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My comments concerning the PermaFix EIS scoping decision are presented herein as enumerated topical points. Many of the topics covered in my comments were discussed by other interested members of the public at the EIS scoping meeting held on March 13, 2019 at the Richland Public Library.

1: The March 13, 2019 Public Meeting:

In the course of the March 13th public meeting, much public commentary was focused on the PermaFix request for permission to process and treat up to 3,000,000 gallons of nuclear waste annually, with the most likely customer for that much-expanded processing capability being US-DOE and the Hanford Site.

2: A General Observation:

A decision to grant permission for the 3,000,000 gallon figure carries many more implications for long term public policy decision making, as it concerns the management of nuclear wastes in Washington State, than would be permission for the 2,000 gallon US-DOE Tank Waste small test figure or for the 300,000 to 500,000 US-DOE Tank Waste large test figure.

3: Context of the PermaFix Request:

The PermaFix request for authorization to process up 3,000,000 gallons of nuclear waste is driven by developing issues with the cost and schedule of completing the Hanford Waste Treatment Plant (WTP). At start-up, the WTP will be roughly three times over cost and schedule relative to the original 2001 estimates. In addition, total lifecycle costs for the WTP might be in the range of from three to five times the original estimates.

4: Historical Context of Vitrification:

The decision made in the mid-1990's to vitrify a good portion of Hanford's tank wastes was based on the assumption that there existed a rough balance between the environmental risk reduction benefits of vitrification versus the costs of the vitrification process, in comparison with other alternative and less expensive means of treating and disposing of the tank waste. However, in the twenty-five years which have passed since the vitrification decision was made, the true cost disparity between vitrification and other alternative means is now triple, perhaps even quadruple, what was being calculated in the mid-1990's.

5: Environmental Risk Reduction versus Cost:

In the mid-1990's when the vitrification decision was under discussion among the US-DOE, Washington State, and the EPA, the option of vitrification was being criticized by some experts as being over-kill for tank waste material which could be treated with less expensive and less time-consuming methods. Part of these criticisms were founded in arguments that the cost and schedule estimates for doing vitrification versus alternative methods of disposal were highly unrealistic; and that the technical risks of vitrifying Hanford's very complex tank wastes was being greatly understated. The passage of twenty-five years of WTP project history, including several major redirections in the WTP project's scope and schedule, has vindicated those early concerns.

6: US-DOE Project Management Methods, Then and Now:

The capital and lifecycle cost estimates calculated for WTP in the mid-1990's were developed using highly optimistic assumptions under a project management philosophy which US-DOE has long since discarded as being undisciplined and unrealistic. Unlike how it was done in the mid to late 1990's, the methods US-DOE now use demand that the true cost and schedule risks of a project be fully analyzed and that a realistic cost and schedule estimate be developed before US-DOE's approval to proceed with a large capital project can be given.

7: WTP Startup and Operational Risks:

As was said in the March 13th meeting, doubt has been expressed by some knowledgeable experts that the Hanford WTP plant will ever reach startup and/or full production operation, owing to the exceptionally challenging tasks which lay ahead in bringing the plant safely into full operational status. Not discounting the substance of these opinions, it is my opinion that bringing WTP into full production operation is mostly a matter of how much time and money one is willing to expend in covering every technical and operational issue that might arise as startup activities go forward.

8: US-DOE's Yucca Mountain and MOX Cancellation Decisions:

In the last decade, US-DOE senior managers under both Democratic and Republican administrations have been notably unwilling to pursue projects which cannot deliver the benefits being promised for the time and money actually being spent. Concerning Yucca Mountain, it makes no sense to be burying our spent nuclear fuel when the odds are more than even that within the next fifty to one-hundred years, that spent fuel will be retrieved and reprocessed. If that is the case, why build Yucca Mountain? Concerning the MOX project, its massive cost and schedule overruns made the cost/benefit ratio of the project so outrageously high that proceeding forward became indefensible from any kind of rational public policy perspective.

9: WTP's Long-Term Mission and its Costs:

The costs of building and operating WTP for another forty to fifty years could pay for reprocessing all of America's spent nuclear fuel several times over. Vitrifying Hanford's tank wastes is an industrial process which carries as many safety, health, and environmental risk issues as would a plant dedicated to the reprocessing of spent nuclear fuel. It is even possible to imagine a scenario occurring forty years in the future where the US-DOE begins seriously examining the option of co-locating a spent fuel reprocessing facility on the Hanford site next to the WTP plant, given that much of the supporting infrastructure and the technical expertise needed to safely reprocess the nation's stock of spent nuclear fuel, and to safely dispose of the resulting process waste, would already be located there.

10: Handling Tank Waste as TRU with Disposal at WIPP:

When the decisions regarding vitrification versus other alternative methods such as packaging Hanford's tank waste as TRU were being made in the mid-1990's, the Waste Isolation Pilot Plant (WIPP) in New Mexico had not yet gone into operation. It should also be noted that the designation of Hanford's tank wastes as HLW, LAW, and other waste suitable for onsite disposal is largely an artificial construct of requirements being imposed through the Tri Party Agreement (TPA). A recognized expert in nuclear waste treatment and disposal, Dr. James Conca, has argued persuasively that most, if not all, of Hanford's tank wastes could be packaged as TRU and sent to WIPP, assuming that an agreement could be worked out among the local, state, and federal government stakeholders.

11: PermaFix and its Future Role in Hanford Waste Management:

At the March 13th public meeting, it was said by the PermaFix General Manager, Richard Grondin, that PermaFix has no intention of replacing WTP's primary mission. However, the fact of the matter is that if Washington State ever approves the PermaFix request for permitting a considerably larger volume of waste over and above what is now allowed, then the US-DOE has greater incentive to seriously consider alternative methods of disposing Hanford's tank wastes, for example, packaging the waste as TRU at the PermaFix facility and then shipping it to WIPP for final disposal.

12: Changing or Reducing WTP's Mission as a Major Federal Action:

A decision by the US-DOE to downsize or even abandon WTP's vitrification processes as the preferred method for disposing of Hanford's tank waste would be a major federal action affecting the environment, one requiring a full EIS plus a renegotiation of the Tri Party Agreement. Any prior decision made by Washington State to grant PermaFix permission for handling a significantly larger volume of nuclear waste would certainly have serious impacts on any future negotiating positions Washington State might take in its ongoing relationship with the US-DOE, the US-EPA, and with the other Hanford stakeholders.

Summary Comment:

In the absence of a US-DOE proposal to significantly modify the Hanford WTP's current scope and mission, Washington State must by necessity examine the public policy implications of any decision taken to grant PermaFix permission for a greatly expanded waste processing capability. The public interest demands this. However, that said, if Washington State does deny PermaFix its full request, then any justifications for that decision which go beyond Washington State's environmental compliance requirements into the realm of public policy decision making, as that decision making might affect the Tri Party Agreement -- those kinds of justifications should be stated openly and transparently in the state's final decision document.