West Valley Demonstration Project
Summary of Quarterly Public Meeting – May 28, 2014

Members of the Public and Others Present
Deb Aumick*, Diane D'Arrigo, Barbara Frackiewicz, Andrew Goldstein, Joanne Hameister, Lee James*, Kathy McGoldrick, Barry Miller, Rick Miller (Olean Times Herald), Jordan Nicholson, Bill Nowak, Joe Patti, Douglas Rusczyk, Paul Siepierski, Barbara Warren, Deleen White, Jay Wopperer.

Agency and Contractor Participants
Department of Energy (DOE): Bryan Bower, Marty Krentz*, Moira Maloney, Sandra Szalinski, Ben Underwood, Zintars Zadins.
New York State Energy Research and Development Authority (NYSERDA): Paul Bembia, Leanne Brechtel, Lee Gordon, Elizabeth Lowes, Andrea Mellon.
CH2M Hill B&W West Valley, Inc. (CHBWV): Lynette Bennett, Dan Coyne, John Rendall, Robert Steiner.
New York State Department of Environmental Conservation (NYSDEC): Patrick Concannon, Ken Martin.
U.S. Nuclear Regulatory Commission (NRC): Chad Glenn*, Michael Norato*, Mark Roberts*, Robert L. Johnson*.

INTRODUCTIONS AND ANNOUNCEMENTS
The facilitator Bill Logue welcomed all present and reviewed the meeting protocols and documents[1].

PHASE 1 DECOMMISSIONING UPDATE
Dan Coyne of CHBWV provided a project update for the four contract milestones.

Milestone 1 - High-Level Waste (HLW) Relocation Project. Status: The HLW storage pad and apron are complete. Projects in progress are: hydro-seeding, installing cameras and other security features, installing storm water pollution prevention controls, and closure packages (4 out of 14 are complete). Eight concrete Vertical Storage Casks (VSCs) have been fabricated on-site, and eight more will be fabricated this year. Eight stainless steel HWL multi-purpose canister overpacks have been ordered. The Vertical Cask Transporter is complete; load testing and delivery is expected by the end of June. The TL220 (which places lid on the casks) and the low profile rail cart will be delivered later in the year. The Tugger to move the VSCs to the pad is on-site. The Overpack welder is complete and weld testing and qualification are scheduled for June/July. For the Equipment Decontamination Room (EDR), the subsurface grouting plan to reinforce the floor has been received and peer review initiated. The upgrades of the Haul Path to the pad (road widening, asphalt overlay and plating) are underway.

Milestone 2 – Waste Operations. Status: Of the ~140,000 ft³ of Legacy Waste in storage at the start of the CHBWV contract, ~77,000 ft³ have been processed and shipped for disposal. LLW processing and shipment is 53% complete, MLLW is 79% complete, industrial and hazardous waste are 100% complete; total of 84 shipments to date. Eighty transuranic (TRU) waste drums in the Interim HLW Storage Facility have been placed in overpacks and relocated to the CPC Waste Storage Area. In response to a question about locations of waste disposal, Mr. Coyne referred to a chart that can be found in the West Valley Citizen Task Force April 23, 2014 meeting summary.

Milestone 3 – Demolition and Removal of the Main Plant Process Building (MPPB) and the Vitrification Facility. Status: Deactivation and cleanout of the MPPB continues; asbestos removal is complete from the first and second floors. Raschig (borated glass) ring removal is complete from Tank 13D-8 and work has begun on Tank 13D-7. The Vitrification Facility is being cleaned out and floors vacuumed. In response to a question, Mr. Coyne stated that waste from clean out would be disposed of according to its characterization. Waste shipments are mostly transported by truck.

Milestone 4 – Balance of Site Facilities. Status: restoration is ongoing for areas where facilities have been removed - backfilling and seeding with top soil and native grasses. Deactivation of the Con-Ed Building is underway. Shipments

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[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

of newly generated waste continue. Removal of excess property through the Property Management System continues – thereby contributing to cost avoidance and DOE's Green Initiative. The installation of the first water well is complete. Tests of water quality were acceptable. Drilling for the second water well is complete and installation and water quality testing are ongoing. In response to a question, Mr. Coyne stated the purpose of the wells is to replace surface water with groundwater as the site's potable water source. [Note: following the meeting Mr. Coyne clarified that while groundwater meets potable water standards, bottled water is provided for drinking purposes.] In response to a question, Mr. Bower stated that the contaminated soil found during the excavation of the HLW pad was packaged. Its source unknown.

PERMEABLE TREATMENT WALL (PTW) UPDATE

Robert Steiner of CHBWV provided an update on the PTW.

The PTW is ~860 ft long. The purpose of the PTW is to passively treat groundwater to reduce levels of Sr-90 to As Low As Reasonably Achievable (ALARA) with a goal of <1,000pCi/L; to minimize expansion of the groundwater plume; and to make sure that technology used for containment does not preclude future strategies for site decommissioning. The Operations and Maintenance Plan stipulates monthly visual PTW inspections and quarterly well inspections, and groundwater elevation measurements, and groundwater sampling. Results are reported annually. The PTW was installed late 2010 and has been monitored for three years. The PTW is successful in containing and treating the plume concentrations (≥10,000 pCi/L). Mr. Steiner showed two depictions of plume delineation from January 2011 and October 2013, which illustrated that Sr-90 concentrations ≥10,000 pCi/L are no longer being detected beyond the PTW. The slides show the plume in the thick-bedded unit of the North Plateau. The next annual report will be released in June/July.

In response to questions, Mr. Steiner stated that the swamp ditch in the plume area is connected to Frank's Creek, and described the flow around the drainage highpoint into surrounding creeks. Sr-90 contamination has been at background or slightly above in the creeks at the edge of the Western New York Nuclear Service Center. The Construction Demolition Debris Landfill is down gradient of the PTW. The landfill was initially operated by Nuclear Fuel Services, Inc. (NSF), starting in the early 1960s during construction of the former spent fuel reprocessing plant. The landfill was closed in accordance with a NYSDEC-approved closure plan in 1986. Groundwater monitoring wells are located in the vicinity of the landfill and are being monitored. Radiological contamination has been detected; however, it is thought to be attributed to migration of the north plateau plume. Lastly, Mr. Steiner showed a chart of Sr-90 doses from natural and man-made sources compared to the dose of the WVDP outflow of water from 2012. The calculated doses show both natural and manmade sources at 310 mrem/year and WVDP source dose is at 0.019 mrem/year; similar results are expected for 2013.

PHASE 1 STUDIES UPDATE

Lee Gordon of NYSERDA provided a brief update on the three Potential Areas of Study (PAS).

The **Erosion Working Group** (EWG) was tasked with looking at the issue of uncertainty in erosion predictions and to make recommendations on how to reduce uncertainties and to prioritize the EWG's recommended studies. The Erosion Working Group (EWG) is now working on developing a study plan. The plan is almost complete. As soon as the study plan is finalized, it will be made available on the Phase 1 Studies website (wwwwestvalleyphaseonestudies.org).

The **Exhumation Working Group** (EXWG) was tasked with developing and executing studies that address key issues and related uncertainties associated with exhumation and removal of waste. The EWG recommended three studies which were presented at the November 2013 Quarterly Public Meeting: Waste Inventory Analysis; Evaluation of Methods to Reduce Uncertainty; and Review of Precedent Projects. The Independent Scientific Panel (ISP) is currently reviewing the EXWG's recommendations and input received from stakeholders on the recommendations. When the ISP's review is complete, it will be made available on the Phase 1 Studies Website.

The **Engineered Barriers Working Group** (EBWG) is on hold pending progress of the EWG and EXWG. Progress on the Exhumation and Erosion study areas will allow for more effective definition of objectives and approaches for Engineered Barriers study areas.

In response to questions, Mr. Gordon stated that all public input provided on the EWG and EXWG Recommendations had been sent to the ISP. All Subject Matter Expert (SME) groups review, consider and, as necessary, help the agencies respond to technical comments. The agencies are preparing a responses to outstanding letters. All stakeholder input and agency responses are posted on the Phase 1 Studies website, which is up and running.

PERFORMANCE ASSESSMENT CONTRACTING UPDATE

Mr. Bryan Bower of DOE provided a brief procurement update. In early May, the agencies issued a notice of Sources Sought in order to gauge industry interest and capabilities for the proposed sensitivity analysis and probabilistic modeling work. As the agencies are working through the procurement process, they are unable to comment on the responses they received to the Sources Sought notice. The Request for Proposals (RFP) for this work will be released in the next several months.

LICENSE TERMINATION RULE

Robert Johnson of the U.S. Nuclear Regulatory Commission (NRC) presented an overview of the License Termination Rule (LTR). (For citations to specific NRC regulations in the two NRC segments please view the presentation on the website.)

The LTR is brief and is accompanied by a Statement of Considerations (SOC), which is a source of extensive information and rationale for LTR provisions and responses to comments. The LTR provides a set of multi-layered requirements. There are three license termination approaches available: unrestricted release, restricted release, and restricted release with alternate criteria. The NRC prefers unrestricted site release, but recognizes that this may not be possible in all cases (e.g., if cost prohibitive or risk of harm to people). There is flexibility within the LTR: it is constructed such that it can be applied to a variety of sites, and there are several ways to meet the dose criteria. Under the LTR, the licensee proposes a release approach for a site and decommissioning methods for meeting dose criteria. A licensee could propose both unrestricted and restricted release for different areas within a site.

The general provisions for unrestricted release sets the period for compliance as 1,000 years. The NRC highly recommends that the analysis for West Valley go beyond 1,000 years. For unrestricted release the dose criteria are 25 mrem/year and ALARA based on a cost-benefit analysis.

The general provisions for restricted release speak first to eligibility, which is not the same as approval. A site is *eligible* for restricted release only if further reductions in residual radioactivity for unrestricted release would result in public health or environmental harm. NRC orders and litigation regarding the Shieldalloy, NJ site clarify and confirm the NRC intent in the LTR. They clarify 10 CFR 20.1403(a) required analysis for restricted release is limited to further removal of residual activity and that it is not a comparison of individual doses of restricted and unrestricted release. Further, the cost-benefit analysis is addressed in NUREG-1757, Appendix N is addressed.

Under restricted release, Institutional Controls (ICs) must be created and are required to be legally enforceable and durable (for higher risk sites) to restrict future site use. These are reviewed every five-year. An independent third party/government entity must be identified as back-up in case the ICs fails. The NRC retains authority to take actions if ICs fail.

Engineered Barriers (EBs) are designed to mitigate human intrusion, adverse natural processes (e.g., erosion), and the release and transport of radionuclides. The LTR does not prescribe EB design as they should be tailored to each site to meet dose criteria. EBs are not considered ICs and are assumed to degrade over time, not instantaneously. The analysis must look at how the deterioration occurs and how to remedy it. Financial Assurance must be established so that an independent third party/government entity could assume and carry out responsibilities for controls and maintenance, if necessary.

Under restricted release, if ICs are in effect, the dose criteria are 25 mrem/year plus ALARA. If ICs are no longer in effect (sometimes referred to as “dose caps”), there is the assumption of immediate and total failure, in which case the dose criteria are ALARA, 100 mrem/year or 500 mrem/year. If ICs fail, NRC retains authority to take action. Under restricted release, the LTR provides alternate dose criteria of up to 100 mrem/year plus ALARA based on the intent to alleviate the need for exemptions for exceeding doses. The LTR provisions for restricted release require that advice be sought from affected third parties on specific questions listed in the regulations. A summary of discussions

as well as documentation of whether the advice was acted on or not must be entered into the publicly available decommissioning plan.

If no license termination is sought because the LTR requirements cannot be met a site would remain under license. The NRC addressed this circumstance in the West Valley Final Policy Statement (discussion below). NUREG 1757 provides that the license may be for "possession" only for long-term control as approved by the Commission and as a last resort, for example, if the independent third party requirement is not met.

In response to questions, Mr. Johnson stated that although not done before, it is possible that part of a site remain under license and the remainder could be released; he noted this is part of the flexibility provided in the LTR. There are not a prescribed number of segments to a site in this situation; however, the dose requirement is for the entire site at 25 mrem/year. Mr. Johnson stated that he could not compare the LTR and DOE release rules. A request was made that someone perform this. A member of the public made a cautionary note and stated that another site was released from license and that was premature given that weapons grade nuclear material was later found at the site.

A member of the public commented that because of the site sensitivity and complexity of the site whether it should be treated differently and as decisions are made about potential long-term storage, given erosion and that the waters flow into the Great Lakes, comment should be sought from Canada and other sovereign nations. Another member stated, in reference to engineered barriers and restricted release, that barriers not only degrade but could also fail immediately resulting in catastrophic release. He cited Fukishima as an example. In response, Mr. Johnson noted that the EIS process would record and answer many of the questions and that NRC guidance requires degradation study/analysis customized for the specific site, including a sensitivity analysis.

WEST VALLEY FINAL POLICY STATEMENT

Chad Glenn of NRC presented an overview of the Commission's Final Policy Statement (FPS) on the West Valley Demonstration Project (WVDP).

By way of background he reminded those present that in 1980, Congress passed the WVDP Act which directed the Commission to prescribe decommissioning criteria for WVDP. In January 1999 the Commission held a public meeting regarding proposed decommissioning criteria. NRC then published a draft Policy Statement for public comment in December 1999. In January 2000, NRC held a public meeting at West Valley to discuss the draft Policy Statement and hear from West Valley stakeholders. NRC received over 200 comments on the draft Policy Statement. In February 2002 the FPS was released.

The FPS applied the LTR as the decommissioning criterion for the WVDP, reflecting the fact that the applicable decommissioning goal for the entire NRC-licensed site is compliance with the requirements of the LTR. The LTR applies to the High-Level Waste (HLW) tanks, facilities used in the vitrification of waste, and materials and hardware used in connection with the Project. The FPS also provides criteria for incidental waste.

The FPS states that decommissioning of the West Valley site will present unique challenges, which may require unique solutions. Mr. Glenn referred to Section IV. "Summary of Public Comments and Responses to Comments" in the Federal Register Notice for the FPS, and comment response C.4 which states "…the approach to decommissioning at West Valley may include portions of the site being released for unrestricted use, and portions of the site being released for restricted use, as well as potions of the site remaining under license, because of a failure to meet the LTR." The response further states "…the Commission believes that for those portions of the site that are unable to demonstrate compliance with the LTR's restricted release requirements, the dose limits should be viewed as goals in order to ensure that cleanup continues to the maximum extent that is technically and economically feasible. The Commission also believes that after cleanup to the maximum extent technically and economically feasible is accomplished, alternatives to release under the LTR criteria may need to be contemplated. Specific examples of these alternatives are a perpetual license for some parts of the site or exemptions from the LTR." NRC expects these issues will be addressed in the DOE/NYSERDA EIS.

The application of the LTR to WVPD is a two-step process: the NRC prescribes the LTR and then the NRC evaluates if the preferred alternative satisfies the criteria after completion of the EIS.

The LTR applies to the NRC-License Disposal Area (NDA). The EIS will provide an analysis of impacts beyond 1,000 years. The FPS notes the State-License Disposal Area (SDA) is regulated by the State of New York and the NRC license does not apply to the SDA, however, a cooperative approach with the State should be utilized to apply the LTR criteria in a coordinated manner to the NRC-licensed site and the SDA. The LTR criteria apply to the termination of NYSERDA's license for the Western New York Nuclear Service Center. Any exemption or alternate criteria authorized for DOE would also apply to NYSERDA.

Early resolution of guidance criteria for incidental waste is important. The FPS incidental waste criteria state that waste should be processed to remove key radionuclides be removed to the maximum extent technically and economically practical and waste should be managed so that the safety requirements comparable to the performance objectives of part 61, subpart C are satisfied. The resulting calculated doses from incidental waste are to be integrated with all other calculated doses. The NRC expects the EIS to consider impacts of incidental waste.

With respect to previously authorized burials, including the NDA, the FPS indicates that the Commission would continue to require an analysis of site-specific impacts and costs in deciding whether or not exhumation of previous buried waste is necessary. The FPS notes that the general exemption provisions of 10 CFR part 20 are available to consider unique past burials on a case-by-case basis. NRC expects the EIS to evaluate the disposition of previous burials.

With respect to the Environmental Analysis, the LTR does not establish new requirements. The NRC licensed site at West Valley is already subject to the LTR, and the environmental impacts of applying the LTR to NRC licensees were evaluated in the LTR/GEIS. In promulgating the LTR, the Commission noted that that an independent environmental review will be conducted for each site-specific decommissioning decision where land use restrictions or institutional controls are relied upon or where alternative criteria are proposed. The environmental impacts from the application of the criteria will need to be evaluated for various alternatives considered. will be site-specific with alternatives evaluated. NRC expects the Decommissioning EIS to provide this information. Full or partial license termination will also require an environmental review.

Finally, Mr. Glenn addressed NRC's roles and responsibilities at West Valley under the Atomic Energy Act, the WVDP Act, and the National Environmental Policy Act, and its ongoing responsibility for interfacing with stakeholders in an open and collaborative manner

Mr. Glenn and other NRC staff then responded to questions and comments. In response to a question about how climate change would be considered given that the LTR was developed before the issue emerged. Mr. Glenn noted that the whole spectrum of environment and climate change should be addressed in the EIS. Another staff member stated that they were not aware of NRC insisting on climate change being part of a final decision but that the NEPA process for the EIS and the notice of availability for the Decommissioning Plan were times when the public could comment on climate change and other issues. DOE and NYSERDA are obligated to seek public comment on the EIS. NRC is not obligated to solicit public comment on the Decommissioning Plan because DOE is not a licensee. However, if the public submits comments, NRC will consider them in its review of the Decommissioning Plan. DOE and NYSERDA committed to making the public aware of the pending release of the draft Supplemental EIS and Decommissioning Plan through the Quarterly Public Meetings and traditional notification methods. In response to another question, DOE and NRC clarified that the incidental waste in the tanks has not be determined to be WIR. Mr. Glenn stated that he was not able to confirm at the moment how many states have stricter rules or criteria than NRC.

In response to a question about New York State requirements for decommissioning, Mr. Concannon of NYSDEC responded that, although some time ago a clean up guidance value had been issued, the State did not currently have specific decommissioning regulatory criteria. New York is developing the draft criteria in Part 384 and the draft will be issued for public comment at some date in the future. The draft criteria are likely to be similar to the LTR.

TOPICS FOR NEXT AND FUTURE QPM(S)

Before concluding the meeting, Mr. Logue asked for suggested topics for coming QPMs. None were raised. He asked that stakeholders try to provide as much advance notice as possible of suggested topics.

The next Quarterly Public Meeting will be held on August 27, 2014.

DOCUMENTS DISTRIBUTED

Document Description	Generated by; Date
Meeting Agenda	5/28/2014
WVDP Project Update	CHBWV; 5/28/2014
Permeable Treatment Wall Update	CHBWV; 5/28/2014
Overview of NRC's License Termination Rule	U.S. NRC; 5/28/2014
Commission's Final Policy Statement on WVDP	U.S. NRC; 5/28/2014