# Quarterly Public Meeting[1]

Ashford Office Complex
9030 Route 219
West Valley, New York
**Wednesday, February 27, 2013**

6:30 Welcome and Introductions.....Bill Logue, ECS

6:40 Phase 1 Studies Update..... Lee Gordon, NYSERDA; Moira Maloney, DOE

- ISP Review of EWG Recommendations
- Upcoming Activities

7:00 Project Update.....Bryan Bower, DOE

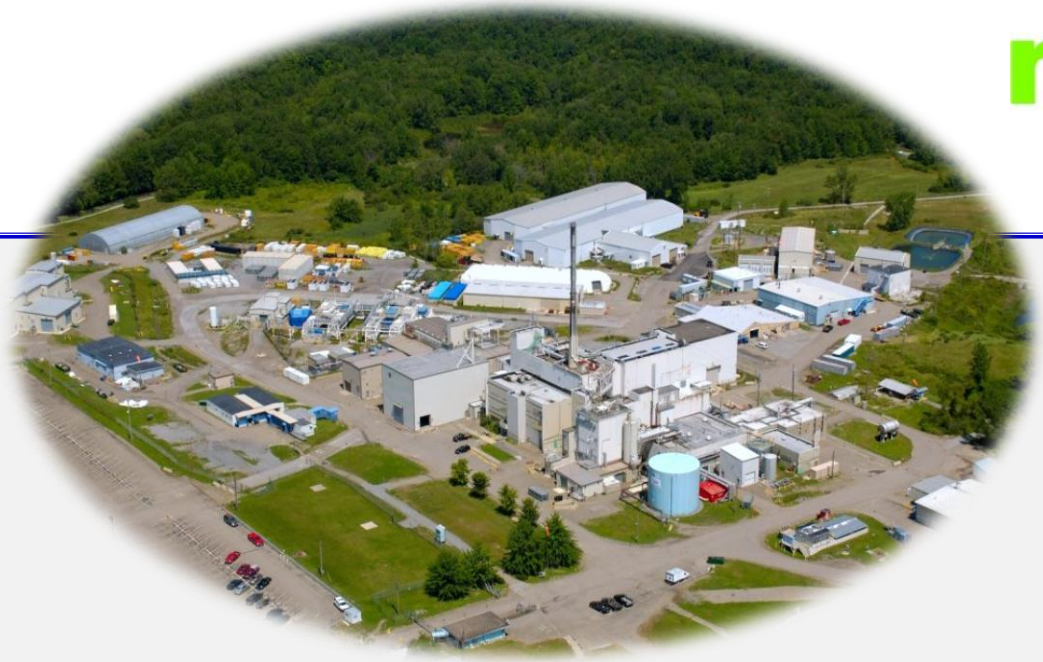
7:15 01-14 Building Demo.....Dan Coyne, CHBWV

7:45 Discuss Topics for Next Meeting.....Bill Logue, ECS

8:00 Adjourn

## Next Meeting
## Wednesday, May 23, 2013
## 6:30 p.m.
## Ashford Office Complex

[1] Call-in number: 1-888-369-1427; Participant code: 791455.



# Phase 1 Studies Update

Quarterly Public Meeting
February 27, 2013

# Phase 1 Studies Website

- **www.westvalleyphaseonestudies.org**
- Study area updates
- Recommendations reports
- Stakeholder comments and responses
- Public meeting materials
- Background documents
- To come: study plans and results

# PAS Status

- Engineered Barriers Working Group – kickoff 7/12/12, finalizing recommendations, on hold awaiting agency guidance
- Exhumation Working Group – kickoff 10/3/12, continuing work on recommendations, on hold awaiting agency guidance
- Erosion Working Group – ISP Review Complete

# Erosion Working Group (EWG)

- 02/13/12 – PAS Kickoff
- 07/24/12 – Submittal of *Recommendations for Phase 1 Erosion Studies*
- 08/22/12 – EWG presents recommendations at Quarterly Public Meeting and discussed stakeholder questions and concerns.
- 09/13/12 – Stakeholder and regulator input provided to ISP and review of EWG recommendations initiated
- 01/12/13 – ISP review of EWG recommendations

# Erosion Working Group (EWG)

- 01/12/13 – ISP review of EWG recommendations
  - ISP reviewed EWG recommendations and considered all stakeholder input, specifically:
    - B. Warren et al., 09/06/12, Re:*The Subject Matter Expert Panel on Erosion Report & Recommendations*
    - CTF, 09/07/12, Re: *Erosion Working Group Recommendations for Phase 1 Erosion Studies July 20, 2012*
    - NRC, 09/13/12, *NRC Staff Comments on EWG Recommendations for Phase 1 Erosion Studies*

# ISP Themes (EWG Recommendations Review)

1. Clearly articulate study objectives, including data quality objectives
2. Base studies in sound science
3. Address uncertainty in more detail
4. Consider natural analogs
5. Collaborate with other Working Groups
6. Stakeholder comments provide useful technical suggestions and valuable insight

# EWG Recommendations

*"The EWG's assessment is that perceptions of uncertainty associated with long-term predictions of the effects of erosion on critical facilities presented in the FEIS lie at the root of differences in agency views, and that consensus may be achieved if this perceived uncertainty could be better quantified and reduced."*

# ISP Review of EWG Recommendations

The EWG Recommendations *"should explicitly address expected uncertainty issues with regard to the principal erosion threat (gully advance) more fully, and include consideration of the following:*

> *Deterministic versus probabilistic methods for evaluating uncertainty - advantages and disadvantages of each with respect to evaluating the principal erosion threat."*

# Current Activities

- Input and feedback from each of the SME groups, public stakeholders, and the ISP have identified uncertainty issues as very important to the evaluation of long-term analysis of the West Valley site.
- DOE and NYSERDA are evaluating a path forward for the SME groups with the goal of addressing uncertainty issues in support of agency consensus.

# Current Activities

- Agencies evaluating how best to proceed with EWG recommendations, in light of stakeholder comments, ISP review, and discussions by SME working groups
- Exhumation Working Group and Engineered Barriers Working groups will proceed to finalize Phase 1 Study Recommendations

# West Valley Demonstration Project
# Summary of Quarterly Public Meeting – February 27, 2013

**Members of the Public and Others Present**
Diane D'Arrigo, Rob Dallas, Andrew Goldstein, Joanne Hameister*, Deb Johns, Lee James*, Barry Miller, Joe Patti, Ray Vaughan, Barbara Warren.

**Agency and Contractor Participants**
*Department of Energy (DOE):* Bryan Bower, Marty Krentz, Moira Maloney, Ben Underwood, Zintars Zadins.
*New York State Energy Research and Development Authority (NYSERDA*): Tom Attridge, Lee Gordon, Elizabeth Lowes, Andrea Mellon.
*CH2M Hill B&W West Valley, Inc. (CHBWV):* Lynette Bennett, Charles Biedermann, Tom Dogal, Joe Ebert, Ray Geimer, John Rendall, Kirk Winterholler.
*Enviro Compliance Solutions, Inc. (ECS):* Dhananjay Rawal*.
*New York State Department of Environmental Conservation (NYSDEC):* Patrick Concannon, Ken Martin, Dennis Weiss, Lynn Winterberger*.

**Introductions and Announcements**
The facilitator Bill Logue welcomed all present and reviewed the meeting protocols and documents[1]. Issues were experienced with the conference number. The facilitator committed to attempting to resolve them prior to the next meeting. Later a commitment was made to develop a list of acronyms and to try to avoid using acronyms.

**Phase 1 Studies Update**
Lee Gordon of NYSERDA provided a Phase 1 Studies update.

Mr. Gordon reviewed the timeline of the work to date of the Erosion Working Group (EWG). The Independent Scientific Panel (ISP) has completed their review of the EWG recommendations for Phase 1 Erosion Studies, and all regulator and stakeholder input (listed on the Phase 1 Studies website; www.westvalleyphaseonestudies.org). The ISP review identified six themes: 1) the main objective of the studies and study plans should be clearly articulated; 2) emphasis should be placed on basing the studies on sound science - study plans should address how data and model quality will be assessed; 3) recommendations should specifically address uncertainty; 4) include consideration of natural analogs – a tool which can assist in estimating future events; 5) collaborate with the other working groups to provide a systematic perspective; and 6) stakeholder comments provided useful technical suggestions and valuable insights. The ISP's comments on uncertainty were similar to the EWG's assertion that perceptions of uncertainty lie at the root of differences in agency views. Mr. Gordon noted that there are differences with regard to how uncertainty is addressed between deterministic and probabilistic dose and risk analyses, and that the agencies are evaluating these issues.

All three Subject-Matter Expert (SME) working groups are on hold as DOE and NYSERDA are evaluating a path forward with the goal of addressing uncertainty issues in support of agency consensus. Both the Engineered Barriers Working Group (EBWG) and the Exhumation Working Group (EXWG) have yet to submit recommendations for Phase 1 Studies to DOE and NYSERDA. Members of the public raised questions on the following: (1) Whether the EWG would focus on gully advance versus looking at all types of erosion that are of concern to the area; (2) The meaning of perception of uncertainty; and (3)Whether additional stakeholder comments would be accepted as the working groups proceed. In response, Mr. Gordon explained that the EWG will study all types of erosion and that study of slope stability and seismic hazard could occur under a separate Potential Area of Study (PAS). Further, he explained that there are different types of uncertainty that exist in

[1] Documents and materials relating to the Phase 1 Studies are available at www.westvalleyphaseonestudies.org. Materials related to WVDP Updates may be found at www.wv.doe.gov with Quarterly Public Meeting information. All are listed at the end of this summary.
* Attended by phone.

models, and that having more detailed and focused studies would allow for viewing things similarly. Mr. Gordon ended the update by saying that stakeholder comments are always welcome throughout the entire process.

**West Valley Demonstration Project Update**

Ray Geimer of CHBWV provided a Project update. DOE awarded an honorable mention award for the Permeable Treatment Wall (PTW) in the category of environmental sustainability. No additional field work has been performed since November on the Characterization Sampling and Analysis Plan (CSAP) but once the demolition of the Balance of Site Facilities is complete, SEC Contractors will conduct soil sampling to assess contamination.

Main Plant Process Building (MPPB). Deommissioning work continues section by section in the MPPB to remove contaminated equipment and surfaces. The Lower Extraction Aisle (LXA) is complete and work will continue for two months in the Chemical Operating Aisle (COA). Asbestos abatement work will continue for 8-12 months throughout the MPPB. The lab hood cleanout in the Radio-Chemical Lab is complete. Piping and electrical lines are being removed to access the Liquid Waste Cell.

Vitrification Facility. The piping removal from the Vit Cell continues (in the Vitrification Facility) in preparation for re-purposing the Vit cell for the High-Level Waste (HLW) canister decontamination project. Work is done in parallel on the removal of HLW glass canisters and all other deactivation work. Funds are fixed for these activities and if work effort in one area is high, it impacts work effort in the other activities.

Other work. Building 01-14 is being demolished and the work on the Balance of Site Facilities is 50-75% complete; facilities have been torn down and load out of wastes and preparation for site restoration continues. Over 80 shipments of waste have been completed since the start of the CHBWV contract. One-third of the legacy LLW, most of the legacy LLW mixed waste, all of the hazardous and universal waste has been shipped off-site and work has begun on moving industrial waste off-site as well. The processing of remote-handled waste continues with size reduction of large highly radioactive components. Size-reduction work on the 3C-2 dissolver is almost complete.

Members of the public raised questions about the timeframe for completion of the decomissioning work within the MPPB, worker radiation exposure, and the types of waste and location of the waste shipment recipient sites. Mr. Geimer responded that the timeframe depends partly on the future funding profile, but assuming the continuing of the current funding profile, the MPPB will be ready for demolition by 2017. Radiation exposure depends on the actual work performed – radiation measurements are taken in the work areas to measure exposure. The maximum allowable individual exposure is 500 millirem (mrem)/ year. Rob Dallas noted that last year, one person reached 420 mrem, but most workers reach an exposure level of 140-175 mrem and several less than 10 mrem. Mr. Geimer responded that the waste shipment end location depends on the type of waste: most LLW is shipped to Nevada; mixed LLW legacy waste to Utah and Tennessee; non-radioactive hazardous to a waste broker in Buffalo; clean industrial waste (concrete) to Chafee, NY and Casella, PA; universal waste to various waste disposal facilities. Universal waste is a subtype of hazardous waste such as batteries, light bulbs and other items typically in household garbage items. Certificates of Destruction and Certificates of Disposal are issued for each shipment.

**01-14 Building Demolition Status Update**

Tom Dogal of CHBWV provided an update on demolition of the 01-14 Building, which is attached to the MPPB, and was used for supernatant treatment. Step 1, started in mid-December and was completed in late January 2013. This step consisted of removing the control room, truck bay, conference room, motor control center room, clean drum room and utility pipe bridge. Step 2 is currently in progress and is expected to be complete by March 2013. Step 2 included the roof structure and the exterior concrete block walls. Step 3 includes the demolition of the three process cells (entry-process cell, off-gas cell, waste dispensing cell). Step 3 will address the remaining portions which are partially radiologically contaminated. The end state will have an earthen road base cover sloping from north to south.

Mr. Dogal explained the initial and final preparations, which include radiological characterization, removal of

equipment, piping, asbestos, etc., applying fixatives to seal contamination, site preparation and waste management. The cell walls are about two feet thick with contamination in the initial ¼ inch of the inside surface. He also described the various modes of radiological/environmental mitigation. Multiple modes are used to monitor levels of radiation and dust in the demolition work zone. National Emissions Standards for Hazardous Air Pollutants (NESHAPS) calculations were performed and the numbers are very low and well below the required level of 0.1 mrem/year. Contamination surveys of radiological boundary areas and inside equipment cabs and processor heads/bucket/debris are done at several points throughout the day using radiation detection equipment. Dust emissions are also monitored by collecting dust particles around the perimeter. A dust suppression apparatus is used to soak the concrete to limit dust emissions. The entire building has very low radioactivity levels. An environmentally friendly material called Durasoil™ is used to lock down debris piles at the end of the day to contain dust emissions. Waste will be package in intermodals and moved to a Nevada National Security site and Energy Solutions in Clive, UT.

Members of the public raised questions related to the 01-14 Building and the NESHAPS dose calculation and assumptions, where the results of the calculations are submitted and if they are available to the public. John Rendall of CHBWV explained that the NESHAPS dose model is the maximum exposure to the off-site individual under worst case conditions using EPA methodology and assumptions. Calculations are submitted to EPA with a copy to DOE and can likely be obtained by a Freedom of Information Act (FOIA) request. All actual air data is summarized and included in the Annual Site Environmental Report (ASER). Calculations are currently being performed and will be released in the fall of 2014. CHBWV is coordinating with DOE to make collected data available on a regular basis. Mr. Ray Geimer of CHBWV noted that the dose calculation is performed prior to any demolition and thus meant to be a worst case. The calculation is submitted to the EPA, which determines whether additional control measures are needed. Because calculation results are well below control points, EPA deemed that no control is necessary and a NESHAPS permit is not required. With EPA approval to move forward, a ring of air monitoring stations have been set up around the plant and results will be made available.

In response to a question, Mr. Rendall stated that in Step 3 run-off water will be collected and sampled before any disposition. No scrap metal from the building will be recycled; all demolition debris will be sent for off-site disposal. All equipment will be surveyed and if clean, be reused. If equipment is found to be contaminated and cannot be decontaminated, it will be disposed of according to its appropriate contamination level. In response to a question about contamination control during Step 3 of the demolition process, Mr. Dogal clarified that potentially contaminated vessels and associated piping will be removed prior to demolition, and noted that highly contaminated piping has already been removed and was placed in waste containers and shipped to Nevada as LLW. The characterization work of soil conditions under the 01-14 Building will be performed by an independent team. The final soil cover will be brought in from off-site and consist of clean engineered fill materials.

**High Level Waste Canister Relocation and Storage Project Update**

Joe Ebert of CHBWV provided an update of the HLW Canister Relocation and Storage Project. Currently, there are 275 HLW canisters, two evacuated canisters, one nonroutine HLW canister, and two Spent Nuclear Fuel (SNF) debris drums in the Chemical Process Cell (CPC) of the MPPB which need to be relocated to a stand-alone dry storage cask pad on the South Plateau to allow for demolition of the MPPB. A multi-purpose overpack (MPC) will hold five canisters. Each overpack will be placed in a dry storage cask. In total, there will be 57 dry storage casks on the concrete storage pad which will be roughly 120 feet by 300 feet three feet thick on top of 3-10 feet of subsurface material/engineered fill. Final design will be based in part on geotechnical characterization work. The pad will be located about 300 yards from the waste disposal areas and design will be complete in April.

NAC International (NAC) was selected to design and provide the fabrication and delivery/transport equipment of a HLW storage system. NAC was selected because they have fully licensed technology, high capacity production, are the best value for the government, scored highest on the technical approach and the design leaves the smallest

footprint.

Mr. Ebert explained the technical approach of moving the canisters through the MPPB. Five HLW canisters in the CPC will be placed on a transfer rail cart and relocated to the Vit cell where they will be processed and decontaminated. An MPC will be brought in through the Load-In/Load-Out Facility to the Vit Cell where five HLW canisters will be loaded into one MPC, and a lid welded shut by a remote-welding station in the Equipment Decontamination Room before moving to the Load-In/Load-Out Facility. The MPC is then placed within the concrete shielded storage cask. The storage cask is transported to the HLW Canister interim storage pad. Most of the work will be done remotely. Mr. Ebert explained that the radiological emission is less than one mrem/hour and once the canister is removed, the storage cask will not be radioactive. Unless delayed by funding shortfalls the move will begin in 2015 and take two years.

Mr. Ebert also reported on ongoing activities: the chemical process cell waste removal is 90% complete, waste is being moved out of the equipment decontamination room and a grapple and a welder that had been sent to Hansford, WA will be returned.

A number of questions were raised about the contamination of the canisters and potential cross contamination of the MPCs during the process. The HLW canisters are contaminated on the surface, primarily the top, from dust from airflow. Mr. Ebert stated that different ways to remotely decontaminate – water, steam, a simple vacuum – are currently being tested to determine the best method. Mr. Bower explained that currently, boxes go in and out of the building now and a "shrink wrap" is placed around the box to prevent cross contamination. This same type of approach will be utilized with the overpacks. In addition, when HLW canisters are not in the tunnel or Load-In/Load-Out area and buffer areas they can be entered for cleaning at the start of the process and between moves.

A question was posed regarding the form of environmental impact studies (EIS) performed before the selection of the dry-cask system and whether requirements to consider community character had been addressed. Ben Underwood, DOE counsel, responded that the use of dry-cask system was analyzed in the 2010 decommissioning EIS.

In response to questions, Mr. Ebert explained that the concrete casks will be stored on the pad until a federal repository is constructed. The casks have a 50-year licensed design life and will undergo routine maintenance and monitoring. The HLW is vitrified glass within a stainless steel canister within a concrete cask so leaks are not possible. The maximum temperature would be similar to the temperature generated by a 300-watt source, or slightly above room temperature. A question was raised about whether shipment of the HLW canisters to the Savannah River Site would achieve cost savings. Mr. Bower responded that a facility would have to be constructed at either site and therefor the costs would be similar. A member of the public suggested that the storage pad be large enough to store the spent nuclear fuel that could be excavated from the disposal areas. Several questions were raised about impacts of excavation of the burial grounds in proximity to the storage pad.

**Topics for Next QPM**

Before the conclusion of the meeting, Mr. Logue asked for suggestions of topics for future QPMs. Suggestions included:

- Characterization Sampling and Analysis Plan (CSAP) Update.
- Permeable Treatment Wall (most likely August 2013 QPM depending on submission of annual PTW report).
- Update on the completed Waste Incidental to Reprocessing (WIR) evaluation (report is available on the DOE website (http://www.wv.doe.gov/).
- Technical discussion of the design and chosen method for the HLW canister storage relocation approach – This might be accomplished in a separate meeting to go through the details of the chosen design and approach.

**Documents Distributed at the Meeting**

| Documents Distributed | Generated by; Date |
|---|---|
| Meeting Agenda | ECS; 2/23/13 |
| West Valley Phase 1 Studies Update | ECS/DOE/NYSERDA; 2/23/13 |
| CHBWV Presentation – Project Update | CHBWV; 2/23/13 |
| CHBWV Presentation – 01-14 Building Demolition Status | CHBWV; 2/23/13 |
| CHBWV Presentation – HLW Canister Relocation & Storage Project | CHBWV; 2/23/13 |