



MEETING SUMMARY

HANFORD ADVISORY BOARD

Tank Waste Committee

Wednesday, May 20, 2020

Virtual Meeting – GoToMeeting and Teleconference Line

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This is only a summary of issues and actions discussed at this meeting. It may not represent the fullness of represented ideas or opinions, and it should not be used as a substitute for actual public involvement or public comment on any particular topic unless specifically identified as such.

Opening

Bob Suyama, Benton County and TWC chair, opened the meeting.

The committee adopted the TWC October 2019, Joint TWC and HSEP November 2019, and TWC January 2020 meeting summaries.

Federally Funded Research and Development Centers (FFRDC) Report on Low-Activity Waste (LAW) Supplemental Treatment Options

Kaylin Burnett and Anne McCartney, U.S. Department of Energy (DOE) began the agency presentation by reviewing the 2017 Congressional mandate for the National Academy of Sciences (NAS) Review of the FFRDC report. The report was to include the analysis of approaches to the supplemental treatment of low-activity waste, including vitrification, grouting, and steam reforming. Seven public meetings were included in the process of developing the FFRDC report, which was submitted to Congress in October 2019. The NAS review report was released in February 2020. It concluded that waste form assessment is linked to disposal location, and other information may be needed to form a complete technical basis on a decision about treatment approach. See presentation: Discussion of Analysis of Approaches for Supplemental Treatment of Low-Activity Waste at Hanford Nuclear Reservation¹

Michael Stone, Savannah River National Laboratory, reviewed the Waste Treatment Plant baseline process as a foundation for presenting the report comparisons of vitrification, two cases of grouting (on-site and off-site disposal), and two cases of steam reforming (on-site and off-site disposal). The comparison of the possible treatment alternatives included identifying risks and obstacles, benefits, estimated cost ranges, years needed to begin treatment, and regulatory compliance. The results of the comparisons were:

- A viable treatment and disposal option could be developed for vitrification, grouting, and steam reforming
- Using high-performing grouting and steam reforming waste forms, neither would require technetium or iodine removal for on-site or off-site disposal. These elements may require removal or additional treatment with lesser-performing waste forms.
- Grouting is the least expensive treatment option. Vitrification is the most expensive.
- Secondary waste generated from vitrification would require additional treatment.

See presentation: Analysis of Supplemental Treatment Approaches for Low-Activity Waste at the Hanford Nuclear Reservation Overview and Conclusions²

¹ https://www.hanford.gov/files.cfm/PBC1_Brief_to_HAB_on_SLAW_Review_FINAL_3_5_11_20.pdf

² https://www.hanford.gov/files.cfm/PBC3_NDAA_Panel_Stone-_R1.pdf

Tom Brouns, Pacific Northwest National Laboratory, explained that the 2017 Hanford Integrated Disposal Facility (IDF) Performance Assessment (PA) only considered glass wastes from low-activity waste processing. Therefore, for on-site disposal of secondary wastes, the FFRDC team identified the need for a Performance Evaluation (PE) to assess how supplemental treatment alternatives compared with the IDF waste acceptance criteria. The PE focused on the groundwater pathway and impacts of technetium and iodine. STOMP modeling was used to ensure that the PE was producing equivalent results to the PA for IDF. The PE results indicated that high performing and best cases for glass, grout, and steam reforming waste forms would meet regulatory requirements for technetium. Low performing grout and steam reforming options would not. In the case of iodine, only high performing and best cases for steam reforming, and projected best cases for grout and glass meet regulatory requirements. There may also be a requirement to pretreat for organics in the waste. See presentation: [Analysis of Supplemental Treatment Approaches for Low-Activity Waste at the Hanford Nuclear Reservation](#)³

Regulatory Perspectives

Dan McDonald, Washington State Department of Ecology (Ecology), observed that in looking at the report, it is important to consider the Consent Decree and the time frame for commissioning of the Waste Treatment Plant. Supplemental treatment of low-activity waste is another contributor to the project's costs. Depending on who you talk to, there is a perception that there is (or is not) enough money to accomplish this.

Committee Member Questions (Q), Responses (R), and Comments (C):

Note: This section reflects individual questions, comments, and agency responses.

Q: "When we look at the cost estimate for off-site disposal, it's much higher than the publicly shared proposal and contracts, and why is that? Is that accurate?"

R: "What you are seeing there is the WCS [Waste Control Specialists site in Texas] cost for the disposal."

Q: "For the grouting case number one, did you include the tech [technetium] and iodine cost removal?"

R: "No, tech removal would not be a huge cost increase. The iodine removal - you are almost starting from scratch. It's hard to come up with a cost. I wouldn't expect it to double the cost."

Q: "In terms of tank sampling to get current data, we know something about what is in the tanks. Is ORP [U.S. Department of Energy – Office of River Protection] taking this time to increase the sampling to get a better idea of what is in the tanks?"

R: "WRPS has done an evaluation of the double shelled tanks for the organics in there. They are doing a study for the single shelled tanks currently reviewing historical data. Field work for sampling is impacted by work stoppages due to COVID, and there isn't funding in FY20 for additional investigative sampling."

³ https://www.hanford.gov/files.cfm/PBC2_NDAA_PE_Brouns_052020_Present_R1.pdf

Q: “I was impressed that in the next steps, I didn’t see a single one I disagreed on. Are all those steps funded and going through right now?”

R: “The first one, I don’t have an update on that one, but the rest are funded for FY20. Some field and lab work has slowed down due to COVID.”

Q: “Given this is the first time we are hearing about this, when did you start and finish this analysis?”

R: “We started in 2018 and finished in October 2019.”

System and Facility-wide Critical Path for Direct-Feed Low-Activity Waste (DFLAW) Critical Path and Supporting Facilities Update

Tom Fletcher and Erik Olds, DOE, reviewed the Integrated Schedule and the timing trends and float for each of the major project elements. Tom explained that DOE is working to do everything it can off of the Critical Path to retain progress in light of the advancing backlog over the last 10 weeks due to coronavirus impacts. See presentation slides: [DFLAW Integrated Schedule – March 2020⁴](#)

Committee Member Questions (Q), Responses (R), and Comments (C):

Note: This section reflects individual questions, comments, and agency responses.

Q: “I’m wondering what the process is for TSCR [Tank-Side Cesium Removal]?”

R: “TSCR was shut down, but we continued to do the paper side of it. All physical field work has been stopped since March 21 due to COVID-19. Everything we could progress that is paper related and can be worked on is being worked on.”

Q: “Since you guys have a lot of time on your hands, in your recovery plan, the van pools were being supported, because you didn’t have enough parking out there. So, carpooling and van pooling will be an issue with social distancing. Have you thought of that?”

R: “I don’t know totally how it will be managed yet, but van and carpooling where you can be six feet apart will be an issue. I don’t know the answer to that, but it is one of biggest discussions.”

Q: “Do we have enough PPE [Personal Protective Equipment]? And what is considered enough?”

R: “The PPE is one of the main concerns. We will not enter a phase where we don’t have the supply chain to meet the PPE chain - knowing we shouldn’t be the first providers like first responders. Right now we are good on PPE to manage the situation we are in. DOE is looking at PPE at a national level.”

Committee Business and Open Forum

⁴ https://www.hanford.gov/files.cfm/DIS_Level_1_Graphic_March_2020.pdf

The group discussed a number of potential TWC topics for future meetings, including what topics they might want to see for a Committee of the Whole, when the site-wide analysis will be out, and asking DOE staff what topics TWC could have a presentation on. They also considered what TWC topics might be appropriate to bring to the full Board at its next meeting. There was not a consensus or agreement in the group as to what these topics should be.

Another thought was related to a potential joint TWC and River and Plateau (RAP) committee meeting that could cover topics like the lateral flow white paper, the upcoming Nuclear Regulatory Commission analysis report, and the IDF Performance Assessment. The suggestion was made that the time is ripe for a discussion on the jurisdiction of TWC and RAP in light of overlapping topics and issues.

The agencies were asked how much longer the Tri-Party Agreement holistic negotiations are expected to continue. The negotiations are continuing, but there is nothing that can be shared right now about their progress.

TWC agreed to have a June committee call.

Attachments

Attachment 1: Discussion of Analysis of Approaches for Supplemental Treatment of Low-Activity Waste at Hanford Nuclear Reservation

Attachment 2: Analysis of Supplemental Treatment Approaches for Low-Activity Waste at the Hanford Nuclear Reservation

Attachment 3: Analysis of Supplemental Treatment Approaches for Low-Activity Waste at the Hanford Nuclear Reservation Overview and Conclusions

Attachment 4: DFLAW Integrated Schedule – March 2020

Attendees

Board Members and Alternates:

Bob Suyama, Member	Vince Panesko, Alternate	Ken Niles, Member
Jeff Burrigh, Alternate	Dan Solitz, Alternate	Shelley Cimon, Member
Gerry Pollet, Alternate	Jacob Reynolds, Member	Richard Bloom, Alternate
Steve Wiegman, Member	Marissa Merker, Alternate	Liz Mattson, Member

Others:

Kaylin Burnett, DOE	Dan McDonald, Ecology	Lindsay Strasser, North Wind
Janet Diedker, DOE	Ryan Miller, Ecology	Ashley Herring, Facilitation Team, ProSidian
Jolynn Garcia, DOE	Ginger Wireman, Ecology	Jasmine Martinez, Facilitation Team, ProSidian

Tom Fletcher, DOE	Tom Rogers, WDOH	Ruth Nicholson, Facilitator, ProSidian
Yvonne Levardi, DOE	Tom Brouns, PNNL	Peter Bengtson, WRPS
Jim Lynch, DOE	Michael Stone, SRNL	Sarah Saslow
Erik Olds, DOE		Kelsey Shank
Michael Turner, DOE		GL Smith
Gary Younger, DOE		