

To: West Valley Citizen Task Force
From: Bill Logue, Citizen Task Force Facilitator
Date: November 24, 2020
Subject: **Summary of the October 28, 2020 Meeting**

Next Meeting

Date & Time: **January 27, 2020 at 6:30 PM**
Location: Zoom

CTF Members and Alternates Attending

Clyde Drake, Heidi Hartley, John Hood, Lee James, Kathy McGoldrick, Tony Memmo, Joe Patti, Pat Townsend, Ray Vaughan. Facilitator: Loraine Della Porta.

Agency Participants and Observers

Department of Energy (DOE): Bryan Bower, Joshua DesMarais, Martin Krentz, Bethany MacNeill, Moira Maloney, Audrey Seeley, Zintars Zadins.

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

CH2M HILL BWXT West Valley, LLC. (CHBWV): Joe Pillittere, Elizabeth Lowes, John Rendall, Alison Steiner, Kelly Wooley.

New York State Department of Environmental Conservation: Pat Concannon, Ken Martin, Lynn Winterberger.

Neptune and Company: Paul Black, Katie Cartlett, Sean McCandless.

Public: Wayne Barber, Diane D'Arrigo, Kelsey Shank, William Townsend. (Other dial in only callers not identified.)

Introductions, Announcements, Administrative Business

Bill Logue welcomed all present and reviewed the meeting agenda and materials¹. Bryan Bower of DOE informed the group that the federal government was operating under a continuing resolution through December 18 and that the West Valley Demonstration Project (WVDP) would be funded during that time at the FY 2020 level of just over \$80 million annually. He will keep the CTF apprised of any updates. Absent pressing business the Citizen Task Force will forgo the December meeting.

CHBWV Project Update

Kelly Wooley of CHBWV presented a project update. He stated that the COVID safety protocols for Phase 2 resumption of activities were successful with a significant increase in self-screening and temperature screening. There has been no onsite spread of COVID and only one case over the summer of a new employee who was about to start work. He noted sanitizing activities for workspaces and, following the meeting, Mr. Wooley clarified that the sanitizing spray is SSS Navigator & Navigator PDC #3X Renegade Daily Disinfectant Cleaner RTU. This is the same product used by the airline industry.

At the February public Quarterly Public Meeting (QPM) there will be a presentation on the demolition approach for the Main Plant Process Building (MPPB).

Safety. The 12-month rolling average for Total Recordable Cases (TRC) is 0.0 and Days Away, Restrictions, Transfers is at 0.0. The last TRC was March 20, 2019 and last Recordable injury March 27, 2019. This amounts to 826,809 safe work hours or 560 days.

Deactivation and Demolition Progress. Mr. Wooley showed graphics of MPPB work completed and planned.

Under Performance Based Incentive (PBI) #1 the General Purpose Cell (GPC), GPC Crane Room and General Operating Aisle are being prepared for demolition with grouting of the GPC Mini Cell and GPC floors. The grout

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

can withstand 200PSI and loads from heavy equipment. Grouting required approximately 20 truck loads per day for two weeks. Removal of materials in and preparation of the General Operating Aisle will occur in the following weeks.

A new door was installed in the Vent Wash Room east wall and core drilling for access opening in the south wall is complete and commenced on the east wall for future duct work. A Polymeric Barrier System was applied to the interior of the Wash Room as a fixative. Workers are testing and practicing with a remote controlled mini-Brock that will be used to cut duct-work in the space.

Decontamination has resumed in the Product Purification Cell-South using Nitrocision®. Workers are using protective suits with breathing air. At the November Quarterly Public Meeting (QPM) subject matter experts will provide additional information.

Balance of Site Facilities (BOSF). Upcoming work includes completion of removal of CPC-Waste Storage Area gravel and restoration and removal of the Schoolhouse septic tank and well followed by restoration of the area. Forty-four of 46 BOSF have been removed. The South Parking Lot was repaved to relocate employees and facilities and provide parking farther away from the MPPB when demolition begins. Brush was cleared from the on-site railroad tracks. Drum cell modifications have begun to support waste operations.

A CTF member expressed concern that with MPPB demolition scheduled to begin in the spring, having a presentation to the public in February would not give sufficient time for questions and comment concerning monitoring and whether an enclosure is needed during demolition. The member stated that this leads to the impression that despite any public concern the existing plan would be implemented. Mr. Wooley stated that CHBWV was open to input when the plan was presented to the public.

Annual Site Environmental Review

Alison Steiner, CHBWV Principal Environmental Regulatory Specialist, presented an overview of the Annual Site Environmental Review for calendar year 2019. She started by noting the major accomplishments in decommissioning and demolition for 2019. Those include removal of 17 BOSF, MPPB decommissioning and demolition of 4 MPPB ancillary facilities. The ASER information is available at www.wv.doe.gov. Copies can be mailed on request.

Ms. Steiner noted that the environmental data confirmed that the public's health and safety and the environment continued to be protected while significant decontamination and demolition progress continued in 2019. DOE orders require that activities be conducted such that public exposure does not exceed 100 mrem/year. Potential exposure pathways include ground and surface water, air and food. The EPA air pathway limit is 10 mrem/year for the maximally exposed off-site individual (MEOSI) and 100 mrem for all pathways. For the WVDP, the 2019 maximum potential dose from the air pathway was less than 0.48 mrem and the maximum potential dose from the water pathway was 0.019 mrem. She noted this was consistent with historical levels in recent years. By way of comparison the public receives ~620 mrem/year from natural and manmade sources.

Ms. Steiner reviewed the programs and lead staff and their experience in conducting the groundwater, surface water, air and food monitoring programs and showed several short video clips.

The **groundwater monitoring** program focuses on the North Plateau groundwater plume which contains Strontium-90 that probably originated from a leak under the MPPB in the 1970's. There are 70 monitoring wells installed in and around the slow-moving plume. The plume surfaces at the WNSWAMP ditch which is not accessible to the public. The surface water from the WNSWAMP drainage ditch flows into Cattaraugus Creek where it contributed 0.006 mrem to the total annual dose from the water pathway in 2019. The Permeable Treatment Wall has filtered Strontium-90 from the groundwater as it migrates through the wall. Following the meeting, Ms. Steiner clarified that groundwater samples are taken quarterly and some wells are monitored for water levels on a monthly basis.

The **surface water monitoring** occurs through sampling at a number of locations in the creeks and streams in and surrounding the WVDP. Ms. Steiner showed graphics of Gross Beta and Strontium-90 readings at two locations on the South Plateau before and after interim measures were installed at the NRC-Licensed Disposal Area (NDA) demonstrating that concentrations had decreased due to installation of these interim measures. Surface water is collected using timed-continuous samplers composited biweekly and monthly for radioactive indicator parameters and these samples are composited and analyzed for isotopes semi-annually.

The **air monitoring program** uses off-site air samplers approximately 1 mile from the site in all directions and a background monitor is located in Great Valley 18 miles away. The samplers were operational 99.4% of the time 2019 and send a message to staff if the power goes out. All readings were at non-detect in 2019.

The laboratory facilities on the site were closed and samples are sent off-site for analysis. However, the site retained some **on-site analysis capabilities** which includes an Alpha Beta Detector that allow for off-site result confirmation and to screen against trigger levels to evaluate anomalies quickly.

The **food monitoring program** samples deer yearly, milk from dairy farms nearby yearly and every five years fish from nearby streams and apples, beans and corn. The food sampling results are used to corroborate air and water doses.

Probabilistic Performance Assessment

CTF member Ray Vaughan gave a presentation entitled “Probabilistic Performance Assessment and how it can (but shouldn’t) be abused or misused.” He started by reminding the group that in July 2019 Dr. Alan Hutson of the Roswell Park Comprehensive Cancer Center presented an overview of probabilistic performance assessment (PPA) and statistical analysis. In June of 2020 Dr. Vaughan suggested the CTF consider asking Professor Kristen Schrader-Frechette to do a presentation. Professor Shrader-Frechette was a member of the West Valley Phase One Studies Independent Scientific Panel and specializes in quantitative risk assessment.

Dr. Vaughan noted that his comments on the 1996 and 2010 Draft EISs had both supported the use of a PPA to address uncertainty and predict future performance at the site. He also stated that PPAs can be used responsibly and transparently, or can be manipulated and abused. He expressed concern about a lack of transparency related to input probability distributions in the PPA being developed for the site. He went on to review the differences between deterministic assessments (which assign a single value to each input parameter) and probabilistic assessments (which develop a probabilistic distribution of values for each parameter). He expressed concern that the purpose of PPA – avoiding deterministic choices of input values – can be defeated when there is a deterministic choice to use certain information sources and reject others. He called this a fundamental source of bias in any case, but said that the problem becomes worse when done quietly rather than transparently.

As examples, he referred to input probability distributions for two key parameters: the inventory of Plutonium-239 in the NRC-Licensed Disposal Area (NDA) and the West Valley site’s erosion rate. These had been referenced in an August 2020 presentation from Neptune and Company, the PPA contractor. The Neptune presentation noted that a variety of information sources could be used to inform each distribution curve and that sources could be combined and went on to state that “despite a variety of possible sources, data are sometimes sparse.” In response to this, Dr. Vaughan said it is important to look at the range of available data. For the Plutonium-239 inventory in the NDA, he noted that Neptune’s reliance on only two sources of information for its probability distribution curve – the NFS burial records and URS 2000 study calculations – had omitted a much higher inventory of Plutonium-239 that the 1996 Draft EIS had listed in the NDA. He expressed concern that, regardless of whether this was an intentional rejection of the data or lack of knowledge of the data, neither reason was a sufficient explanation for lack of inclusion in the PPA. He emphasized the importance of handling such data responsibly and transparently, and said that even if the 1996 inventory value for Plutonium-239 was questionable it should be given some value in the uncertainty calculation. He noted that DOE and NYSEERDA’s inability to trace how the values were established in their 1996 Draft EIS does not justify omitting such values as if they never existed.

Dr. Vaughan’s other example related to the rate of erosion. He stated that the PPA could be biased by making yes/no decisions about which sources to accept and use in the PPA. Such decisions could result in large differences in gully advance estimates that could reach the burial grounds. While he noted that Neptune has provided no recent update on its erosion work, he reviewed the significant prediction differences in the models for the 1996 Draft EIS, Neptune’s own work, and the 2010 EIS and Phase 1 Studies, all of which may possibly qualify as information sources for the probabilistic erosion distribution for the PPA. He displayed graphics showing differences in erosion over different timeframes.

In conclusion Dr. Vaughan stated the need for responsible and transparent use of data and modeling. While he noted that PPA processes can be biased in either direction, he said that his two examples and their direction of bias needed specific attention. He also posed questions to the CTF about inviting Professor Shrader-Frechette,

Dr. Hutson, and Neptune to future meetings so they might respond to his concerns and provide additional insight on the PPA process.

Mr. Bower of DOE responded by reiterating that bias can be in either direction. He noted that in 1996 the agencies formed a team to review the Plutonium-239 data and it worked over several years and concluded the data could not be replicated or reproduced reliably and because that was the case it was not prudent to use unreliable data. He disagreed that that data was rejected but rather that it was addressed through the URS 2000 report. Dr. Vaughan responded that any documentary evidence about the data in the 1996 Draft EIS not being correct, particularly original documents showing the team’s post-1996 conclusions and rationale, should be provided to the CTF.

Mr. Gordon of NYSERDA shared that the Exhumation Working Group Task 1.1 Report pages 55-57 references that information was not found to support the outlying data concerning Plutonium-239 in the burial grounds. He went on to say that Neptune would begin to respond to the expressed concerns at the November QPM.

Other Business

Pat Townsend noted that NYSDEC had extended the comment period on the closure plan to November 19 and raised the question as to whether the CTF would reconsider its decision to not submit comments. She will draft a proposed letter and circulate it to the CTF for consideration.

Joe Patti inquired about attempts to further dry the high-level waste tanks and the SDA trenches pending a final decision. Mr. Bower that the Tank and Vault drying system was effective and that Tank 8D-4 which has high concentrations of Cesium, a gamma emitter, and is made of stainless steel is not being dried at this time. Funding for MPPB demolition is being prioritized over the development of an approach for drying Tank 8D-4. Additionally, it should be noted that further evaporation of those wastes could make future work more difficult. Mr. Bembia and Ms. Mellon of NYSERDA stated that existing and future water infiltration mitigation measures are limiting inflow of water into the SDA. SDA leachate elevations are generally decreasing.

A CTF member asked about a train recently seen on the rail spur to the site. Mr. Wooley noted that a train on the spur to inspect the tracks.

Observer Comments

An observer raised the question of how modeling could be correct during intensifying global warming. In response Mr. Gordon stated that the agencies are committed to having the PPA thoroughly documented and making modeling available to the public. Paul Duffy of Neptune will make a presentation in the future on how climate change will be incorporated.

An observer asked how water used during demolition would be handled. Mr. Wooley stated that tanks and a water separator would be installed and then monitoring and treatment as necessary.

Action Items

Action	Who; When
Draft letter to NYSDEC concerning closure plan	Townsend
Identify sanitizing spray	CHBWV - done

Meeting Documents Available on the CTF Website

Description	Generated by; Date
Meeting Agenda	Logue; 10/28/20
CHBWV Project Update	CHBWV; 10/28/20
CHBWV 2019 Annual Site Environmental Review	NYSERDA; 10/28/20
Ray Vaughan Probabilistic Performance Assessment	Vaughan; 10/28/20
News Clippings Since the Last Meeting	NYSERDA; 10/28/20