'Arrigo  
**Subject:** Growing Concerns with West Valley Phase 1

DATE: July 27, 2012

MEMO TO: Moira Maloney  
US Department of Energy  
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Lee Gordon  
NYSERDA  
[LMG@nyserda.org](mailto:LMG@nyserda.org)

FROM: Coalition on West Valley Nuclear Wastes \* Citizens' Environmental Coalition\*  
Sierra Club Niagara Group \* Center for Health and Environmental Justice\*  
Concerned Citizens of Cattaraugus County \* Niagara Watershed Alliance\*Cattaraugus  
Bioregion Green Party \* Nuclear Information and Resource Service  
and Judith M. Metzger, Kathleen Duwe, Patricia Shelly

RE: Concerns regarding Phase 1

Attached and pasted regarding ongoing and growing concerns with West Valley Phase 1 activities, decisions and process.

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Coalition on West Valley Nuclear Wastes \* Citizens' Environmental  
Coalition  
Sierra Club Niagara Group \* Center for Health and Environmental  
Justice  
Concerned Citizens of Cattaraugus County \* Niagara Watershed  
Alliance  
Cattaraugus Bioregion Green Party \* Nuclear Information and  
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Moira Maloney  
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Lee Gordon  
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June 27, 2012

Dear Moira Maloney and Lee Gordon:

This memo is geared to addressing both the overall planning for West Valley Phase I studies and public participation as well as the specific issue of the recent proposed new areas of study.

We believe there should be a careful, fully considered and orderly process for Phase I studies that includes full public participation in a serious discussion of all the potential studies including the additional recommendations we made in our February and March 2011 letters.

A serious discussion of these potential studies has not occurred and the Agencies [DOE and NYSERDA] have indicated that these recommendations would be put before the [Independent] Scientific Panel for their consideration. We believe the public should have an opportunity to discuss these recommendations with the Agencies and experts. In our letter we merely listed the recommendations and since that time no discussion has occurred. *When can we expect an opportunity to discuss our additional recommendations?*

We have also been flagging the importance of a thorough discussion of the *Characterization, Sampling and Analysis Plan [CSAP]* with a scheduled opportunity for public input into that plan. Given the immediacy of actions that will be taken under this plan and the importance of the CSAP to adequate site cleanup, this is a more appropriate Next Step than starting the 5 new Potential Areas of Study [PASs] which DOE and NYSERDA now propose.

Pertaining to the recently announced Potential Areas of Study, we have some serious questions about their timing, appropriateness, scope and membership.

First, the Agencies appropriately chose the first Area of Study to deal with erosion. That study team has just begun its work. There has been no report to public yet on their efforts other than who they are and that they have started. Erosion is probably the West Valley site's key characteristic that will drive many of the subsequent evaluations. *We question the commencing of new study areas before the erosion work is further along and ahead of other potential areas of study.* The 5 studies on costs and alternatives to exhumation cannot be independent of the erosion work, climate change work, decisions on length of time considered in the study and on the use of a discount rate in projecting future costs.

Adding to the erosion problem is the fact that climate change was not considered at all in the 2010 Final Environmental Impact Statement. The DOE merely assumed that climate change would not occur for 10,000 years, despite the science that demonstrated otherwise. We are now scheduled to have a full day workshop on climate change this summer to consider how climate change will impact erosion and other site concerns.

In addition, the scopes provided for exhumation and engineered barriers suffer from brevity. We are also concerned that DOE is biased in favor of pursuing only in- place closure. Therefore the usefulness and costs of these two studies will be questionable and questioned by the public, public officials and other experts.

Without a full understanding of erosion and climate change for the WV site, how can an adequate study of exhumation and engineered barriers be done?

The state-funded independent study, *The Real Costs of Cleaning Up Nuclear Waste: A Full Cost Accounting of Cleanup Options for the West Valley Nuclear Waste Site* (FCA Study) found that leaving buried waste on 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 to \$27 billion or more if a catastrophic release occurred and impacted drinking water.

**I. *These are the two areas of study [5 studies] proposed by the Agencies for Exhumation and Engineered Barriers:***

**A. Exhumation**

- Alternative approaches to, costs of, and risks associated with complete waste and tank exhumation
- Viability, cost, and benefit of partial exhumation of waste and removal of contamination
- Exhumation uncertainties and benefit of pilot exhumation activities

**B. Engineered Barriers**

- In place closure containment technologies
- Engineered barrier performance

**II. *Our Recommended expanded and redirected scopes for Exhumation and Engineered Barriers:***

**A. Exhumation**

Using the findings of the Erosion Study Team and the potential impacts of Climate Change:

- Examine the benefits of exhumation at West Valley, particularly over the long term (the many 1000's of years the waste will continue to be radioactively and/or chemically hazardous) for protection of the sole source aquifer, Cattaraugus Creek, underground migration and the Great Lakes.
- Evaluate various exhumation methods and their costs without a discount rate or rate of 0,
- Evaluate outcomes for various contaminated sites where "management

strategies" failed to contain contamination and resulted in increased costs and long term cleanup activities. Include the experience at West Valley where the Strontium plume was not contained, allowed to spread and full cleanup of the plume is so costly that only the source is planned for removal [and there is some question about if and when that will happen].

- Plan for pilot exhumation activities with methods that may decrease the cost of exhumation.
- Similar to the FCA Study, comparison should be made between the cost of full removal sooner versus the costs of active continual indefinite maintenance, remediation and eventual waste removal, rather than assuming that there will be no leakage.

## **B. Engineered Barriers**

Using the findings of the Erosion Study Team and the impacts of Climate change on the area:

- Evaluate the various types of materials and barriers available and the field performance of these barriers in use, especially their useful life. Document the literature on this subject.
- Evaluate barriers necessary for above ground storage and containment over the long term following exhumation.
- Evaluate the useful life of in-place closure methods including frequency of monitoring and long term maintenance and replacement of barriers for adequate containment as well as total costs for monitoring and maintenance over the long term- the length of hazard of the longest-lasting of the buried waste. (The EIS only looked at 200 years.)
- Include the costs continual monitoring and tracking of potential migration and the cost of having to continually put in more barriers as the materials move in different directions and the erosion patterns change. Erosion patterns will change DUE to the barriers so the cost of active maintenance must be fully included in cost estimates and comparisons.
- Similar to the FCA Study, comparison should be made between the cost of full removal sooner versus the costs of active continual indefinite maintenance, constructing more and more engineered barriers, remediation and eventual waste removal, rather than assuming that there will be no leakage.

*The study teams should be instructed that any Studies that are done must not use an economic discount rate and must assess the site and costs on and off site for 10-20 times the half- life of the longest lasting radionuclides in the waste at the site.*

## **C. Discount Rate**

Either use zero for the discount rate in assessing future costs or provide calculations using a range including zero. As indicated in the FCA Study, using a discount rate above zero denies the reality of future costs, skewing the decisions in favor of kicking the can down the road into the future in essence increasing the costs to Western NY, Canada and the Great Lakes ecosystem for many generations to come.

**D. Length of Study**

Rather than arbitrarily cut off the time period for waste burial and maintenance costs and costs of consequences of leakage of radioactive wastes, the study teams shall be instructed to report the cost of burial, excavation/exhumation, the costs of perpetual remediation against the forces of erosion and the consequences of contamination in a more comprehensive way than the Full Cost Accounting Study was able to cover.

**E. Composition and Scope of Study of Study Teams**, especially the 5 new ones.

We feel very strongly that the determination of the membership on the study teams should involve meaningful public discussion and input.

Sincerely,

Coalition on West Valley Nuclear Wastes, Joanne Hameister and Kathy McGoldrick,

[REDACTED]  
Citizens' Environmental Coalition, Barbara Warren, [REDACTED]  
Nuclear information and Resource Service, Diane D'Arrigo, [REDACTED]  
Sierra Club Niagara Group, Lynda Schneekloth, [REDACTED]  
Concerned Citizens of Cattaraugus County, Barry Miller, [REDACTED]  
Niagara Watershed Alliance, Vincent Agnello, [REDACTED]  
Center for Health and Environmental Justice, Lois Gibbs and Anne Rabe,

[REDACTED]  
Cattaraugus Bioregion Green Party, J. David Swift, [REDACTED]  
Judith M. Metzger, [REDACTED]  
Kathleen Duwe, [REDACTED]  
Patricia Shelly, Downstream Denizen, [REDACTED]