

To: West Valley Citizen Task Force
From: Melinda Holland, Facilitator
Subject: Summary of the November 18, 2003, Meeting
Date: December 10, 2003

Next Meeting

The next Citizen Task Force meeting will be held as follows:

Date: December 16, 2003
Time: 7:00 - 9:30 p.m.
Location: West Valley Demonstration Project Site
10282 Rock Springs Road
West Valley, NY

NOTE: All participants must bring photo identification to enter the site.

If you have questions or comments regarding the upcoming meeting or about this summary, please contact Melinda Holland at (828) 894-5963, or Tom Attridge at (716) 942-2453.

CTF Attendees

Attending were: Tim Siepel, Pete Scherer, Lee Lambert, Bill Kay, Gayla Gray (for Lana Redeye), Paul Piciulo, T. J. Jackson, Mark Mitskovski (for Larry Rubin), Ray Vaughan, Warren Schmidt, Mike Hutchinson, John Pfeffer, Nevella McNeil, and Eric Wohlers.

CTF Members not attending (nor represented by an alternate) were: Joe Patti, John Beltz, John Allan, and Bill King.

Regulatory Agency Attendees

Dr. David W. Esh, U.S. Nuclear Regulatory Commission (NRC); Randolph C. Ragland, NRC; Lawrence E. Kokajko, Branch Chief, NRC; Anna Bradford, NRC; Denise D'Angelo, New York State Department of Environmental Conservation (NYSDEC).

Meeting Highlights

- ▶ NRC presentation on the principles of performance assessment;
- ▶ SAIC presentation on the approach to performance assessments at West Valley;
- ▶ Agenda Workgroup report; and
- ▶ Discussion of Congressional Developments and Next Steps.

Meeting Summary

Tom Attridge, NYSERDA, reviewed the documents distributed at this meeting, then Melinda Holland reviewed the agenda. T. J. Jackson introduced himself as the new Acting Director for DOE at West Valley.

Principles of Performance Assessment

Dave Esh, PhD, Senior Systems Performance Analyst with the NRC, gave a presentation entitled “Regulatory Perspective on Performance Assessment”. A Task Force member recommended that NRC consider the rate of sediment removal assumption used in the erosion model as ‘key data’ for the West Valley site. He also reminded participants that 1996 estimates prepared by DOE contractors derived 89,000,000 mrem as the dose from the High Level Waste Tanks, but today the estimate is 100 mrem - both estimates were developed by models. He expressed concern that two different deterministic risk assessment models could produce results that differ by six orders of magnitude and that this difference in results is not justified by the additional cleaning of the tanks. Dr. Esh explained that performance assessments are about understanding why the numbers turned out the way they did, what quality assurance and quality control was performed, whether correct modeling concepts were used, and whether the results make sense. Performance assessments are not a subjective process to obtain the result you prefer. He also stated that NRC reviews performance assessments to evaluate how the natural and engineered features will retain, or not retain, wastes on a site.

In response to a CTF member’s question on how you determine what the health effects might be for long-term nuclear radiation exposure, Dr. Esh explained that estimates must be used. These estimates may be based on real-life exposure study data, and should be designed to be very conservative so as to err on the side of safety.

A CTF member explained his concern about a lack of data regarding the possibility that contamination is migrating along vertical channels created by attempts to straighten the pilings (during construction) that were used to support the main plant building. He also stated that he has not received a reply to his letter to NRC on this subject. Dr. Esh explained that he has not seen this letter, but if the situation described may affect the pathways for mobility of wastes, it needs to be evaluated in the performance assessment. This evaluation would look at where the contamination might go, how mobile the wastes are, whether additional data is needed, and how to best collect this data. He stated that NRC will apply the ‘reasonable person standard’ in evaluating this information.

A Task Force member asked whether NRC’s License Termination Rule (LTR) standards will be applied to allow a 25 mrem dose from the SDA plus 25 mrem from the remainder of the site. Dr. Esh responded that the LTR says that doses should be integrated from a risk analysis standpoint, but he is not sure how NRC’s lawyers and policy makers will interpret this provision at West Valley. Another CTF member asked how NRC will analyze exposure to populations employing a subsistence lifestyle such as some Native Americans. Dr. Esh responded that the differences in consumption/exposure between Native Americans and the average member of the critical group (which is usually assumed to be a farmer eating crops, dairy, meat, etc. that they have grown) may need to be considered in the performance assessment, if local Native Americans are a group that could receive radiation dose from the site. Another Task Force member noted that in a catastrophic release from the site to Cattaraugus Creek, members of the Seneca Nation may receive higher doses. Dr. Esh explained that they would analyze dilution in the stream, but the key is calculating accurate numbers for the specific situation in question.

In response to a question about what level of detail NRC reviews when examining a performance assessment, Dr. Esh explained that they are like miners, delving from the surface of the information presented down to the details of hand calculations, referenced reports, conceptual models, and computer models, depending on what the performance assessment shows and the complexities of the site. He also explained that the performance assessment is given more weight in the decision making process at complex sites, but there is no set percentage weighting. In response to another question, he stated that the models and assumptions used are re-evaluated over time as important new data is available, and models are tested using data from past events. However, performance assessments may deal with time frames exceeding 1,000 years, and there is no way to validate those long-term predictions. He explained that

when you extrapolate time and spatial scales you add an additional source of uncertainty which the decision maker needs to understand.

In response to a question about protection levels for fish, Dr. Esh explained that NRC does not have regulations to protect biota, only humans. In response to another question, he stated how the performance assessment starts with a long list of radioisotopes which is shortened using a screening process. The remaining isotopes are entered into the computer models. He clarified that dosimetry deals with exposure to a particular amount of radioisotope, and that NRC uses federal guidance documents to evaluate the dosimetry information in the performance assessment. Dr. Esh suggested that CTF members review NUREG-1573 for additional details on performance assessment methodology.

A CTF member questioned how NRC can model the institutional bias of an agency for under estimating risk versus NRC's tendency to be more conservative. Dr. Esh explained that NRC's goal is to objectively review risks, they attempt to balance safety against unreasonable cost and regulatory burden.

In response to a question, Dr. Esh explained that he is not yet familiar with the SIBERIA erosion model, but will be soon as it is being used for calculations regarding West Valley. He also explained that NRC uses data from releases like happened at Chernobyl when the circumstances are similar enough to make the data applicable.

Approach to Performance Assessment at West Valley

Joe Price, SAIC, (via speakerphone) gave a presentation on the approach being used for performance assessment at West Valley. A Task Force member questioned the 'best estimate' on erosion model runs for sensitivity analysis and what sediment removal rate is being used in the erosion modeling. Dr. Price explained some of the variables in the erosion model, for example "rill erodibility"¹ where surrogate data from other sites was used and calibrated with available data from WVDP. In this case they looked at conditions corresponding to frequency of occurrence at the 10 percent mean, and 90 percent levels for national data. He added that it is impossible to measure erodibility over the entire WVDP site over a long period of time.

A CTF member asked if the modeling would consider the chances of the return of the glaciers which made the area's lakes 10,000 years ago. Dr. Price responded that all they have are currently available predictions which say the next glaciers are expected in 100,000 years. However, he noted that there is a great deal of uncertainty about climate change over the next 1,000 years. Decision makers will need to understand this uncertainty.

In response to a question about what data is missing or desired; Dr. Price responded that he would like to see groundwater data below and within the Kent Recessional, and real-time, long-term erosion data. Extensive groundwater data has been collected over the last 20+ years, but it is still not over a long enough time frame, so they will use the best information available.

Another Task Force member asked if SAIC will use deterministic risk-assessment or probabilistic risk assessment at West Valley. Dr. Price explained that guidance from NRC and the Environmental Protection Agency (EPA) requests probabilistic analysis, thus they will use that approach to the extent feasible. They are using probabilistic risk assessment for groundwater on each facility and the site as a whole.

¹. This refers to the development of small channels.

In response to a question, Dr. Price reviewed the exposure pathways under analysis as including those typical for the “residential farmer:”

- ▶ Primary drinking water intake rate;
- ▶ Fish consumption;
- ▶ Irrigation of farm land;
- ▶ Dust and skin exposure;
- ▶ Eating crops; and
- ▶ Drinking milk from on-site cows.

Dr. Price explained that the residential farmer is used by EPA, NRC and DOE to bound the upper range of possible exposure. A CTF member cautioned that the Seneca Nation members may not consume the same foods as a typical farmer, they eat deer, grow their own tobacco, and gather berries.

Congressional Update

Task Force members commented that to the best of their knowledge, neither the West Valley amendment nor the Waste Incidental to Reprocessing amendment are in the Chairman’s markup of the Energy Bill which is believed to have passed the Committee and the House.

CTF members stated that it is time to start planning another CTF trip to Washington D.C. to visit the WNY Congressional Delegation. Mark Mitskovski agreed to contact Scott Sroka of Senator Schumer’s staff about timing for a CTF visit and about the status of the Energy Bill. Another Task Force member stressed the need to have a defined mission for a visit to Congress. He noted that the WNY delegation held a meeting with DOE Secretary Abraham last week but no one that he knows was notified of the results. A CTF member suggested the site budget, status of the site cleanup, and future legislation to resolve the disputes between DOE and NYSERDA, as possible topics for a meeting with the delegation.

Agenda Workgroup Report

Melinda Holland briefly summarized the Agenda Workgroup conference call held on November 10th and reviewed the draft list of topics proposed for the 2004 CTF Work Plan. A member of the Agenda Workgroup suggested that in preparation for the February meeting, CTF members should develop a comparison of DOE’s preferred alternative and the CTF’s recommendations.

A DOE representative questioned NYSERDA’s preferences for future use of the site. A NYSERDA representative responded that the agency has not decided on a future use but wants the site cleaned up to NRC’s criteria, independent of the type of future land use. He noted that NYSERDA’s ownership of the site and the WVDP Act make this site different than other DOE sites considering re-use. The Agenda Workgroup proposes a CTF meeting in April to discuss future site use and risk-based end states.

A Task Force member suggested adding a discussion of the site’s economic impact to the local/regional community to the 2004 CTF Work Plan.

A CTF member asked NRC if their agency has commented on DOE’s risk-based end state proposals and if the CTF could have copies. A NRC representative responded that DOE asked them to submit comments, and they will continue to comment as the policy and its implementation develops. He suggested that the CTF obtain NRC’s comments directly from DOE. An NRC representative also mentioned that the National Academy of Science’s study of the impacts of DOE’s risk-based end states policy has recently started with the next meeting scheduled for December.

Observer Comments

There were no observer comments.

Next Steps

Future Task Force meetings will be held on December 16 and January 14.

A Task Force member requested additional clarification on an action item from the October meeting, seeking more information on the impact of DOE's proposed preferred alternative on site employment predictions.

Action Items

Action	Assigned To	Due Date
Provide CTF members with copies of the additional slides used by Dr. Esh	WVNSCO	12/10/03
Contact Scott Sroka of Senator Schumer's staff about timing for a CTF visit and about the status of the Energy Bill; share with the CTF	M. Mitskovski & M. Holland	12/5/03
Develop a comparison of DOE's preferred alternative and the CTF's recommendations	Technical Workgroup	2/6/04
Provide the CTF with a copy of NRC's comments on the risk-based end states policy from DOE	T. Attridge	12/5/03
Confirm Dave Geiser's [DOE Headquarters] participation in the December CTF meeting and request recent documents on LTS and RBES	M. Holland	12/1/03
Provide the CTF with information on the impact of DOE's proposed preferred alternative on site employment predictions	T. J. Jackson, DOE	12/16/03

Documents Distributed

Document Subject	Document Description	Generated by–Date (if applicable/known)
Regulatory Perspective on Performance Assessment	Presentation	Dave Esh, NRC (11/18/03)
West Valley EIS Approach to Risk Assessment	Presentation	Joe Price, SAIC (11/18/03)
Summary of the November 10, 2003 Agenda Workgroup Conference call	Meeting Summary	Melinda Holland (11/17/03)
Summary of the October 21, 2003 CTF Meeting	Meeting Summary	Melinda Holland (11/13/03)
November 18, 2003 CTF Meeting Agenda	Meeting Agenda	Melinda Holland (11/13/03)