To: West Valley Citizen Task Force
From: Bill Logue, Citizen Task Force Facilitator
Date: November 14, 2009
Subject: **Summary of the October 28, 2009 Meeting**

Next Meeting

The next Citizen Task Force Meeting will be:

Time & Date: **7:00 – 9:30 PM, November 18, 2009**
Location: Ashford Office Complex
9030 Route 219
West Valley, NY

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: Rob Dallas, Robert Engel, Judy Einach, Chris Gerwitz, Mike Hutchinson, Lee Lambert, Kathy McGoldrick, Anthony Memmo, Joe Patti, Pete Scherer, Warren Schmidt, Tim Siepel, Bill Snyder, Ray Vaughan, Eric Wohlers.

Agency Participants and Observers

Department of Energy (DOE): Bryan Bower, Moira Maloney, Craig Rieman, Ben Underwood.
New York State Energy Research and Development Authority (NYSERDA): Tom Attridge, Paul Bembia, John Kelly, Andrea Mellon, Dave Munro, Paul Piciulo.
West Valley Environmental Services, LLC (WVES): Charles Biedermann, John Chamberlain, John McKibbin, Steve Warren.
US Environmental Protection Agency: Mike Basile, Paul Giardina.
NY Department of Environmental Conservation: David O'Herir.
Observers: Jessie Owen (Springville Journal).

Introductions and Announcements

Bill Logue welcomed the group and reviewed the meeting documents.[1] He informed the CTF that in the near future he would ask for volunteers to review the year end assessment questionnaire before it is disseminated.

EPA Discussion Concerning 40 CFR 191 and 40 CFR 197

Paul Giardina, Chief Radiation & Indoor Air Branch, U.S. EPA Region 2, gave a brief presentation concerning the EPA stance on 40 CFR 191 and 40 CFR 197 as they relate to the West Valley Demonstration Project (WVDP) and the Western New York Nuclear Service Center (WNYNSC). He noted the exchange of correspondence among the agencies on the issue. In brief, he stated that EPA takes the position that certain radioactive wastes at the site require a level of protection equivalent to that which would have been provided at a designated storage or disposal site for spent nuclear fuel and high-level waste. This includes certain wastes in the NRC-licensed Disposal Area (NDA) and the State-licensed Disposal Area (SDA), the 275 high-level waste (HLW) canisters and possibly the HLW tanks. Current data

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

indicate that the WVDP site is unsuitable for disposal of HLW; consequently, EPA would apply 40 CFR 191, its HLW standards for management and storage of these wastes.

If the Environmental Impact Statement (EIS) does not address requiring an end state for Phase-2 of the preferred alternative for these HLW and some other wastes; the question arises as to whether the site should be considered a disposal site and meet the stringent requirements of 40 CFR 191. He noted that the EPA requirements are similar to those promulgated for the Yucca Mountain repository for the period up to 10,000 years. Yucca Mountain has site specific standards for 10,000 to 1 million years. EPA has provided guidance to DOE concerning the HLW, spent fuel and Greater-Than-Class-C waste in the tanks, canisters and NDA.

Mr. Giardina noted that, in correspondence, NYSERDA has indicated in part that "more analytical work is necessary before a supportable Phase 2 decision can be made. We do believe that continued monitoring and maintenance of the SDA for some period of time is an option that should be considered in the EIS for the Phase 2 decision." He stated that the 30-year ongoing assessment period in the Draft EIS was selected in part because it would for the time necessary to find disposal options. A timeframe the EPA still believes is appropriate. Since the release of the DEIS the viability Yucca Mountain Repository has come in to question. Nonetheless the agency believes that within 30 years, and perhaps sooner, it is possible to have the wastes studied, possibly retrieved, packaged, safely stored on-site and ready for ultimate disposal off-site. DOE is examining both the 30-year period and potentially shorter time frames. EPA believes that NYSERDA has not committed to such timeframes. EPA supports the longer timeframes so as to allow for the determination of suitable future disposal options and has encouraged DOE to investigate new technologies that could be applied to the HLW tanks.

Discussion. A CTF member asked if this position by EPA would potentially bias any future decisions at the site. Mr. Giardina noted that EPA had a goal of shortening the decision making process and that the wastes could be removed and stored in protective canisters which meet NRC criteria for a 30-year period but this was complicated because a repository is not likely to be operating for these HLW, spent fuel and Greater-Than-Class C wastes any time in the near future. Mr. Giardina stated that he believes that EPA's position would be that no further NEPA coverage will be needed if the waste is taken to a licensed disposal facility. If no facility exists the waste is deemed orphan waste. NEPA coverage would be required if the WVDP were to be deemed a disposal site. Similar letters concerning 40 CFR 191 and 197 have been sent to the Army Corps of Engineers for the Niagara Falls site but that he was unaware that any other region had done so or if they had facilities similar to WVDP or Niagara Falls. He noted that, because decay could address a number of site issues including the North Plateau Ground Water Plume (NPGP), the SDA and NDA are central to the decision making process because of the high level of curies they contain. The removal of those HLW wastes would significantly reduce risk.

Paul Bembia stated that NYSERDA will assess the requirements provided by the EPA. He agreed with Mr. Giardina concerning the presence of long-lived curies, but said he believes there is no HLW in the SDA. If the Phased Decision Making alternative is selected, selective exhumation, as mentioned by Mr. Giardina, will be one of the options that will be studied, among others. The SDA is under license and permit and therefore there is no requirement to decommission. Therefore, the SDA could be maintained in place while additional information is gathered to inform a final decision.

In response to a CTF member question, Mr. Giardina noted that he was not aware of any available interim facility if Yucca Mountain is not available as a national repository. Mr. Bower noted that citizens in locations that might be considered for storage might object to having the wastes stored at their facilities. Mr. Giardina stated that EPA and NRC were in frequent communication and he believed that a single solution is necessary for the entire site.

Consent Decree

Dave Munro, Deputy Counsel at NYSERDA provided an overview of the settlement of the litigation between New York State and the federal government which resolves the allocation of financial responsibility for various waste management areas but does not affect in any way the cleanup alternatives being considered in the EIS process. He advised that the New York Attorney General's office had filed the settlement agreement, known as a consent decree, in federal court in Buffalo on October 27. Mr. Munro thanked the CTF for their patience as the parties undertook the confidential mediation process that did not allow them to disclose the status of the discussions. New York (including NYSERDA and New York State Department of Environmental Conservation) filed the lawsuit in December 2006 and presented claims concerning the extent of the federal government's duties under the WVDP Act, Federal Superfund law, and the Nuclear Waste Policy Act.

Settlement Terms. The settlement addresses allocations for each facility and area based on a number of criteria including:

i. whether (or extent) covered by the WVDPA,
ii. source of wastes,
iii. ownership of the site,
iv. which government operated the facility and when,
v. each government's involvement in contamination of the facility, and
vi. other miscellaneous factors.

Using these criteria the parties agreed to the following allocations: SDA US 30%/NY 70%, NDA US 50%/NY 50%, Main Process Plant US 90%/NY 10%, NPGP US 50%/NY 50%, Lagoons US 90%/NY 10%, and Waste Tank Farm US 90%/NY 10%. The Consent Decree also allocates responsibility regarding areas of soil contamination, as well as piping and certain other matters. Certain claims and defenses relating to the Waste Tank Farm are reserved. Mr. Munro noted that the settlement allocations had been improperly reported in the press. Both he and DOE counsel Ben Underwood urged the CTF to carefully read the consent decree in order to understand the various allocations and other settlement terms.

The consent decree contains provisions for consultation in the design and implementation of remedies and documenting of costs. In the event the state and federal governments disagree as to the meaning of any of the settlement terms, the consent decree sets forth a dispute resolution process, by which disagreements will be resolved through a structured negotiation process and possible petition to the court.

Mr. Munro explained that at the request of the parties, the court will not act on the consent decree until the public has had 30 days to comment. Following the comment period the parties will review the

comments, determine if any modifications are warranted and either withdraw the decree or ask the court to approve it. The settlement does not resolve several claims including a natural resource damage claim which will be "tolled" and the Nuclear Waste Policy Act claim, addressing responsibility for payment of disposal costs for HLW, which will be litigated.

A CTF member stated that the 50/50 allocation for the NPGP did not seem appropriate because the plume had spread during a time when DOE could have taken action to mitigate the spread but did not. Mr. Munro responded that the reason the two governments decided on the 50/50 split was because: (1) the plume became contaminated during the time that the State controlled the area, but (2) the size of the plume increased during the time that DOE controlled the area under the WVDPA.

Quantitative Risk Assessment for the SDA

Dr. John Garrick, Project Director, and Dr. John Stetkar, Principal Investigator, for the SDA Quantitative Risk Assessment (QRA) provided an update of the revised QRA. Dr. Garrick noted the other members of the team and provided a brief update on the value added by providing such an assessment. He stated that a QRA is designed to address the basic question "what is the risk of an event?" Implied in this are three other questions: 1) What can go wrong, 2) How likely is it to go wrong, and 3) What are the consequences? The results generally predict the possible frequency of an event and the confidence in the frequency that an event might occur; in other words the level of uncertainty. The results do not predict *when* an event might occur. As an example he noted that a super volcanic eruption occurs in Yellowstone every 600,000 to 650,000 years and that the last eruption was 640,000 years ago. The knowledge predicts the likelihood but not the timing of an event.

Dr. Garrick also noted that scenarios are used in QRA's to determine if the right questions are being asked. He cautioned that models are very helpful but are "not the real thing." The scenarios are based on an understanding of the system or facility. The likelihood of events are predicted based on the evidence supporting the scenario and the consequences of the event are based on the endpoints of the scenario. A probability distribution is then developed and can be used to enhance safe operations and decision making in managing risk.

Dr. John Stetkar reminded the CTF that NYSERDA staff had presented an overview of the QRA a year ago and that the evening's update was to review information refined in the last year. The QRA addresses risks to the SDA only for a 30 year period from 2010 to 2039 and provides a snapshot of the risk at this time. A QRA can be continuously updated.

Dr. Stetkar noted the five release mechanisms from the SDA for contamination which include: liquid releases via groundwater though the unweathered Lavery Till; liquid releases via the weathered Lavery Till; surface runoff through trench overflow; physical breaches of the trenches; and extensive physical disruption with airborne release. He noted that in the 2008 QRA the two releases through groundwater accounted for 92% of the risk. In updating the QRA a number of enhancements were made in the data including: improved evaluation of trench water level probabilities, Buttermilk Creek water sampling and uncertainties in SDA liquid radionuclide concentration; improved correlations of precipitation incidents, trench overflow volumes, and creek flow rates; assessment of nuclear criticality; and sensitivity

assessment of terrorist attacks, deliberate acts of destruction, and effects from climate change. He noted that criticality (the ability of the materials to reach critical nuclear mass resulting in a fission event) was for all intents and purposes not an issue. There was brief discussion of the types and locations of Plutonium in the trenches. NYSERDA is relying on Dr. Wild's report from 2002 and Paul Giardina noted that EPA had a report from 1977 that he can make available. The QRA took a conservative approach by using the 2002 radionuclide inventory analysis and did not account for any decay over time.

The analysis of trench water level probabilities for the 2009 update include new precipitation data and conditions that might allow infiltration of water into the trenches. The risk related to trench overflow reduced significantly, as did the groundwater flow through the Lavery Till layers. The probability that trench water levels will remain the same for the assessment period analyzed increased to 93.5%. He displayed a number of graphs indicating the risk of release frequency per year as a factor of the dose to two potential receptors – a resident farmer and a hunter/hiker. The risk curves show a higher frequency of low consequence events and a low frequency of high consequence events. With the higher dose the level of uncertainty grows.

The revised QRA shows a reduction in the risk of groundwater releases from 95% to 55% presenting a more balanced risk profile. The other forms of release could appear to have increased; however, this is actually a result of the reduction in the groundwater release risks thereby causing the other release mechanism to appear proportionally larger. In conclusion, Dr. Stetkar noted that the QRA results confirm the risk to public health from operating the SDA over the next 30 years is below widely applied radiation dose limits. There is a high confidence that potential releases of radioactive materials from the SDA may result in a one-year dose to any member of the public of 100 mrem, or more, will occur much less often than once in 30 years. This low level of risk will be maintained only if NYSERDA continues to operate the SDA according to its current physical and administrative controls. There is large uncertainty about a number of issues including: models and analyses for groundwater release pathways, estimation of radionuclide concentrations in trench leachate and evaluation of SDA slope stability and non-seismic slope failures. There is confidence in radionuclide solids in the trenches but leachate sampling occurred in 1986, 1991 and 1992 and therefore more information is needed.

In response to a question Dr. Garrick stated that in-house staff could be very capable of performing a QRA because they are familiar with the systems being analyzed. He noted that in the nuclear power industry the assessments have become a common management tool that influence operations and maintenance more than regulatory compliance. Various CTF members noted that improved meteorological data and records for locations closer to the WDVP could better inform the analysis and noted that, from personal experience and measurements, that rain events could be quite dramatic. A CTF member encouraged the agencies and QRA team to collect data whenever it is available. In response to a comment, Dr. Stetkar stated that during the 30-year period climate change was not a significant factor in the risk assessment given the existing year to year variability. A member encouraged the team to review several reports on climate change that analyze temperature variation and its potential exponential effects. A DOE/NOAA study from 2008 was referenced. Dr. Stetkar noted that for erosion the team did look at storm intensity.

CTF Letter to Congressman Massa

The CTF signed the letter to Congressman Massa and asked Warren Schmidt to deliver it.

Upcoming Meetings

For the November meeting NYSERDA will present on the potential release of the Bulk Storage Warehouse and some portions of the site, DOE will present on Recovery Act Projects and the CTF will discuss comments on the Consent Decree. At a future meeting DOE will present the status of their examination of tank exhumation options.

Observer Comments

There were no observer comments.

Action Items

Action	Assigned To	Due Date
Preview Yearend Survey	Logue	11/16/09

Documents Distributed

Document Description	Generated by; Date
Meeting Agenda	Logue-10/28/09
Correspondence between EPA/DOE/NYSERDA	9/1/09,9/4/09 & 10/1/09
EPA 40 CFR Part 191 Handout	EPA
Presentation On Settlement of Litigation Between NYSERDA and DOE	NYSERDA 10/28/2009
Letter to Court submitting the Consent Decree	NY Atty General 10/27/09
Notice of Lodging of Consent Decree	10/27/09
Consent Decree	NYSERDA/DOE
Governor Paterson Announcement of Settlement	10/27/09
Presentation of Dr. John Garrick re QRA	Garrick – 10/28/09
Presentation of Dr. John Stetkar re QRA	Stetkar – 10/28/09
Biography of Dr. Garrick	
Biography of Dr. Stetkar	
CTF Letter to Congressman Massa	CTF - 10/28/09
Newspaper clippings distributed at the meeting	NYSERDA; 9/23/2009