

To: West Valley Citizen Task Force  
From: Bill Logue, Citizen Task Force Facilitator  
Date: June 13, 2016  
Subject: **Summary of the April 27, 2016 Meeting**

## **Next Meeting**

Date & Time: **June 22, 2016 6:30 – 9:00 PM**  
Location: Ashford Office Complex  
9030 Route 219  
West Valley, NY

## **CTF Members and Alternates Attending**

Barbara Frackiewicz, Heidi Hartley, Paul Kranz\*, Kathy McGoldrick, John Pfeffer, Ray Vaughan, John Walgus, Eric Wohlers.

## **Agency Participants and Observers**

**Department of Energy (DOE):** Bryan Bower, Sandra Szalinski, Zintars Zadins.

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

**CH2M HILL BWXT West Valley, LLC. (CHBWV):** Scott Anderson, Lynette Bennett, John Rendall.

**New York Department of Environmental Conservation:** Patrick Concannon.

**Nuclear Regulatory Commission (NRC):** Amy Snyder\*.

**Observers:** Thomas Carpentey, Diane D'Arrigo, Paul Siepierski.

## **INTRODUCTIONS AND ANNOUNCEMENTS**

Bill Logue welcomed all present and reviewed the meeting agenda and materials<sup>1</sup>. New CTF member Heidi Hartley introduced herself as the representative for Assemblyman Joseph Giglio. She will be replacing Mike Brisky. The facilitator discussed the status of scheduling a meeting of CTF members with leadership of DOE Environmental Management the week of May 2. He also noted that he was in contact with NRC about their presenting at an upcoming CTF meeting and that he had not yet heard back from representatives of the congressional delegation about a possible meeting.

## **CHBWV PROJECT UPDATE**

Scott Anderson of CHBWV stated that, as of April 14, CHBWV and its subcontractors had worked almost 2 million hours, more than 3 years, without a lost-time work accident or illness. WVDP has the best or closest to the best safety record in the DOE complex.

**Milestone 1:** High-Level Waste. (HLW). The HLW campaign has resumed relocation with Vertical Storage Casks (VSC) scheduled for transport to the HLW Interim Storage Pad in the coming week at the pace of one per week until mid-June when an additional shift will be added and two casks will be moved each week. The goal is to complete the move of the remaining VSCs by December 2016 – one year ahead of schedule.

**Milestone 2:** Waste Operations. The NRC issued a Special Package Authorization for transport of the melter package. Special conditions include things such as an impact limiter (steel and foam bumper) and limits of ambient temperature conditions during transport. MHF Logistics will manage the shipment via truck and rail. Shipment to a disposal site in Texas will occur in September.

A little more than half of Legacy Waste has been shipped for disposal. Further shipments have been postponed to reallocate funds for deactivation activities. One-hundred seventy-seven of 241 drums of remote handled waste have been relocated from the Chemical Process Cell in the Main Process Plant Building (MPPB).

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<sup>1</sup> Each is listed at the end of this summary and may be found at [www.westvalleyctf.org](http://www.westvalleyctf.org)

\* Participated by telephone.

**Milestone 3:** Facility Disposition. The BROKK machine that was used for size reduction was packaged in a waste container and moved from the Vitrification Cell to storage. Two out-of-service cranes were drained of fluids. The MPPB deactivation is 49% complete and the Vitrification Facility 92% complete. Deactivation of the latter should be complete in 2016 with demolition to start in early 2017.

**Milestone 4:** Balance of Site Facilities. Construction and demolition debris from the Test and Storage Building office/restroom complex was shipped for disposal. Completion of the installation and setup of the 10-Plex office space continues with workers beginning to move in. Thirty percent of the 47 site facilities have been demolished. Material in the warehouse that is no longer in service is being excessed. The warehouse will be reconfigured for lockers for workers. The reconfiguration and utility system rerouting continues and the 2015 Annual Site Environmental Report is being prepared.

### **SDA TRENCH LEACHATE ELEVATION UPDATE**

Jane Pietraszek, Project Manager and hydro geologist for NYSERDA presented an update on the State-Licensed Disposal Area (SDA) Trench Leachate Elevation for Trenches 14 and 1, and identified a change for Trench 3. For each of the updates she stated that there is currently no threat to public health or safety. Ms. Pietraszek displayed graphics of the leachate elevations from 1986 to the present noting that infiltration controls were installed in 1992-1993. All other trench leachate levels are decreasing or holding stable.

Trench 14 elevations generally decreased until 2011. Since then, elevations increased by 0.6 feet and have stabilized again. If the current increase were to continue at the same rate it would take 11.3 years to reach the highest previous leachate levels and 115.8 years to reach the surface. The Trench 1 leachate was generally decreasing between 1996 and 2006 when increases were noted and have continued totaling 0.44 feet. If the current increase were to continue at the same rate it would take 27.1 years to reach the highest previous leachate levels and 313.7 years to reach the surface. Trench 1 leachate had been decreasing until it stabilized in 2014.

Ms. Pietraszek reviewed the history of changes that could impact leachate levels. These include installation, maintenance and repair of geomembrane covers and slurry walls on the SDA and NDA (NRC-Licensed Disposal Area) at various times. Several tears in geomembrane seems may have contributed to infiltration. An evaluation of the increases in Trench 14 and 1, which looked at groundwater and precipitation rates increases was completed in March 2015. No pathway or source for the increases was identified. An additional evaluation was prepared in October 2015 identifying further areas for investigation. A work plan is being developed to implement those recommendations which include installation of soil probes and piezometers on the perimeter of the SDA, soil sampling and pumping tests. Ms. Pietraszek communicated that field activities associated with the work plan were scheduled to commence in late May 2016. An update will be provided when results are available.

In response to questions, Ms. Pietraszek stated that leachate, monitoring well and piezometers measurements generally happen quarterly and for Trenches 14, 1, and 13 these measurements occur monthly. A datalogger was suggested as a way of correlating precipitation rates and elevation changes. Mr. Bembia noted that the nature of the changes did not appear to fluctuate as would be expected from precipitation. However, he committed to raise this with the contractor. A brief discussion was held on how the water flow impact peat layers in the area at depths of approximately 6 - 12 feet. may have on the trench leachate Leachate leaving the trenches flows downward through the clay layer where the constituents tend to bind with the clay. The downward flow rate is less than 1"/year. A question was asked concerning how long it would take to "load" the clay beneath the trenches and how long it could take for radiological contaminants to travel downwards and out to the creeks. Mr. Bembia stated that it would take approximately 1,500 years just for the water to travel through the clay and then laterally through the underlying gravel to Buttermilk Creek. He stated that this time would be significantly longer considering the geochemical barrier properties of the clay. A question was asked about the frequency of inspection of the geomembrane cover. The geomembrane cover is visually inspected five times per year and a coupon sample is taken for evaluation of UV degradation every 5 years. The SDA cover will be replaced except for the areas over Trenches 12-14, which was already replaced.

### **CATTARAUGUS CREEK PRESENTATION**

CTF member Ray Vaughan presented "Cattaraugus Creek: A Story of Flowing Water and the Geology of the Channel it Flows Through." Mr. Vaughan opened by explaining that a clay particle, sand grain, pebble, cobble or boulder all can be moved downstream depending on the volume and speed of water movement. As water slows,

at bends and deltas for instance, the ability to carry material decreases with the heavier/larger material dropping out first. In this way sediment and gravel will be deposited on the inside of a bend or at the mouth. He showed pictures and satellite images demonstrating this for Cattaraugus Creek including a sediment plume from the 2009 storm event flowing into Lake Erie that continued on into the Niagara River and Lake Ontario. He noted that Cattaraugus Creek has an extremely variable flow rate and thus a “flashy” response to rainfall and snowmelt with quick drainage because of its steepness.

Mr. Vaughan then explained that the area bedrock is sedimentary and more than 300 million years old with layers that are flat and almost horizontal and how erosional processes interact with this type of rock. This is a cycle of erosion, glacial action deposition and cementing together. Glacial action formed many of the rivers and creeks in Western New York up to a million years ago. However, the Zoar Valley and Cattaraugus Creek appear to be more recent, within the last 15,000 years, and could be postglacial. He showed pictures of creek features demonstrating his points. He then reviewed the role of plate tectonics in the formation of local bedrock, its stratigraphy and the orientation of the valleys in the region. Cattaraugus Creek is unusual in that it cuts east to west across the other bedrock valleys and ridges.

Mr. Vaughan noted that this Zoar Valley history is important to decision making at the WVDP because it should be incorporated into the landscape evolution model being used to predict erosion for the next 10,000 years and how it factors into model calibration based on understanding of the last 10,000 years. For example, model calibration runs have generally assumed that the confluence of Buttermilk and Cattaraugus Creeks has remained at its current elevation (about 1,100 feet) throughout the past 10,000 years, but this may not be possible if the Zoar Valley gorge was still in the process of downcutting to the level we see today. An additional concern is whether it is realistic to assume a constant past climate versus today’s climate versus a future climate. Climate affects the amount of water flowing down the creek, and this in turn controls the rate of erosional downcutting through the bedrock. He suggested that the Phase 1 Studies Erosion Working Group examine if the gorge existed as a drainage pathway throughout the past 10,000 years, and thought that some of the EWG’s age-dating studies could help answer this question.

Long-term erosion is a threat to the buried waste with the question remaining over what period of time? He noted that past releases of radionuclides flowed down Cattaraugus Creek and on into Lake Ontario. In his opinion current releases are relatively low. In conclusion, he noted that the level of cleanup determined in the 2020 decision and future contamination transport downstream are interrelated. The Phase 2 decisions will be informed by prediction(s) of future erosion processes and rates, which could be quite different from actual future erosion if the landscape evolution modeling is poorly done or miscalibrated. The greatest risk is from a scenario that *predicts a low rate* of erosion, thereby resulting in a Phase 2 decision with the tanks and burial grounds closed in place, and an actual *future erosion rate that is high*. The hope is that the predicted and actual erosion rates will result in scenarios that have a low risk of release of contamination into the creek.

In response to questions Mr. Vaughan noted that with the generally slow rate of flow it may take several days for contamination to reach Lake Erie.

**OTHER BUSINESS**

Mr. Bower stated that the House Appropriations Committee has proposed FY 2017 funding at \$61.9 million for non-defense and about \$2 million in Defense funding for the WVDP. He anticipated continuing resolutions in an election year.

**OBSERVER COMMENTS**

There were no observer comments.

**ACTION ITEMS**

Action	Who; When
None	

## **DOCUMENTS DISTRIBUTED**

<b>Description</b>	<b>Generated by; Date</b>
Meeting Agenda	Logue; 4/27/16
CHBWV Project Update	CHBWV; 4/27/16
SDA Trench Leachate Elevation Update	NYSERDA; 4/27/16
Cattaraugus Creek Presentation	Vaughan; 4/27/16
News Clippings Distributed at Meeting	NYSERDA; 4/27/16