To: West Valley Citizen Task Force
From: Bill Logue, Citizen Task Force Facilitator
Date: December, 2008
Subject: **Summary of the December 17, 2008 Meeting**

Next Meeting

The next Citizen Task Force Meeting will be a ***private caucus closed to the public held*** as follows:

Time & Date: **7:00 – 9:30 PM, January 14, 2009**
Location: Ashford Office Complex
9030 Route 219
West Valley, NY

The next public CTF meeting will be held on January 28, 2009 at 8:00 PM. It will be preceded by a public meeting of the Nuclear Regulatory Commission from 6:00 to 8:00 PM.

Note: All participants must be United States citizens and must bring photo identification. If you have questions or comments regarding the upcoming meeting or about this summary, please contact Bill Logue (860-521-9122, bill@loguegroup.com).

CTF Participants

CTF Members and Alternates attending: Joe Atkinson, Chris Crawford, Rob Dallas, Judy Einach, Chris Gerwitz, Mike Hutchinson, Paul Kranz, Lee Lambert, Anthony Memmo, Joe Patti, Pete Scherer, Warren Schmidt, Tim Siepel, Bill Snyder, Ray Vaughan.

Agency Participants and Observers

Department of Energy (DOE): Craig Rieman, Ben Underwood, Cathy Bohan.
New York State Energy Research and Development Authority (NYSERDA): Tom Attridge, Paul Bembia, John Kelly, Andrea Mellon, Paul Piciulo.
West Valley Environmental Services, LLC (WVES): Charles Biederman, John Chamberlain.
Observers: Natalie Condor-Smith (Springville Journal), Bob Engel (CTF Alternate), Joanne Hameister, Kathy Kellogg (Buffalo News) Kathy McGoldrick (CTF Alternate), Rick Miller (Olean Times Herald).

Introductions and Announcements

Bill Logue welcomed the group and reviewed the agenda and meeting documents.[1] Quarterly Public Meetings for 2009 will be held on February 3, May 5, August 4 and November 10. The NRC has requested that a public meeting on the Decommissioning Plan be held on January 28 from 6 to 8 PM prior to CTF meeting. The CTF agreed and will receive the presentation on the full cost accounting study from 8:00 to 9:30 PM.

DOE Presentation on Draft Environmental Impact Statement

Cathy Bohan of DOE presented on the Draft Environmental Impact Statement (DEIS). She noted that the DEIS Preferred Alternative is the result of deliberations starting in 2006 among the Core Team agencies which resolved numerous technical issues. The document addresses DOE managed Waste Management Areas (WMA) 1 -7, 9 and 10, and NYSERDA managed WMAs 8, 11 and 12.

[1] The documents are listed at the end of this summary and may be found at www.westvalleyctf.org

The starting point for the work contained in the DEIS is approximately 2011 at the completion of the current contract. Generally, the **starting point conditions** are:

- Minor uncontaminated facilities closed, emptied and demolished to their foundations.
- Main Plant Process Building (MPPB) decontaminated and demolition ready.
- Vitrification Facility and Remote Handled Waste Facility decontaminated and demolition ready.
- Barrier wall installed and geomembrane cover over NDA to mitigate surface water infiltration.
- Drying system installed for waste tank farm to dry residual liquid waste in tanks 8D-1 and 8D-2.
- Permeable treatment wall and permeable reactive barrier installed to mitigate further migration of North Plateau Groundwater Plume (NPGP).
- Legacy waste shipped off-site (except perhaps non-defense transuranic (TRU) waste because there has been no determination to identify West Valley TRU as defense-related waste and, as such, it cannot be disposed of at WIPP).

Under the **DEIS, the proposed action** is to complete the West Valley Demonstration Project and decommissioning or long-term stewardship of the WNYNSC. DOE proposes to decontaminate and decommission tanks and other WNYNSC facilities in which high-level radioactive waste (HLW) is stored, the facilities used to solidify the waste and any material or hardware used in that process. NYSERDA must determine how the facilities and property that it is responsible for will be managed and decommissioned. In the DEIS, in addition to the required no-action alternative, three alternatives are considered. In all alternatives vitrified HLW canisters will be stored on site until there is a federal waste repository. The alternatives are:

1. **Sitewide Removal.** In this alternative all facilities would be removed over 64 years; environmental media would be decontaminated; radioactive, hazardous and mixed waste would be characterized, packaged and shipped offsite; there would be a number of large facilities constructed to process, treat or contain wastes during the cleanup process.
2. **Sitewide Close-in-Place.** In this alternative all major facilities would be closed-in-place over a period of 7 years. Residual radioactivity in facilities with larger inventories of long-lived radionuclides would be isolated in specially designed enclosures; a buffer area and long-term stewardship would be required; and several large facilities would be constructed.
3. **Preferred Alternative – Phased Decision Making. In Phase 1**: MPPB, Vitrification Facility, and 01-14 Building, source area of NPGP, and lagoons would be removed over an 8-year period; no decommissioning or long-term management decisions would be made for the Waste Tank Farm and support facilities, Construction and Demolition and Debris Landfill (CDDL), non-source area of the plume, or NDA; the State-licensed Disposal Area (SDA) would be under active management for up to 30 years; additional characterization and studies would provide information to support evaluations to determine technical approaches to complete decommissioning; and major construction including an Interim Storage Facility and several barrier walls. In **Phase 2** the Decommissioning or long-term management decision-making would be completed, following approaches determined through Phase 1 evaluations.

The **rationale for phased decision making** is that major facilities, and their potential attendant risk to human health, would be removed, while minimizing the potential for generation of new orphan waste. This includes the source area of the plume. "Orphan wastes" are wastes for which there is no current pathway for disposal. The ability to collect and analyze new information and develop new technologies would allow better analysis of sitewide removal or close-in-place of remaining facilities. The agencies believe this fosters more informed decision making with lower risk to the public and environment.

Ms. Bohan reviewed the **DEIS analysis of potential impacts from each alternative.** These are divided into potential impacts from decommissioning actions and potential impacts from monitoring and maintenance.

1. **Sitewide removal. Impacts from decommissioning actions** include availability of the entire site for unrestricted release; high employment due to long duration of work, higher radiological dose to public (less than one patent cancer fatality); worker doses below administrative controls; largest volume of waste produced and greatest potential for generation of orphan waste; high nonradiological risk associated with number of transport shipments of waste and has the highest discounted cost per avoided person-rem. **Potential impacts from monitoring and maintenance** are negligible because no monitoring and maintenance actions would be required; negligible long-term dose to offsite public and a very small dose to users of the site.
    a. In response to a question, Ms. Bohan noted that "discounted cost per avoided person-rem" is used for purposes of comparison to an NRC guideline of $2,000/avoided person rem that is used as part of the cost benefit analysis. Discount refers to an allowance for the change in the value of money due to inflation and other factors between the time of the cost estimate and the time of actual expenditure to enable comparison of costs in today's dollars for alternatives with very different expenditure patterns.
2. **Sitewide Close-in-Place. Impacts from decommissioning actions** include portions of the site are available for release over time; employment over a short time period; the lowest radiological dose to the public; the lowest worker dose, the lowest volume of waste; the lowest nonradiological traffic fatalities; and the lowest discounted cost per avoided person rem. **Potential impacts from monitoring and maintenance** are a small number of workers in perpetuity; smaller radiological dose to the public and workers; small waste volumes; small long-term radiological doses to the public; and moderate doses to an intruder if institutional controls are lost.
3. **Phased decision-making.** These impacts are analyzed in several segments tied to the phases and final decisions. **Impacts from Phase 1 decommissioning actions** include a portion of the site is available for unrestricted release in Phase 1; lower level of employment than the other alternatives; a total radiological dose between the other alternatives; an average worker dose below administrative controls; more waste than sitewide close-in-place but less than sitewide removal and less than one nonradiological traffic fatality.

    If the Phase 2 decision is removal of remaining facilities, the entire site would be available for unrestricted use and the other impacts would be similar to the sitewide removal alternative. **If**

the Phase 2 decision is close-in-place a portion of the site would be available for unrestricted release; the total employment (worker-years) is similar to Phase 1 plus Sitewide Close-In-Place Alternative; the total population dose would be between Sitewide Removal and Close-In-Place Alternatives; total waste volume similar to Phase 1 plus 30 percent of Sitewide Close-In-Place Alternative and the discounted cost per avoided person-rem similar to Sitewide Close-In-Place Alternative.

Potential impact from Phase 1 monitoring and maintenance are a small number of workers for up to 30 years and a small radiological dose to the public and workers. **If the phase 2 decision is removal** the impacts are no workers would be required and the long-term human health impacts are negligible. **If the phase 2 decision is close-in-place,** a small number of workers would be required in perpetuity and the long-term health impacts are slightly less than the sitewide close in place alternative because of the removal of some facilities during Phase 1.

4. **Potential impacts of the No Action Alternative**. Under this alternative there are no decommissioning actions or impacts. The potential impacts from monitoring and maintenance include: non-impacted areas of the site are available for unrestricted release; workers will be required in perpetuity; annual radiological dose to workers and the public; annual waste generation; a small to moderate long-term radiological dose to the offsite public and potentially lethal doses to an on-plateau resident farmer if institutional controls are lost.

Ms. Bohan displayed a graph showing a sample comparison of doses and risks under the four alternatives. She also noted the ongoing regulatory schedule with the DEIS comments due in June 2009 and a final EIS in November 2009. NRC will be conducting an acceptance review of the Decommissioning Plan through March 2009 followed by requests for additional information (RAI) and responses from DOE with a planned Technical Evaluation Report from NRC transmitted in December 2009 with the Decommissioning Statement of Findings and EIS Record of Decision filed in December 2009. She noted that Public Hearings on the DEIS are scheduled for March 31, April1 and April 2.

In discussion, Ms. Bohan and Mr. Bembia noted that one benefit of waiting during the 30-year assessment period is the decay (and ultimate reduction in radioactivity) of short lived radionuclides such as those in the HLW tank farm and the ability to conduct a proper inventory to determine if remote handling will be necessary or if direct contact is possible should the SDA be exhumed. In response to a question, Ms. Bohan noted that the permeable treatment wall would capture the leading edge of the NPGP that is not removed as part of the source area work. When asked about the primary potential exposure pathway for the person located closest to the site boundary, she responded that the primary potential pathway for exposure analyzed in the impacts for this individual is air; however, the exposure pathways vary with the receptors considered. A CTF member strongly encouraged DOE to be detailed in their responses to public comments. Ms. Bohan stated that the number and type of comments would determine how DOE is able to respond.

Presentation of NYSERDA "View" on DEIS Analysis and Results

John Kelly, NYSERDA Program Manager, presented the authority's "View" on the DEIS which is contained as a foreword to the document. He noted NYSERDA's role as a joint lead agency with DOE for

preparation of the DEIS and as lead for compliance with New York State under the State Environmental Quality Review Act (SEQRA). NYSERDA holds the Part 50 license and DOE's actions are important for the citizens of the state.

NYSERDA had considerable input in the DEIS including review with comments provided to DOE. DOE responded and resolved many of NYSERDA's comments. There was also coordination through the Core Team process. NYSERDA conducted its own Quantitative Risk Assessment for the SDA which is included as an Appendix to the DEIS. In addition, an Independent Expert Review Team (IERT) was convened to assess the adequacy of the analysis presented in the DEIS. More than 11 critical sections were analyzed and a report is posted on the NYSERDA website.

Areas of Concern. Mr. Kelly reiterated that the Preferred Alternative was arrived at through the work of the Core Team and is fully supported by NYSERDA because it allows for significant work to be accomplished while additional data and long-term consequences are assessed. However, NYSERDA has identified (along with the IERT) a number of areas of concern, including:

- **Adequacy of Long-Term Erosion Modeling.** The revised DEIS uses computer models (SIBERIA and CHILD) to calculate changes over tens of thousands of years and predicts serious erosion only near the LLW Treatment lagoons, the SDA and the NDA. The HLW tanks on the North Plateau would not be affected. These predictions contradict field observations for the North Plateau where gullies and slumping are evident. The IERT report notes that the DEIS contains no validation or verification of the models with field data and no uncertainty analysis of the model predictions.
- **Analysis of Contaminant Transport by Groundwater.** DEIS Appendix E presents a 3-D groundwater flow and contaminant transport model which is used to assess release and transport for contaminants in the Close-in-Place alternative. However, impacts to the public use a simple one-dimensional model in Appendix G. The rationale for this difference is not clear. The IERT notes that the 3-D model is essentially sound but could be improved in a number of ways. The sensitivity analysis for the model is seen as not comprehensive enough.
- **Performance of Engineered Barriers.** To account for subsidence, cracking and clogging, engineered barriers are assumed to perform in a degraded condition for the next 10,000 years. The DEIS also assumes that they will not be affected by erosion on the North Plateau and will remain stable. NYSERDA feels that it has not been demonstrated that man-made engineered barriers will maintain their chemical properties over that timeframe. The IERT Report notes additional examples of poorly supported assumptions.
- **Uncertainty in the Long-Term Performance Analysis.** The DEIS uses deterministic long-term analyses relying on single models and values for model parameters and the impacts of uncertainties are handled through the selection of "conservative" parameter choices. A number of these are contained in the last section of Appendix H. The IERT concluded that the DEIS does not demonstrate that the deterministic analysis is conservative or that is has appropriately incorporated or bounded uncertainty. By varying some of the limited crucial parameters in

Appendix H, dramatic effects on performance predictions are seen. Therefore, more comprehensive and transparent analysis would be beneficial.

- **Connection between DEIS Analyses and Applicable Regulatory Framework.** NYSERDA believes that the License Termination Rule, as specified in the NRC Policy Statement for West Valley, is the applicable framework for the long-term performance assessment analysis. They note several instances where 10 CFR 61 (LLW waste disposal regulations) is used, they believe incorrectly, as the DEIS framework.
- **Engineering Approach for Exhumation.** The DEIS suggests using large structures, some with additional structures inside with 3-4' thick concrete walls, as containment buildings for exhuming the SDA, NDA and Waste Tank Farm. The construction and demolition of these structures and classification of the demolition waste as LLW are very costly. NYSERDA believes not all the demolition waste need be classified as LLW and that other types of less expensive structures could be used. In addition, the DEIS assumes that all SDA and NDA wastes need not be classified as Greater-Than-Class C (GTCC), an assumption that adds $3 billion to the Sitewide Removal Alternative estimated costs.
- **Adequacy of Rail Transportation Analysis.** NYSERDA believes that the number of fatalities from rail transportation is overestimated because it assumes only one rail car per train. NYSERDA suggests using a "train-kilometers" as the appropriate measure. CTF members suggested escorts and other ways to reduce fatalities. Mr. Kelly noted that the fatalities were nonradiological and relate to the number of shipments and that NYSERDA believes it is an erroneous calculation and creates a situation where estimated fatalities from rail are greater than those by truck.
- **Long-term Performance Assessment for Close-in-Place.** The above concerns for erosion and groundwater modeling, engineered barriers and handling uncertainties relate to the Close-in-Place Alternative thereby calling into question this option. Therefore, NYSERDA believes that any future decisions involving this alternative will require a revised long-term performance assessment.

In comments and questions, CTF members noted that, at this point in time, no alternative has been selected and therefore the long-term consequences need to be closely examined. CTF members encouraged NYSERDA to present their view at public hearings on the DEIS. Mr. Bembia stated that NYSERDA would look into this. In closing, Mr. Kelly noted NYSERDA supports the Preferred Alternative while emphasizing the need for further studies to support and improve the long-term analysis.

CTF Discussion

CTF members agreed that the January 14 meeting be a private caucus closed to the public. At that meeting the CTF will discuss what level of support each member might have for the Preferred Alternative, what presentations they might desire to make during the comment period and how to approach their work over the coming months.

Observer Comments

An observer encouraged the CTF to look at how to modify the DEIS with substantive comments.

Action Items

Action	Assigned To	Due Date
Coordinate January 28 NRC Public Meeting with CTF	Logue	12/31/08
Schedule December 30 CTF Work Group call	Logue	12/23/08

Documents Distributed

Document Description	Generated by; Date
Agenda	Logue; 12/17/2008
DOE Presentation: Revised DEIS	DOE; 12/17/2008
NYSERDA Presentation: NYSERDA View	NYSERDA; 12/17/2008
Full Cost Accounting Study (Available on website; only CTF members received a hard copy)	Synapse Energy Economics; 11/2008
Compilation of News Articles	NYSERDA; 12/17/2008