

# HANFORD ADVISORY BOARD

*A Site Specific Advisory Board, Chartered under the Federal Advisory Committee Act*

**Advising:**

US Dept of Energy  
US Environmental  
Protection Agency  
Washington State  
Dept of Ecology

October 4, 2013

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Washington State Department of Ecology  
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Re: 100-N Remedial Investigation/Feasibility Study and Proposed Plan Draft A and  
Committee Based Round-Robin Activities

Dear Messrs. Smith and McCormick and Ms. Hedges,

As the number **and** complexity of issues which Hanford Advisory Board (Board) committees are asked to review in preparing advice or preparing materials for public involvement have increased, so have the efforts of committee members and the Board Executive Issue Committee to find better ways to improve the general process. A particularly successful approach that was recently tested makes use of a committee based round-robin activity.

A round-robin is a commonly used facilitation tool that allows all committee members participating in a meeting a brief period of time to provide individual feedback on a specific issue. The feedback is captured in the committee summary and can then serve as a resource for advice writing, further committee discussion, or public involvement. The feedback does not represent the Board or have Board or committee consensus, but it may serve as a thoughtful sketch of the major themes and concerns identified with a given issue. Practically speaking, the round-robin activity also appears to concentrate the attention of committee members and to sharpen presentation skills. Speaking to an audience that is really listening to one's words is refreshing.

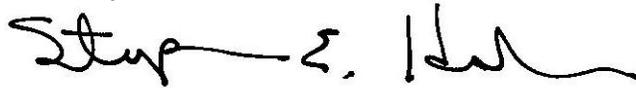
**EnviroIssues**  
**Hanford Project Office**  
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**Hanford Advisory Board**  
Subject: 100-N RI/FS Round Robin Activity  
October 4, 2013  
2014-01  
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The Board and all of its committees appreciate the opportunity to learn about cleanup plans early in the process, and the Board is conscious of the time and effort on the part of the agencies to provide such information. At the recent August 6, 2013 River and Plateau (RAP) committee meeting, the U.S. Department of Energy – Richland Operations Office (DOE-RL) provided a presentation on the 100-N Remedial Investigation/Feasibility Study and Proposed Plan Draft A. In the interest of collaboration and understanding that draft cleanup documents change over time, the RAP committee decided to try providing feedback via a round-robin exercise. As previously noted, using this exercise provided immediate feedback on information just presented.

Following the general discussion and the round-robin activity, RAP committee members observed that while both the general discussion and the round-robin were productive, the round-robin more successfully focused and clarified their concerns and/or support. Furthermore, committee members observed that the round-robin comments merited wider distribution and thus, on their behalf, I have attached those comments to this letter.

Sincerely,

A handwritten signature in black ink, appearing to read "Steve E. Hudson". The signature is fluid and cursive, with a long horizontal stroke at the end.

Steve Hudson, Chair  
Hanford Advisory Board

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*This letter represents Board consensus for this specific topic. It should not be taken out of context to extrapolate Board agreement on other subject matters.*

cc: Jeff Frey, Deputy Designated Official, U.S. Department of Energy, Office of River Protection  
Dennis Faulk, U. S. Environmental Protection Agency  
Catherine Alexander, U.S. Department of Energy, Headquarters  
The Oregon and Washington Delegations

**100-N Remedial Investigation/Feasibility Study and Proposed Plan Draft A,**

**Part 2: Round-Robin Activity**

Hillary Johnson described the Round Robin activity and noted that it was an approach being tested for providing committee feedback on Draft A documents. The Executive Issues Committee (EIC) and facilitation team will be interested to hear if it was a worthwhile and appropriate exercise for such purpose. Each committee member was given two minutes to share their thoughts on the 100-N RI/FS and Proposed Plan Draft A. These comments will be tracked in the committee meeting summary as part of the committee meeting record. Prompting questions had been provided for committee member consideration: Are there any compelling factors or issues that you believe haven't been adequately addressed in the draft plan? Do you think the proposed plan remedy is reasonable as presented in the draft plan?

- Dale Engstrom said the 100-N cleanup process appears to have worked well. The apatite barriers have reduced the amount of strontium-90 that is reaching the Columbia River and it can be promoted as a successful process. Dale said he does have concerns with the remediation scenario for the final Record of Decision (ROD); a lot of strontium-90 is planned to be left behind in upland area. Some of that material could be treated as outlined in Alternative 5 with the additional RTD and apatite barrier. Petroleum remediation may not be advisable because it could affect the apatite barrier. Nitrate treatment is the larger issue; the nitrate plume is equal in size to the strontium plume. The current plan for nitrate is MNA. Dale said he is concerned about other Contaminants of Concern COCs that do not appear to have been addressed and he will be reviewing the RI/FS in more detail.
- Bob Suyama said that this is culturally sensitive area. Since budget is always a concern, the outlined approach is reasonable because it does not require a lot of excavation and avoids problems that arise from RTD. The apatite barrier does appear to be working to isolate strontium-90. Bob said he is concerned about long-term stewardship (LTS) in the area because the apatite barrier needs to be maintained with monitoring for bioventing. These maintenance costs along with vegetation control will add up over time and will be ongoing. Bob said he would like to review the other alternatives in more detail before stating whether he supports the proposed approach or not.
- Steve Hudson said the plan appears reasonable, although the draft plan can only be reasonable if adequate funding to address all the issues is identified. He questioned what aspects of the problem will not be solved if the entire funding amount is not received. There is a serious concern that there will not be adequate funding to meet expectations.
- Dan Serres said he is concerned about leaving strontium-90 in place both in the soil column and the vadose zone. He is also concerned that the model assumptions will not reflect reality. Dan said materials will accrue, even if they do not accrue quickly, and there is concern about how durable remediation will be over 200 years. He asked if there will be factors that could cause strontium-90 to move into the Columbia River over that timeframe. Dan said he does not have faith in ICs over the proposed timeframe, especially in such close proximity to the Columbia

*Attachment: Excerpt from the Final Meeting Summary of the River and Plateau Committee meeting held on August 6, 2013, pages 7-10*

River. He added that the timeframe for the TI waiver should be high and is curious to see how the agencies respond to the request.

- Jean Vanni said the area of the apatite barrier will be a waste site in the future that will require some type of remediation. She will examine the details in the RI more closely. The reasoning behind the TI waiver for groundwater is concerning and the notion that some materials will be left in the area in perpetuity. Jean suggested that there should potentially be another alternative considered and she may support the Nez Perce recommendation, but will need more information.
- John Stanfill said he agrees with what others have been saying about needing more information on the plan to cleanup nitrate and petroleum. All contaminants must be remediated, but other contaminants in the area appear to have disappeared with the focus on strontium-90. John said the Nez Perce will be sending a letter to DOE suggesting that the agency select Alternative 4 with some modifications.
- Gerry Pollet said he is concerned that the proposed remedy is not truly permanent; a waste site is being created right alongside the Columbia River, which is very concerning especially with expected rising river levels in the future. The Board should request a presentation with more information about the other alternatives before providing comments on Draft A. There should be an additional alternative for nitrate that includes RTDs and the additional apatite barrier upland and along the River Corridor. Gerry said he shares the concerns about phytoremediation and noted that there are already concerns about heavy herbicide use to control plants. One cost not considered is the loss of habitat and what happens if there is a lack of money to finish the area.
- Shelley Cimon said a lot of the assumptions about waterways are difficult to understand and important for making recommendations on the preferred alternative. She is concerned about the modeling of fate transport. DOE is building a de facto waste site by using an apatite barrier and should acknowledge that. Shelley said nitrate is also a big issue. She would like to better understand the coyote willow uptake approach and whether it would be worthwhile to pursue, although there are major concerns about the prospect of bringing contaminants to the surface.
- John Howieson said an ongoing frustration with the Hanford Site cleanup is the thousands of separable waste sites that are not easily prioritized. The 100-N area has groundwater with strontium-90 levels that are 1,000 times drinking water standards. However, the Columbia River flows at 7.5 million liters per second so that amount of strontium-90 would be undetectable in the river. John requested information on the ten most important projects at the Hanford Site. He acknowledged that cleanup at 100-N is important but questioned if 100-N would be on the list of top cleanup priorities over the next year or next decade.
- Pam Larsen said the strontium-90 plume at N-Area has been topic of conversation in RAP for many years. The geography of the site includes a very high bank with the strontium deep beneath the surface. Reaching that contamination would require an astronomical excavation effort. The tribes also do not want excavation in the area because of the cultural significance of the landscape. DOE installed an apatite barrier and drilled wells plus there is monitoring in place to track these efforts. Pam said one option might be to follow the approach at West Valley where a

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650 foot wall was installed for a cost of \$6.5 million that has contained a lot of strontium. Pam added that in terms of priorities for the Hanford Site, there are other more pressing source terms to address than this long-range issue.

- Liz Mattson said she shares many of the concerns such as the concern about LTS, the uncertainty about how long the remedy will last, and how much maintenance would be required. Cleanup projects at the Hanford Site often require more openness and uncertainty through the process, especially for polarizing topics like phytoremediation where people tend to either be completely for or against the process. It is easier to be flexible when implementing solutions with a more open process, especially when faced with information that is changing or even wrong. Models can turn out to be untrue. Liz added that she appreciates the opportunity to comment early in the process and hopes the Board will be given more opportunities to provide early input.
- Susan Leckband commented that the Board has heard before that the Hanford Site will receive additional funding in the future, even though current funding levels are low. It is important to be cautious when thinking about future funding. The RI/FS and Proposed Plan should include a consideration of lessons learned from other proposed plans, such as the Proposed Plan for the 300 Area that the Board recently considered. DOE should assume that whatever cleanup approach is chosen, it will take longer and cost more money than initially envisioned. It is always advisable to complete cleanup sooner rather than later. The shoreline will be an attractive nuisance where someone will likely either want to build or drill a well in the future.
- Alex Nazarali said he is concerned about the inventory assessment on mass balance; the amount of material produced and what will be left on the site. He is also concerned about the groundwater plume and how much DOE really understands about the area because wells do not go below 20 feet. Information available is for the upper part of the aquifer and assumes strontium is on the top. He cautioned against relying on the inventory because if this assumption is wrong the entire inventory is flawed.
- Barbara Harper said she agrees with the need for a post remedial risk assessment that includes all COCs; not just deciding the work is complete once drinking water standards for the individual contaminants has been met. The Natural Resource Inventory Assessment will examine all materials that are left on site. The costs for ICs will need to be included in the cost analysis, including herbicide applications. The possibility of an approach that would use more RTD to address additional hot spots is interesting.

DOE is expecting to receive comments on the Draft A from Ecology by September 9 and DOE expects to issue Revision 0 sometime after December, allowing time for comment resolution. RAP proposed that the Round Robin portion of the meeting summary be submitted to the agencies via a letter from the Board Chair as preliminary informal commentary from the committee. The EIC will consider this proposal and determine if this is an appropriate process.

RAP will continue discussion of the topic and allow more time to review before drafting advice, potentially to bring forward at the December Board meeting. RAP expressed appreciation for having the opportunity to review documents early in the process.