

To: West Valley Citizen Task Force
From: Bill Logue, Citizen Task Force Facilitator
Date: October 24, 2017
Subject: **Summary of the September 27, 2017 Meeting**

Next Meeting

Date & Time: **October 25, 2017, 6:30 – 9:00 PM**
Location: Ashford Office Complex
9030 Route 219
West Valley, NY

CTF Members and Alternates Attending

Charlie Davis, Clyde Drake, Todd Gates, Lee James*, Paul Kranz*, Eric Lawton, Kathy McGoldrick, Tony Memmo*, Joe Patti, Ray Vaughan.

Agency Participants and Observers

Department of Energy (DOE): Bryan Bower, Marty Krentz, Audrey Seeley, Zintars Zadins.

New York State Energy Research and Development Authority (NYSERDA): Paul Bembia, Brad Frank, Lee Gordon, Andrea Mellon, Jane Pietraszek.

CH2M HILL BWXT West Valley, LLC. (CHBWV): Scott Anderson, Cindy Dayton.

New York State Department of Environmental Conservation (NYSDEC): Pat Concannon*, Ken Martin.

Neptune and Company: Terry Jennings, Dan Levitt.

Public: Diane D'Arrigo*, Paul Siepierski, Barbara Warren*.

INTRODUCTIONS, ANNOUNCEMENTS, ADMINISTRATIVE BUSINESS

Bill Logue welcomed all present and reviewed the meeting agenda and materials¹.

CHBWV PROJECT UPDATE

Scott Anderson of CHBWV presented a project update. He showed a video of the start of the demolition of the Vitrification Facility and the celebratory event celebrating.

Safety. At the Vit Facility demo celebration Stacy Charboneau from DOE Environmental Management Headquarters presented WVDP with the Voluntary Protection Program Star Award. In August a minor first aid required treatment resulting in a recordable injury. The twelve-month average for Total Recordable Cases is 1.67 and Days Away, Restrictions, Transfers at 1.0. Given the small workforce, with no further incidents, this number will take several months to diminish.

Mr. Anderson then reviewed the four contract milestones noting that the Milestone 1, relocation of the High-Level Waste (HLW) canisters to long term interim storage, was complete.

Milestone 2- Legacy Waste. Legacy waste is being processed in “campaigns” where similar wastes and container types are grouped. Work is primarily in the LAG Storage Area and Remote Handled Waste Facility (RHWF). The last two non-HLW drums were removed from the Chemical Process Cell (CPC). This was complicated because the polyethylene overpack had degraded due to radiation. The CPC is now empty of all waste. A number of legacy waste containers were size reduced for disposal. Legacy waste shipment is 68% complete and is scheduled for completion in October 2018.

Deactivation Progress Under Milestone 3. The Vitrification Facility (VF) demolition started on September 11th. It is the first Vit Facility demo in the country. The work involves machines that peel and remove structural elements, size reduce them, and pack them in intermodal containers for trucking to rail transfer points and shipment to western disposal sites. Mr. Anderson showed a number of pictures of the process and progress of

¹ Each is listed at the end of this summary and may be found at www.westvalleyctf.org

* Participated by telephone.

demolition and debris packaging. The Main Plant Process Building (MPPB) deactivation is 77% complete with seven crews working. Two are performing asbestos removal and five are on deactivation in radiological areas. He noted that the remaining work is among the most difficult.

Balance of Site Facilities – Milestone 4. Nineteen of 47 other facilities on the site have been demolished with no further work planned at this time. Infrastructure improvements and reconfiguration and repairs have been initiated. The new water treatment system building is almost ready to put into service, as is a new data center and phone system. WVDP crews have been clearing vegetation to ready the rail spur for upgrades in anticipation of waste shipments by rail. Planning continues for on-site electrical distribution and natural gas service.

MAIN PLANT PROCESS BUILDING VENTILATION

As requested at the previous CTF meeting, Mr. Anderson presented an overview of the MPPB ventilation. He noted that all discharged air passes through HEPA filters that are tested annually for efficiency. Last year less than 1% of the allowable NESHAP radiological emissions were discharged. With decontamination efforts less airflow will be required, however, all air will continue to be filtered and a phased approach will be used to shut down ventilation prior to MPPB demolition. The approach has been reviewed by DOE, NYSERDA, EPA and NYSDEC. Mr. Anderson presented several diagrams showing which MPPB areas were open air demolition ready, which were vented through the main stack, supplemented by portable ventilation units or the replacement ventilation unit in the current configuration, in a configuration without the main stack and in a future configuration. Currently 56,000 ft³/minute are vented. This capacity will remain, however, about 16,000 ft³/minute will be taken over by the replacement unit and 10,000 ft³/minute by the portable unit. Fixative has been applied to contain radiation to surfaces. At the time of MPPB demolition only the Replacement Ventilation Unit will be operating to vent the General Purpose Cell.

PROBABILISTIC PERFORMANCE ASSESSMENT (PPA) CONTRACT UPDATE

Zintars Zadins, PhD, of Restoration Service, Inc. provided an update on the PPA work. The purpose of the PPA is to develop a model to support Phase 2 decision making, including supporting the development of alternatives to be evaluated in the Supplemental Environmental Impact Statement (SEIS) as the PPA will evaluate how potential source term removal and application of engineered barriers effect the long-term performance of site facilities relative to the License Termination Rule (LTR) criteria. Reports for the Features, Events, Processes, and Scenarios (FEPS) and Conceptual Site Model (CSM) are complete and available on the DOE WVDP website.

Current PPA work includes:

- **PPA Model development** including model structure (Waste Management Areas (WMAs), facilities, decision units), site geology and hydrogeology and engineered barriers) and input parameters (radiological and chemical inventory, and material properties, e.g., geological, hydrological, species, fluids, waste).
- **Groundwater Modeling** including FEHM (Finite Heat Element and Mass transfer) (3D groundwater flow and contaminant transport), geological framework model and engineered barriers.
- **Erosion Modeling** including gully and hillslope erosion rates (based on Erosion Working Group field studies, site studies, LiDAR, literature review and aerial pictures), timing of facility encroachment.
- **Human Dose and Risk (HDR) Modeling** including initial modeling to define the scope and complexity of the HDR model, screening evaluation of importance of chemical and radiological risks, human exposure scenarios and exposure concentrations.
- **PPA Website** which will contain PPA references and the PPA model.

Dr. Zadins stated that flexibility was being built into the model for things such as multi-layer covers and subsurface walls and materials properties (porosity, density, etc.). The groundwater modeling will be more detailed and sophisticated and at a finer grid size than the groundwater modeling work done to support the 2010 FEIS. It draws on the site well and boring data and creates a 3D representation above the bedrock for the Buttermilk Creek Valley. In response to a question, Dr. Zadins committed to finding information about the calibration of the PPA erosion modeling time frame. For the HDR model the typical scenario is a resident farmer growing crops and raising chickens.

Following this overview, Dr. Zadins reviewed how the PPA Model would work on the GoldSim modeling platform showing how the WMAs and subunits and decision units fit together and how each unit could be

included or not in the analysis depending on the alternative analyzed – no-action, selective exhumation and removal. He also showed graphics of how the geology/hydrogeology was represented and how the engineered barriers would be modeled. Members of the public will be able to simulate scenarios using an online GoldSim player. In response to a question about modeling of erosion from the creeks to the Disposal Areas, Dr. Zadins committed to share the slope angle assumed in the model. In response to a question about the degree to which the subsurface conditions in the model reflected actual field conditions and how this might impact predicted erosion rates Dr. Zadins, Mr. Bower of DOE, and Lee Gordon of NYSERDA stated that the available data was simplified but had been gathered from wells and other site work and will be included so that model runs can provide an uncertainty distribution. Information about calibration and central tendencies will be available in the design documents

PATH TO A PHASE 2 DECISION

Bryan Bower of DOE reviewed the elements of the Phased Decision Making process. The Regulatory Roundtable will meet October 25th to review the schedule of documents, scope, NEPA and SEQRA process and other activities. He noted that various studies and Phase 2 and Decommissioning Plan documents would be released in batches and the CTF should consider work groups to ease the workload on the members.

The 2010 Consent Decree stipulates that DOE will carry out the future remedy actions where it will bear 50% or more of the cost and NYSERDA will carry out the actions where it bears more than 50% of the costs. The agency carrying out the remedy action will make the decision for that WMA in consultation with the other agency. The agencies have agreed to evaluate all site facilities with respect to the NRC License Termination Rule (LTR). He reviewed the existing schedule noting that the Phase 1 Studies would be completed in early 2018. However, the PPA, scheduled to be performed from 2016-2018, will extend to support the SEIS process and that the SEIS will likely extend beyond the intended 2020 date. As cooperating agencies, NRC, EPA, NYSDEC and NYSDOH will review SEIS drafts and NRC may perform an independent long-term performance assessment. The SEIS contract was just awarded to SC&A, Inc..

Mr. Bower then reviewed what would occur within each portion for the PPA, its role in evaluation of decommissioning approaches and Phase 2 alternative analysis in the SEIS. The PPA will be incorporated in the DSEIS and SEIS. He reviewed the Phase 2 Decommissioning Decision for the SEIS which will be prepared jointly by DOE and NYSERDA. The agencies will work with the PPA and SEIS contractors to develop the alternatives to be evaluated. The cooperating agencies will participate in the development and review of the Draft SEIS. If NRC finds in its review that the SEIS is acceptable it will adopt it to fulfill its NEPA responsibilities under the WVDP Act. If not, NRC will publish its own review. NYSERDA will develop a Proposed Decommissioning Plan for NRC and there will be a potential SDA Licensing/Permitting Action. Mr. Bower noted the general schedule for these and stated that greater detail and information about the timing will be available after consultation with the cooperating agencies. He stated that the NEPA/SEQRA public comment process would provide opportunity for review and comment.

In response to a question about DOE's future role if the HLW Tanks were closed in place Mr. Bower stated that this would be subject to discussion with NYSERDA and NRC based on the controls in place and whether the 100 mrem termination with restrictions criteria were met. In response to another question, Mr. Bower and Mr. Bembia stated that the agencies need to consult with each other and with NRC and other regulators as to whether the 25 mrem LTR criteria applied to the entire site or to areas controlled by each agency. A CTF member made the analogy that if only half of the site is clean then the site is not clean. Another member expressed appreciation for the longevity of the site directors because of the experience and institutional memory they bring to the issues. Mr. Bembia expressed similar appreciation for the CTF members.

EROSION MODELING ISSUES – UPDATE

CTF member Ray Vaughan provided a brief update from his June presentation on erosion modeling issues concerning the work of the Phase 1 Studies Erosion Working Group. He noted that the first issue about the causes of erosion and its central importance to risk would be primarily addressed in the PPA. His concern about channelized flow in the Erdman Brook watershed has been addressed. The use of Franks Creek watershed rather than the Buttermilk Creek watershed remains an open question. The 10-year time steps for the model runs is still a concern and is related to the use of rainfall intensity-frequency distributions in the model. Relating to the last issue, Mr. Vaughan noted corrections from his June presentation in that the EWG is using inches/hour mean

rainfall intensity (rather than depth) and that his “calculations (using Excel and Fortran) indicate that the RIFs used by Tucker, Doty (and Price) for the current modeling runs and earlier CHILD modeling runs depend jointly (and unexpectedly) on the model’s time step and its stochastic-rainfall-generator inputs.”

Mr. Vaughan has also identified new questions he asked the agencies to present to Mr. Tucker. They are:

1. Can you provide a list of all the modeling input variables that are being calibrated by the post-glacial model runs?
2. Are any or all of these capable of being directly measured in the field?
3. Or are some or all of them surrogates for field-testable variables, but not directly testable?
4. If the latter, how can we look at and understand the surrogate relationships?

He concluded by showing a graph of the effect of the model’s rainfall intensity-frequency distribution for one year and 100-year storms. He stated his concern that the CTF and others should understand *how* the erosion model works because it will be used to support the decision to remove wastes or stabilize them in place. If the model uses post glacial runs for calibration, the inputs should preferably be supported by field measurements. If abstract values are used as “surrogates” for real, field-measurable values, the relationship between the real and abstract values should be clear and verifiable.

OTHER CTF BUSINESS/COMMENTS/QUESTIONS

A member noted that whether the Springville Dam will be lowered will depend on sediment testing for radioactive contamination behind the dam and asked if Tim Rice from NYSDEC could be invited to present. Charlie Davis informed the CTF that he and John Pfeffer met with Congressman Reed and delivered a letter and request for Direct Impact Aid and a Community Transition Grant Request. (These were shared after the meeting with the CTF via email.) He asked the CTF to support the request. Mr. Bower noted that funding is at the FY ’17 level under a continuing resolution through December 8. Mr. Bembia reminded the CTF of Senator Schumer’s letter of support for funding at the \$75 million level. HR 2389, discussed at the June meeting, is still in committee.

OBSERVER COMMENTS

Observers inquired as to whether fractures in the unweathered Lavery Till and its high hydrologic conductivity were addressed in the PPA modeling. Dr. Zadins indicated they will be, in part, through the distribution parameters.

ACTION ITEMS

| Action | Who; When |
|---|--------------------------------|
| Geologic Model Calibration and Slope Angle in PPA | DOE/NYSERDA; When available |

DOCUMENTS DISTRIBUTED

| Description | Generated by; Date |
|---|--------------------|
| Meeting Agenda | Logue; 9/27/17 |
| Project Update, MPPB Ventilation | CHBWV; 9/27/17 |
| PPA Update & Path to Phase 2 Decision | DOE; 9/27/17 |
| Erosion Modeling Issues Update | Vaughan; 9/27/17 |
| News Clippings Distributed at Meeting | NYSERDA; 9/27/17 |
| Ashford Letter and Request to Represented Reed (to CTF via email following meeting) | Ashford; 9/12/2017 |