

1622 Meadow Hills Drive
Richland, WA 99352
July 19, 2011

Defense Nuclear Facilities Safety Board
625 Indiana Avenue NW, Suite 700
Washington, DC 20004-2901
Attn.: Andrew L. Thibadeau

COMMENTS ON THE WTP CULTURAL ISSUES, RESPONSES, AND RECOMMENDATIONS

Dear Mr. Thibadeau,

I eagerly read the June 9th letter from the Defense Nuclear Facility Safety Board (Board, DNFSB) to the Secretary of Energy concerning the Safety Culture at the Waste Treatment and Immobilization Plant (WTP) and provide this response for inclusion in the public comments. The time is overdue for this issue to be addressed head-on. If the WTP culture is to be substantially improved by DOE, Bechtel, and URS, then all aspects of concern must be brought clearly into the open and discussed. I believe that people who have been there, seen, and experienced the actual functioning should provide this information. With over 42 years of commercial and nuclear chemical plant experience and a Ph.D., along with having worked at Savannah River and Hanford for over 22 years, I feel qualified to provide input.

I have prepared for and participated in many meetings with their staff. Deputy Secretary Poneman's June 22 response typifies the attitude that plagues the Department of Energy (DOE) culture. Dr. Chu's June 30th reply includes actions taken many times before as well as an apparent misunderstanding of the issues. The Board's 2011-1 letter recommended that control be taken at the highest level to direct, track, and validate the specific corrective actions, however, on July 11 it was publicly announced that the follow-up responsibility had been delegated to Mr. Poneman. This should raise immediate concerns about the Secretary's commitment. I will comment further on both DOE responses later.

Based on my experience I provide the issues listed below and challenge DOE to respond with new, specific actions to address each of the 23 issues. I ask Congress to review and implement the 14 recommendations outlined at the end of this letter. DOE responses should be scrutinized carefully to ensure they are sincerely addressing the issues and not repeating past actions.

The negative cultural environment has hampered the progress on the WTP since technical issues were first identified. The Bechtel environment has retaliated and stifled those who have opposed their views. This has contributed to the cost increase of nearly \$8B with potentially another \$4-8B needed to get it operating. The startup schedule has gone from 2008 to the latest proposal of 2022. In current plans, it slipped another 3 years in the last 3 months and also furthers lowers the startup performance target. In light of our Nation's financial situation and needs, we cannot accept such poor project performance. Of greater concern, several major technical issues still exist and nobody can stand up today and assure us that the plant will operate safely, efficiently, and robustly meeting the 40 year design life.

I believe that a fundamental conflict of interest lies within DOE and its contractors which inhibits DOE from conducting their oversight responsibility. This conflict results from a lack of experienced personnel within DOE and is fueled by the fact that DOE and its contractors are driven by the same motives of schedule, cost, and milestones. As a result, safety/technical/efficiency issues take a back seat to cost. The contractors focus on these for fees, bonuses, and future contracting work while DOE personnel focus on them for personal and political gains. As a result, if someone raises a technical issue, DOE and its contractor ban together to resist it. The WTP efforts are confounded because the Federal Project Director is actually a contractor employee. In WTP, the focus to obtain about \$5M in award fees and an additional \$50M from Congress drove Bechtel, URS, and DOE to close M3 despite the existence of many technical issues.

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DOE and their contractors, Bechtel and URS, need oversight. Sadly, if the Board is not watching them, nobody appears to be watching. While our Country faces serious financial issues, the cost growth, schedule delays, unresolved technical/safety issues, and cultural issues of this project indicate that this is neither the project nor the time to let DOE and the contractors conduct their business with minimal oversight. The history of what will happen if this is done is captured in many places (ex. *Atomic Harvest*, Michael DiAntonio, 1993).

I sincerely hope that:

- The Board will maintain their scrutiny and effort to see that the right things are done by requesting a written specific follow-up program to address each of the 23 concerns expressed above, and,
- Congress will take action to see that the following recommendations are implemented.

The 14 major recommendations are:

- Provide increased oversight for DOE and the WTP contractors. The oversight responsibility should include increased funding and enforcement authority
- Conduct Congressional hearings to investigate the cost, schedule, tech difficulties, misrepresentation of information, and accurately define the end points.
- Conduct a GAO audit of expenditures, schedule growth and other issues.
- Investigate and review the alleged closed EFRT issues.
- Conduct an independent technical review team with an independent, new team.
- Conduct an independent cultural review with an independent team and involve the appropriate parties. Address the cultural issues so this plant and future Hanford projects proceed in an atmosphere of openness and with a desire to meet or exceed all objectives.
- Since scale up, sampling, pump-out, PJM control, level control were not demonstrated in the M3 program. Bechtel/URS should return the fee that was awarded to them for the alleged closure of M3 and other unfinished EFRT issues.
- Scrutinize any increase in funding for the WTP to ensure it is not being used to cover overruns and "hidden" technical issues.
- Review and require DOE to account for inappropriate performance payments, reducing WTP performance specifications, and supporting a larger cost and delayed schedule.
- Investigate what role Mr. Knutson played in my termination from the WTP and take appropriate corrective action.
- Replace the appropriate upper WTP management and institute training for the new and remaining management.
- Revise the WTP contract so that Bechtel is no longer the design authority and design agency. Assign an independent group to be the process design authority.
- Staff DOE and the WTP, with management who have the appropriate background and training.
- Ensure that the top DOE manager, Dr. Chu or the next Secretary of Energy, takes personal ownership for the cultural problems and does not delegate them to others.

In closing, the recent events and their timing need to be carefully reviewed: the Board conducts a yearlong intensive investigation of the WTP safety culture; they issued a letter of recommendation on June 28 addressing the cultural issues; after only two days, on June 30, DOE responds with a list proposed actions; and on July 5th, Dr. Triay steps aside. We have seen both of these events before. Many times DOE has responded with the same actions executed by the same people. In 2003, after issues surrounding inadequate nuclear drum inspections at the WIPP Facility, Dr. Triay stepped aside stating she would start her own private consulting company (www.allgov.com/Official/Triay_Ines {PDF attached document #87}). She then took a staff position in DOE and later became EM-1. The cultural issues that plague DOE is one of leadership which the top position

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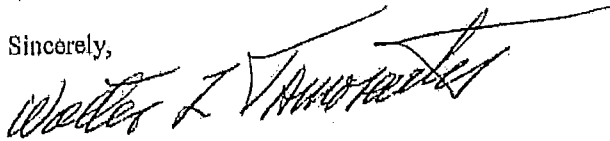
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in DOE must address. But without enhanced oversight, the changes and improvements will not be made. Responsibility to make changes cannot be delegated to those below the Secretary or history will repeat itself. With the billions of dollars being spent, new actions with a new philosophy, or new people, are required along with thorough oversight.

Unlike many facilities where no operation means it is safe, it must be recognized that the WTP is not one of these. Doing nothing is not a solution. The cultural and technical issues must be addressed so that the WTP operates safely and efficiently; by not operating a major safety and environmental issue exists as there is 53M of hazardous nuclear waste left sitting in 177 waste tanks that have exceeded their design life and of which about one third have leaked. The issues shown in attachment #1 represent areas that need specific follow-up and action. The numbers (1-23) associated with the following issues are for convenience of future reference and do not represent a prioritization or level of importance. While any one item might be debated, in totality the issues and attachments describe a culture that should be a concern to anyone. The two attached PDFs (attachment #2 and attachment #3) contain the supporting documentation.

Please contact me if you would like to discuss any of the above topics or need additional information. And again, thank you for your time and effort to address this very important issue.

Sincerely,



Walter L. Tamosaitis, Ph.D., P.E.

Attachments:

- #1- Listing of 23 cultural issues with documentation referenced.
- #2- PDF of referenced documentation for issues #1 - #13
- #3- PDF of referenced documentation for issues #14 - #23 and attachment #87

Cc: Senator Cantwell c/o Amit Ronen and Joel Merkel
Senator Murray c/o Jamie Shimek
Senator Wyden c/o Dave Berick
Senator Franken c/o Jason Day
Senator Markey c/o Michal Freedhoff
Representative Inslee c/o Beth Osborne
Representative Hastings c/o Brianne Miller
Representative Larsen c/o Pablo Duran
Representative Reichert c/o Michelle Tranquilli
Representative Rodgers c/o Shaughnessy Murphy
Representative Beutler c/o Jordan Evich
Representative Dioks c/o Peter Modaff
Representative McDermott c/o Rita Soldana
Representative Smith c/o Paul Hoover
Representative Spier c/o Mike Larsen
Representative Degette c/o Brendan Devine
Representative Sutton c/o David Bond
Senate Armed Services Committee c/o Madelyn Creedon
House Energy and Commerce Committee c/o Alan Slobodin and Peter Spence
J. Richard Schapira - DNFSB
T. Devine - GAP

Attachment #1
COMMENTS ON THE WTP CULTURAL ISSUES, RESPONSES AND RECOMMENDATIONS

Dr. Walter L. Tamosaitis

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- 1- Meetings with the Board and/or Board Staff: In my experience, the DOE and the WTP contractors treat interactions with the DNFSB with contempt. The objective is to see how little can be conveyed while spinning the information in the most positive way. The attitude of "loose lips sink ships" and "the more we say, the more it can hurt us" prevail in any meeting with the Board or the Board staff. That the Board staff can even come close to doing their jobs with the "hide the ball" approach taken by DOE and Bechtel/URS is a credit to the quality of the Board staff. Rather than viewing the Board as an independent set of eyes who can help, DOE and their contractors see the Board as the enemy. This attitude by DOE and Bechtel/URS towards the Board can be seen in the attachments. The attachments contain derogatory comments, show efforts to interfere with Board actions, and attempts to discredit the Board.

Attachments-

- 1: Olinger comments to the State of Washington regarding the Board.
- 2: Attempt by Chung to stop DNFSB 2009 recommendation letter.
- 3: Russo asks DOE to get the Board eliminated from a review session.
- 4: Russo comment on what should "embarrass" the Board.
- 5: Russo comments on the Board abilities and responsibilities.
- 6: Russo says that closing M3 on June 30th would put the Board in "high gear" and that they need to close M3 but "keep the DNFSB from overreacting". He also comments on DOE and states that "they (DOE) often do things that make no basic sense".

2. Message Manipulation: The manipulation of words and messages by DOE and Bechtel/URS does not stop with the Board. Congress receives the same treatment. DOE and the contractors want to make sure their words get to the appropriate congressional members so that they "don't" come up with words of their own" which could influence contractor money.

Attachments-

- 7: Attempts by Bechtel to influence congressional wording
- 8: Bechtel attempts to influence Senate Armed Services Committee staffer Ms. Creedon's wording and the wording in the House Appropriations Bill.
- 9: Bechtel says they should give Ms. Creedon enough to satisfy her concerns but no more and also give Ms. Creedon a path forward or she may find one on her own.
- 10: Bechtel tries to control communications on the Hill after I wrote my June 16, 2010, letter to the Board.
- 11: Senator Murray's office and Jamie Shimek help Bechtel with communications on the Hill following my letter to the DNFSB.
- 12: House personnel ask repeatedly about the use of the extra funding with regards to mixing issues and structural analysis. Despite many questions, DOE says they use it for equipment purchases so that they can continue to move ahead.
- 13: Bechtel lobbyist, D. Owen, provides critical comments about Dr. Tamosaitis despite no investigation or input. Lobbyist Owen describes Triay as frenetic and questions if she should have responsibility for spending \$5B/year. Doug Clapp says the "DNFSB looks like an asshole for opening an investigation".
- 14: Russo tells Triay that the DNFSB language was removed from HASC bill.
- 15: Despite extensive efforts to get the extra funding, top Bechtel management want to know what they will do with the extra \$50M.

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(continued)

3. **Controlling the Message and the Messenger:** The message control "game" was on display at the October 2010 public meeting through all the notes passed from the advisory audience to the witnesses via management personnel. The obviousness of this was noted by Board members at the hearing. DOE and contractor management were reviewing and screening notes in an attempt to control the narrative. It appears that after hours of preparation and a 100+ page written response to the Board's questions, they still felt a need to control the responses. Where are the corner stones of integrity, openness, and truth in the WTP nuclear culture?

Attachments-

- 16: The performance requirements for the mixing issue (M3) will be adjusted (downward) if needed to close the issue by June 30, 2010.
- 17: Russo tells Knutson to be more positive about M3 so that Congress does not kill the extra \$50M
- 18: Russo says Poneman and Knutson want him to help sell the Hill on the story for more money.
- 19: Olinger says to remove words going to the Board that imply they are not ready.
- 20: Olinger outlines several reductions in process capacity that will be made to make M3 work.
- 21: March 8, 2011: TriCity Herald article on DOE Witness Tampering

4. **The Eye in the Sky:** The Board is viewed with such disdain that the actions of some people are carefully watched especially when the Board or Board staff are on site. If sidebar or one-on-one discussions are held between staff members and certain employees, management is immediately informed. I experienced this as a result of a meeting I had with a Board staff member shortly before my termination. URS manager, Bill Gay, then sought to find out why I had this meeting by asking other contractor employees. What does this type of management questioning telegraph to other employees?
5. **The DOE Employee Concerns Process (ECP):** After my termination from the WTP, I immediately went to the DOE ECP. My URS management (Vice President Leo Sain) told me "we do whatever Bechtel says", I did not go to Bechtel management. After a few discussions with the DOE ECP personnel describing what happened and who was involved, the ECP management (Mr. William Taylor) recommended I look externally for assistance since this situation appeared to have big implications. Dr. Chu's response to combine Hanford ECP offices seems to be driven more by a cost reduction motive rather than the desire for cultural improvement.
6. **Nuclear Culture Policy in WTP:** In 2006 the DOE Office of Health, Safety and Security (HSS) audited the WTP and issued a report calling for a nuclear culture policy and procedure. It was not until mid-2010 when the DNFSB public hearing loomed in front of Bechtel/URS that they took action. The need for the report was emphasized in late August when Bechtel held a management retreat at a resort in Idaho. After that, as the issue date approached and comments were coming in slowly, the top Bechtel Project manager, Mr. Russo, sent an email directly to the URS manager coordinating the policy telling him to move ahead, and to assume "that no reply means agreement". Does it take an upcoming public meeting to get follow-up action in a nuclear culture? Where was DOE in following up on their own 2006 review?

Attachments-

- 22: Russo tells Coyle to assume "no feedback by COB today is agreement with the action plan".
- 23: Cover page of WTP Nuclear Policy showing 2010 date.

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(continued)

7. **DOE Culture Audit:** To assess the WTP nuclear culture as a result of my July 16, 2010, letter to the Board, DOE sent their Office of Health, Safety and Security (HSS) to conduct a review. The issue of concern with was the punitive and retaliatory measures taken by Bechtel/URS management against those who raised technical issues as evidenced by my termination from the WTP. To my surprise, the lead of the HSS review, Ms. Worthington, stated specifically that the review would not look into this but rather look at the culture surrounding it. In the Executive Summary of their report, the HSS state that Bechtel/URS had established the framework for a strong nuclear safety culture, however, "pockets of concern" existed. These two points warrant further comment.

First, if they looked at multiple subject areas and only one area had concerns, overall, in their view the framework may look good but implementation is the key. A culture assessment involves more than investigating terminations but, in fact, they never examined this aspect. Second, the HSS stated that they interviewed about 250 people. How many were interviewed is not the key factor in a survey. Who were interviewed is more important. The major factor that was missed by the HSS is the common denominator for these so-called "pockets of concern". These "pockets" were all people who challenged or disagreed with Bechtel management and Bechtel engineering. Specific cases were never investigated. Also, of concern is the fact that the Executive Summary of the HSS report does not adequately reflect the findings contained in their report.

Other reviews have reported that approximately 95% of the employees gave the safety and quality culture at WTP high marks. This warrants a factual review of the employment numbers. The HSS stated they interviewed about 250 employees. At that time the WTP had about 2500 employees. Only about 50 were outside of Bechtel engineering and directly involved in technical issue resolution. Let's double this number to 100. If every one of these 100 employees expressed concerns, it would amount to less than 5% of the total. Would the HSS still classify them as "pockets"?

It also needs to be recognized that the majority of conflict with Bechtel engineering occurred in the 2004-2010 period. Many employees left prior to the HSS audit so for the DOE HSS to find any pockets today should clearly raise a flag of concern. In fact, in the 2006 period, some groups had an annual turnover rate exceeding 30%. Several employees who had concerns left the WTP project by mid-2010 for fear of reprisal. Former employees, independent contractors, and national laboratory personnel should also have been interviewed. Also, how many employees do they believe are going to express concerns after they see a senior manager terminated from the WTP project the day after presenting a list of about 50 safety issues, not allowed to go to his office, not allowed to get his personal belongings, not allowed to talk to anyone, escorted from the premises, and assigned to a basement office with no meaningful work?

But it is not a numbers game. Focus must be on the issues and the culture. It takes only one single individual with special knowledge or a different perspective of a problem to remain silent for a disaster to occur. How many technical people were aware of the O-ring failure potential in the space shuttle Challenger? Probably less than 10. Is it acceptable to DOE to say that since most NASA personnel felt comfortable raising issues, these "10" were just a pocket? Is it acceptable to DOE to say that since NASA management felt schedule pressures, these "10" should be ignored? More recently, how many people were familiar with the problems in the BP Deepwater Horizon? Just a few. How many spoke up?

As a final point, per Ms. Worthington, Dr. Triay took the lead for the HSS review. Why did Dr. Triay take responsibility for this review if Mr. Podonsky is the head HSS manager? After the review, Mr. Podonsky told a person external to the project that if even a single point of concern existed it was bad and had to be addressed. What has Dr. Triay done about the review in the last nine months before moving on? *How many concerned employees does it take to make a pocket and how many pockets does it take before the issue is addressed?*

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Where is the written corrective plan outlining specific follow up actions for the HSS review? Per the HSS report there was *more* than one pocket; what has been done about the pockets?

Attachment-

- 24: URS-0000834: "This will be no easy termination".
- Reference: Paper titled "Maintaining the Continuity of Knowledge in a Major Multi-Decade Project" presented by Dr. Tamosaitis at the 2007 American Society of Engineering Management Annual Conference. This paper resulted from information obtained to formulate closure to the EFRT, Lack of Continuity Issue (P-11).

8. **Who Represents Employees?** As stated above, after my termination from the WTP, DOE sent in their HSS to investigate the culture. The DOE Inspector General (IG) also started an investigation which was supposed to look into retaliation. As soon as the DOE IG learned I had filed a claim with the Department of Labor, the IG immediately stopped their investigation. As a result, no one in DOE has investigated the DOE or contractor actions surrounding my termination or asked my any questions. I have been trying to obtain the information from the curtailed IG investigation for over nine months with no success. One year has passed since the complaint was filed with the Department of Labor with no outcome. In fact, I have had only a partial interview with them and much more information to convey. Neither Bechtel nor URS has provided a written reason for my termination from the WTP. So, in the DOE nuclear culture, who represents the employees? And now Deputy Secretary Ponemen wants all the notes, files, etc. the Board has. What will he do with the information?

Attachments-

- 25: Peneman, Triay, and Knutson support Bechtel's decision to terminate me despite no investigation or discussions with any personnel. Russo also states that "DOE cannot be seen as involved" (in my termination from the WTP).
9. **Independent Review Teams:** DOE and Bechtel formed an "independent" review team, the Environmental Management Advisory Board (EMAB) to review DOE facility issues. The co-chair is a retired Bechtel Senior Vice President and one of the members is a retired Bechtel Vice President. While DOE will attest there is no conflict of interest, what is the definition of the word "independent" in the DOE and WTP nuclear culture?

Attachments-

- 26: Draft announcement of the formation of the EMAB
 - 27: Russo says they will push for Bernie (Meyer) involvement
 - 28: Ogilive says Triay will be happy to hear about Larry Papay
 - 29: Description of EMAB membership by Hanford Challenge
10. **Lessons Learned:** Prior to the WTP, the Boston Tunnel, the Big Dig, was touted by many as the single biggest project in our Country. Despite not having chemical operations to contend with it was still a very big project. It went way over budget and took much longer than expected. Bechtel was a prime contractor. There was a major technical issue resulting in a death following startup (opening). What are the common factors and causes of issues in that project compared to the WTP? A nuclear culture builds on lessons learned. What was, and can be, learned from a comparison?

Attachments-

- 30: 2006 article by D.R. Baker which appeared in the Chronicle
- 31: 2008 article from Bechtel home page (abbreviated)

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(continued)

11. **DOE Managements Role:** The material obtained since my termination from the WTP indicates that the DOE Federal Project Director, Mr. Knutson, played a key role in my termination. It was confirmed under testimony that he stated (or words to this effect) "he would not have a whistleblower in the organization". Yet he signed an affidavit saying he played no role. URS management, Mr. Gay, stated that Mr. Knutson initiated the action. Even Bechtel management personnel questioned Knutson's involvement. Again, where does integrity and honesty reside in the WTP nuclear culture? Why has DOE remained silent in the face of this evidence? Where is the DOE investigation into this act of retaliation? DOE actions are supposed to *assure* a healthy safety culture, not undermine it.

Attachments-

- 32: Knutson tells Russo to "color his conversations" with his management and accelerate personnel moves.
- 33: Gay states that Knutson initiated my termination from the WTP.
- 34: Russo states, "the Federal Project Director is not going to respond to threats of whistle blowing".
- 35: Bechtel management refers to Dr. Tamosaitis as an "official WB" (whistle blower).
- 36: Russo states that "DOE can't be seen as involved" in my termination from the WTP and Bechtel is unhappy with URS' handling of my termination.
- 37: Pages 66-75 from Cami Krumm, URS Human Relations Manager, deposition.
- 38: Russo tells Knutson he told URS to get me out of here 2 weeks ago.
- 39: Olinger offers help to Russo to help with the Board (after Dr. Tamosaitis' termination from the the WTP) and despite the concerns of two senior Ph.D.'s., DOE and Bechtel drive ahead with M3 closure.
- 40: Walker says Triay and Knutson feel they can manage the DNFSB after my June letter.
- 41: Bechtel public relations personnel ask if it is normal for a DOE manager to be involved in personnel movements.
- 42: Gay July 23 email to Wright saying to forget about temp assignment since I wrote a letter to the DNFSB.

Reference-

- Affidavit in DOL suit: Knutson signed affidavit stating no involvement in Dr. Tamosaitis' termination from the WTP (www.sheridanlawfirm.com)

12. **Public Commitments:** In the public meeting on October 7, 2010, Mr. Russo, the Bechtel manager, stated that Mr. Knutson, the Federal Project Director, and he had made a commitment several weeks earlier to do a large scale success oriented mixing demonstration test by mid-2012 (page 142 of the public meeting testimony). He also said the draft plan having consensus on all but the simulant(s) would be available in three to four months, i.e., by March 2011 (page 221). It is now almost 9 months later and basic details like functional requirements, the size(s) of the test, number of tests, sampling, pumpout, cost, funding, test location etc. have not been established (page 172). On page 166 Mr. Russo states that the large scale testing will be done before the vessels are installed. But now discussions are actively underway to completely assemble the vessels, ie, install the heads and close them up), prior to the large scale testing. This will require major rework if the tests are not successful. [REDACTED]

[REDACTED] Why does the DOE nuclear culture allow for such misrepresentation?

Attachments -

- 43: WTP communication dated December 7, 2010
- [REDACTED]

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(continued)

13. **Intimidation?** When does the drive to get support go too far and become intimidation and veiled threats (loss of business, employment, etc). It appears that weeks before M3 was supposed to close, DOE HQ wanted to have support from several third party reviewers to support for a M3 white paper assessment being prepared by Bechtel/URS. Support from PNNL was of special interest. The attached emails, especially those relating to PNNL, raise questions as to whether this line was crossed. This pressure came from the upper levels of Bechtel management and extended to the CEO of Battelle and others.

Attachments-

- 45: Three Chung emails asking Russo has gotten PNNL buy-in on M3 white paper.
 - 46: Olinger wants to know what Russo has done to get "assurance".
 - 47: Russo states that PNNL better "damn well be on board" after the money that was spent there.
 - 48: Russo states that they have to calibrate Wadsworth on standing behind their (PNNL's) work.
 - 49: Wadsworth gets calibrated by Bechtel.
 - 50: Olinger asks that support from Chuck Spencer and Paul Rutland be ensured.
 - 51: Russo says Spencer and Rutland support confirmed. Olinger says Sain and Fonteberry can help sell the Board.
 - 52: Olinger wants SRNL concurrence. Russo says that SRNL will agree with their position since Deason was on his team at LLNL.
 - 53: Russo tells Ashley to send people to SRNL to help get them in alignment.
 - 54: DOE supports M3 closure despite concerns by Dr. Alexander and Gilbert.
 - 55: Sain and Russo agree that regarding a technical issue they "need to kill this BS now".
 - 56: Russo describes a technical question as "fishing for issues".
 - 57: Retaliation concerns expressed by PNNL personnel.
14. **External Flowsheet Review Team (EFRT) Issue UnClosure?** – Related to leadership integrity and "truth in reporting" is the question of how many of the 28 EFRT issues are really closed? EFRT issue closure to DOE and Bechtel/URS became an administrative game. To the credit of the HSS, they identified this as a concern in their audit and commented that closure does not mean closure by normal definitions. They further state that this makes it extremely hard for stakeholders to understand the status. In addition, the HSS states that while several technical issues will be addressed later, the M3 closure also appeared to be in conflict with the project policies. In some cases a plan for the plan was provided to allow closure (M5). In other cases, the issue was never fully resolved between concerned parties (M1). In other issues WTP relies on future actions to provide closure (M4). In other issues, technical concerns still exist (M2). M3 closure should have required that the potential for criticalities and trapped explosive gas be deemed safe as well as sampling, vessel pump out, level control, PJM operation, and viscosity control be demonstrated to be adequate and safe. Clearly, despite Bechtel/URS being paid for closing issues, closure does not mean technical issues are adequately addressed.
- Attachment:
- 58: HSS Report page 38 and 39
15. **What Example is Set by the WTP?** Many people look to the WTP to demonstrate our Nation's ability to reenter the nuclear era by building a complex nuclear plant on schedule and cost that startups and operate safely and efficiently. In light of the major cost increases and schedule changes cited above, have we stepped backwards? In light of our Nation's budgetary situation, our government cannot bail out companies who display such difficulties. Has DOE's and the contractor's performance in the WTP hurt our Country's ability to enter the nuclear renaissance should we choose to do so? What are the incentives for URS to challenge the Bechtel design? None. If they challenge it, it will impact their future business partnering. If they hold their tongue, they can get more money later to fix Bechtel's problems. Why should they voice a concern? Who is responsible for providing the oversight to control this and prevent abuse of our taxpayer funding?

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(continued)

16. **WTP Cost and Schedule:** The original WTP estimate was about \$4.6B. It is now \$12.3B. The original startup date was 2008, then 2019, and most recently 2022 is being proposed. As alarming as the increased cost, having to spend another \$4-8B to obtain full startup it is equally troublesome, especially when it might not operate safely, efficiently, or even at all. This \$4-8B estimate includes pretreatment facilities in the tank farm, the remainder of the LAW vitrification capacity, canister storage, effluent treatment facility upgrades or replacement, and other items. Are there not "Truth in Spending" laws in a nuclear culture? What is today's projected total cost to get it fully started up? What is the expected annual operating cost? What is the expected operating efficiency and what is the expected mission length? What if the mission exceeds 40 years which in all likelihood it will? The plant has a 40 year design life – what will happen then especially considering that much of the equipment cannot be inspected?

Mr. Knutson stated at the public meeting (page 225) for the first time that "for the vast majority of waste the PJM systems will work just fine". On page 229 he states "he believes that there is a large fraction of waste that needs to be treated...and the design of the WTPis not controversial" (for treatment). These statements have now morphed into the statement that 70% of the 53M gallons can be treated without problems. Out of 53M gallons of waste in the Hanford tankfarm, far less than 100 gallons has been analyzed. What does Mr. Knutson base his statements on? Recent analysis indicates problems with the filter loop pumps and piping. Most of the waste must undergo aluminum and chromium removal and thus be filtered. Where will line flushes and vessel pump outs be sent and how will this impact safe operations and throughput? In addition, pretreatment facilities are now being proposed for the tankfarm. Can Mr. Knutson explain why if pretreatment process issues exist in the WTP, why will they disappear in the tankfarm?

In addition, DOE and Bechtel are now proposing the 2020 Vision with the responsibility and cost for startup going to a new Bechtel/URS group. Where does the startup money included in the WTP project go if responsibility is moved? How much more money is needed to start up the WTP? At one point Bechtel/URS were planning to startup and operate the plant without HAMTC operators. Who do they plan to use to operate the plant? The tankfarm contract expires in 2018. Why is operation of WTP automatically being given to this "new" group without competitive bids?

Attachment-

- 59: the \$12.3 Billion dollar cost is in jeopardy.
- 60: April 17, 2011, article in TriCity Herald about extra needed WTP facilities.
- 61: Need for another waste tank to do a double decant is questioned.
- 62: Email on blending facility addition is discussed.
- 63: Russo says that moving scope to the tankfarm can save WTP money. Does money go along with the scope that is moved? How much more will it cost if it is in the tankfarm?

17. **Management Knowledge and Turnover:** A quality culture requires knowledge and continuity to understand and properly address the issues. Degrees, titles, and disciplines studied by themselves do not represent true knowledge or the ability to do a job. On the other hand, a foundation must exist in order for managers to make sound decisions. In addition, the WTP is a chemical plant. In the Bechtel/URS/DOE organization chain, from the top management up and the WTP chief engineer up through the Secretary of Energy, there is not one person with a chemical engineering degree. To my knowledge, not one person has worked in and operated large chemical plants. The organizational decision chain is/was comprised of political science majors, lawyers, civil engineers, chemists, and physicists. This is not to say that these people are not competent but rather to say that experience and understanding of the issues is needed. This factor combined with management turnover (Bechtel has had five Project managers in nine years) impacts continuity and good decision making in projects, especially long duration projects. Note: Mr. Huizenga, ChE Montana State, was recently assigned to Dr. Triay's former position. He also has direct linkage to the Lawrence Livermore National Laboratory similar to Russo, Samuelson, Knutson, and Deason.

COMMENTS ON THE WTP CULTURAL ISSUES, RESPONSES, AND RECOMMENDATIONS
(continued)

18. **M3 Closure (monetary):** An all or nothing fee was associated with M3 closing by June 30th. Stated another way, for Bechtel/URS, 80% of the total (\$6M) fee, about \$5M was associated with M3 closure. The TPA milestone was also associated with the June 30 date and the first milestone (December 31, 2009) had already been missed. Those who signed the TPA, which includes Secretary Chu, did not want to miss another date. In addition, Bechtel was pushing Congress to get another \$50M in 2010 and future years. While all companies are in business to make money, when the push for profits outweighs safety and logic, it is time to examine what is being done; especially with the importance of the WTP.

Attachments-

- 64: Russo makes public comments in March that M3 will close by June 30th, 2010.
 - 65: Email stating that 80% of fee (about \$5M) is directly tied to M3 closure by June 30th.
 - 66: Russo says he would rather win the fee by changing the rules than testing.
 - 67: Russo says fee is in play in a big way in M3 closure.
 - 68: Russo says the \$50M is in play with M3 closure.
 - 69: Russo tells DOE that not closing M3 will kill momentum and the (\$50M) extra funding and he will personally raise "bloody hell".
 - 70: Bechtel management expresses concern about winning the fee.
 - 71: Bechtel management is concerned about who the cost increase is associated with and pushes for REA (request for equitable adjustments) so that responsibility for the work is associated with DOE.
 - 72: Bechtel management wants to ensure the extra \$50M is protected.
19. **M3 Closure (technical):** M3 was declared closed based on the submittal of paperwork on June 30th for which Bechtel/URS obtained nearly \$5M. Today many mixing issues still remain undemonstrated and open including sampling, modeling, pumpout, and PJM controls. The air supply and exhaust system have issues. Erosion is still a concern. Major concerns exist with the ability of the filter pumps to maintain the needed flowrates. The operating temperature is being reduced so throughput is further affected. The WTP has a 40 year design life. It must operate safely and efficiently and remove the 53M of nuclear waste from the 177 tanks as quickly as possible before an environmental catastrophe occurs. World renowned mixing consultants offered many comments but DOE still chose to approve closure and pay Bechtel the fee. How does a quality culture justify that action?

Attachments:

- 73: Dr. Etechells states that "Dr. Calabrese (CRESP) does not like anything he has seen". CRESP is advisory group to DOE, not Bechtel/URS. CRESP stands for the Consortium for RiskEvaluation with Stakeholder Participation. CRESP receives ear-marked funding.
- 74: Dr. Dickey states that Dr. Calabrese agrees that the way Bechtel and DOE are using the (scaling) exponent is "just so the results look good".
- 75: Dr. Dickey states that use of a .18 exponent would be considered by him to be "criminally negligent" with respect to the design of a nuclear waste processing plant".
- 76: Dr. Dickey states "the way (Bechtel) engineering is using the .18 scale-down is a bit of "smoke mirrors".
- 77: Dr. Dickey says a .33 scaling exponent is the best factor (to use).
- 78: Per Dr. Dickey, Dr. Calabrese's scaling exponent was .9 (not .18).
- 79: Dr. Sutter, DOE Consultant, expresses concerns about M3 closure.
- 80: Conclusion of CRESP report appears to be confusing.
- 81: Bechtel/URS accept CRESP based on first 11 words of final sentence.
- 82: Dr. Dickey suggests large scale testing options in February, 2011.
- 83: Dr. Etechells offers thoughts in February, 2011, on what work needs to be done to really resolve the mixing issues and close M3.
- 84: Technical concerns raised by PNNL (Vulnerability letter).
- 84: The feasibility of adding a heel pumpout line is questionad.

COMMENTS ON THE WTP CULTURAL ISSUES, RESPONSES, AND RECOMMENDATIONS
(continued)

20. **Management Actions:** After my termination from the WTP I was assigned by URS to sit in a basement office with no meaningful work given. I have now sat here for almost a year. I have not been invited to any safety or information meetings nor have I had any meaningful discussions with anyone in URS management. URS managers have told others that talking to me or even being seen with me can be troublesome. What signal does this send to others? A few days ago (June 30) I received a call from the Savannah River Site and was asked to support one of their programs. So after almost a year, there is no work for me in the Hanford area despite URS being involved in three major contracts. Per the SRS manager, the major reason for SRS soliciting my help was that the URS Human Relations Division manager, Mr. Hollan, told the manager at SRS that "my help would be free".
21. **Design Authority vs. Design Agency-** A basic problem with the WTP is in the contract mechanism. Bechtel is both the design authority (determines what needs to be done) and also the design agency (decides how it will be done). This is analogous to "giving the fox the hen house to guard". There are no checks and balances. DOE has neither the resources nor the capability to provide the needed oversight. In addition, the focus on short-term results including CPI and SPI drive near term performance. The mantra is "let there be no problems on my watch" and "by the time the problems appear, I will be long gone". This contract conflict combined with the short-term view and the lack of management continuity is the major cause of technical issues, cost overruns, and schedule delays. I want to note that this attitude is **NOT** characteristic of all employees but rather permeates Bechtel, URS, and DOE management. There are **many** employees who sincerely want, and try, to do a good job.
22. **Mr. Poneman's "Vital" Request:** An item that reflects the cultural issues within DOE is Mr. Poneman's request to have all files and investigative information of the Board given to DOE for review. Congress established the DNFSB to review DOE actions, not vice versa. Mr. Poneman surely is aware of that. DOE lawyers sat in some of the closed door subpoenaed sessions held by the Board and they also have other information. Where is the written path forward from the HSS audit of 9 months ago? The HSS manager Mr. Podonsky said if just one person was concerned it was too many. How many "pockets" do Dr. Chu and Mr. Poneman require before action is taken?
23. **DOE's Response to 2011-1:** I find several aspects of DOE's five page response amazing. Do they really think people will show up at "town-hall" style meetings and publicly offer constructive comments? Also, nowhere in their proposed actions does there appear to be use of new, objective eyes. Why not involve critical oversight groups? The DOE response appears to offer the same approach used many times of "using the same people to do the same thing in the same way with the hope of getting a different answer". Maybe DOE is just paying for the answer they want. Maybe this is why the WTP facility will cost nearly \$20B and take 14 years longer to get operating, if it runs at all. By most accounting, the WTP is the fourth attempt by DOE to eliminate the looming safety issue of the 53M gallons of stored waste; this time it must be made to run safely and efficiently.

Attachments-

- 86: B.K. Rao's June 9, 2011, letter titled "Ethics, Compliance with Regulatory Agencies, Technical Competence, and Coercion" to many WTP project personnel and others including Dr. Chu. First page only.