

FINAL MEETING SUMMARY

**HANFORD ADVISORY BOARD
RIVER AND PLATEAU COMMITTEE**

*February 11, 2014
Richland, WA*

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

Opening

Pam Larsen, River and Plateau Committee (RAP) chair, welcomed the committee and introductions were made. The committee approved the January meeting summary with minor edits received.

Pam requested that emails include hyperlinks whenever possible to reduce the number of attachments sent, and to increase the revision number whenever a document is modified.

Briefing on the Resource Conservation and Recovery Act Class 3 Modifications*
(Joint with the Public Involvement and Communications Committee (PIC))

Introduction

Jean Vanni said there were several Resource Conservation and Recovery Act (RCRA) Class 3 permit modifications out for public review during November 2013. This first round of public comment has ended but there will be a second opportunity when the Washington State Department of Ecology (Ecology) releases their draft of the permit modifications. Jean said the Hanford Advisory Board (Board or HAB) has been tracking the RCRA permit for the previous four years and Class 3 modifications are major changes that the Board would likely be interested in addressing. Jean added that there are also a number of Class 2 modifications currently under review which are also important, although less complex than Class 3 modifications. Jean also provided a document with background information on the Class 3 permit modifications (Attachment 4).

Ecology presentation

Deborah Singleton, Ecology, and Andrea Prignano, Ecology, provided a presentation on Ecology's Nuclear Waste Program Class 3 Modification Permitting Process (Attachment 2). In their presentation, they noted the following points:

- The modification request was driven by the findings of an U.S. Environmental Protection Agency (EPA) investigation of the Solid Waste Operating Complex. Four violations were identified during the investigation.
- The permit modification process begins when a permittee provides a draft of the modification request to Ecology for review. Ecology then comments on the draft and works with the permittee to modify the permit.
- The public is also given an opportunity to comment on the draft modification. For Class 3 modifications there are two public comment periods. The first is run by the permittee requesting the modification, although Ecology continues regulatory review. Ecology responds to all comments received during the first comment period and then issues their draft of the permit modification for a second round of public comment opportunity.
- Once the modification has gone through both public comment periods and been reviewed by Ecology, the modified permit will either be issued or denied.

U.S. Department of Energy – Richland Operations Office (DOE-RL) presentation

Mike Collins, DOE-RL, provided a presentation on the three Class 3 Permit Modification requests currently underway (Attachment 3). In his presentation, Mike noted the following points:

* Please see Attachment 1 – Transcribed Flip Chart Notes for key points/follow up actions recorded during the committee discussion.

- The permit modification is required as a response to a Consent Agreement/Final Order between DOE and EPA.
- The modification request includes the Central Waste Complex – Waste Receiving and Processing Facility (CWC-WRAP), T-Plant, and Low-Level Burial Grounds 31-34-94. Mike reviewed the specific modification requests for each unit.

Committee Questions and Responses

Note: This section reflects individual questions, comments, and agency responses, as well as a synthesis where there were similar questions or comments.

Q. Is DOE retrieving transuranic (TRU) waste for ultimate shipment to the Waste Isolation Pilot Plant (WIPP)? DOE has been found to be in violation but DOE has been waiting for funding to be able to complete the work required to be in compliance.

R. [DOE] DOE has retrieved some waste from the underground burial vaults that is suspected TRU but further assessment of that waste is currently on hold because of funding. There is also some waste that is ready for shipment to WIPP that has already undergone the TRU verification process. Another subset of waste could be shipped to WIPP if it were repacked to meet criteria and passes the certification process. These modifications to the permit help build an argument for funding needs and reminding people of the importance of the work. The main concern right now is possible degradation of the boxes.

Q. Can DOE explain the references to potential acceptance of off-site waste in Trenches 31 and 34 during the presentation?

R. [DOE] There was a federal prohibition against accepting off-site waste at the Hanford Site as a result of litigation several years ago. That prohibition was extended as part of the tank farm negotiations. DOE currently cannot accept off-site waste at the Hanford Site until WIPP is operational, with certain limited exceptions.

Q. The Board thought that WRAP was not being used. What are DOE's plans for the facility?

R. [DOE] DOE plans to use WRAP for some limited systems. While it is not currently in use, the entire facility is under routine inspection and preventative maintenance. Additional ramp up would be required to use the main building.

Q. Why didn't Ecology discover the violations?

R. [EPA] EPA routinely conducts inspections but the local EPA office and Ecology are unclear about the reason the Hanford Site was selected and whether it was routine or if EPA had some indication that there was potentially a cause for concern.

Q. What types of inspections does Ecology do of the Hanford Site?

R. [DOE] DOE follows RCRA requirements for weekly inspections; Ecology also has routine inspections that they undertake. Additional, more formal inspections occur less frequently.

R. [Ecology] Ecology completes an inspection plan and will notify DOE at least two days in advance of an unplanned inspection in order to allow time for DOE to gather the necessary documentation and insure the appropriate people will be available.

Jean presented some preliminary advice points on the Class 3 permit modifications (Attachment 5). She developed the draft based on comments submitted to DOE during the Class 3 permit modification public comment period by the Yakama Nation, Heart of America Northwest and Hanford Challenge. The draft also incorporates applicable previous Board conversations and advice. Ecology added that they are committed to holding the second comment period so that it would coincide with a Board meeting and allow the Board to prepare advice, likely in September.

C. The Board should consider the implications of issuing advice on this topic. DOE is unable to complete work because the funding is not available; the Board may be asking DOE for something they cannot accomplish. It will be important to distinguish the issues that are related to funding.

C. These modifications and the regulators acting in their enforcement role can help bring attention to the need for Hanford Site cleanup funds to Congress. Congress will likely want to understand the impact to human health and the environment as well.

C. The Board should focus on what the modifications are about; the modifications are required by an EPA settlement to close the units. The modifications reflect an evaluation of those closure plans and are not driven by budget. The draft potential advice only echoes what the Board has stated in the past about not operating in interim status indefinitely, not permitting off site waste to the Hanford Site, and other issues included in the draft advice. Some of the points could likely be omitted but many of these statements have already been offered by the Board in different contexts.

C. Many of the regulations were written without consideration of the complex issues faced at the Hanford Site and are difficult to apply directly to the unique circumstances. It would be helpful to somehow capture the concerns about the need for legislative changes that better address the nuclear industry and conditions at the Hanford Site. Board advice stating that DOE should follow regulations may not be particularly useful.

R.[Ecology] Applying regulations to the Hanford Site has been a major challenge for Ecology since these regulations really were written with different conditions in mind and do not account for situations such as mixed wastes.

C. The intention of the advice is to stress that some of these units could linger indefinitely without being officially closed. There should be a closure schedule as part of the RCRA permit. Items in the permit receive funding and whatever does not receive funding cannot be completed. The Board should support Ecology's efforts to issue a final RCRA permit.

RAP decided to have the issue managers review the draft advice points more thoroughly once Ecology issues their draft of the permit modifications. The issue managers will then report back to the committee to

determine if advice is warranted and propose timing of any advice, tentatively during the September Board meeting. Members commented that information about the draft permit would be needed at least by the August committee meeting, to prepare advice for September. Jean has a more detailed background document on the modifications that will be posted to the Board's SharePoint site.

Committee Discussion on 100-D&H Remedial Investigation/Feasibility Study and Proposed Plan Draft A*

Introduction

Dale Engstrom said RAP reached general agreement to issue advice on the 100-D&H Remedial Investigation/Feasibility Study (RI/FS) and Proposed Plan Draft A. Dale compiled the major issues heard during previous RAP conversations (Attachment 6). RAP decided to wait on issuing advice because the Tri-Party Agreement (TPA) agencies said negotiations between DOE and the regulators are still ongoing, which could mean that Revision 0 of the document will be very different than the Draft A version that would be the basis of Board commentary. RAP decided during the January meeting that they would like to develop advice in order to ensure that the Record of Decision (ROD) is written comprehensively.

Agency perspective

Jim Hanson, DOE-RL, said the RI/FS is currently in the comment resolution stage with Ecology. Most of the comments have been addressed but there are some important outstanding issues and questions on how to proceed with cleanup at 100-D&H. The current pump and treat system is primarily focused on treating hexavalent chromium because that is the risk driver for contamination. Additional contaminants of concern (COCs) will likely be added to the RI/FS, such as uranium in a site-specific area. Jim said that DOE will be adding an irrigation scenario to the document and developing a standards table that will allow comparison of groundwater protection. In the RI/FS, strontium-90 will be considered as a possible coextracted constituent. Hexavalent chromium will be treated and other extracted constituents will be returned to the groundwater at levels that do not exceed standards. Monitoring will continue for all constituents so if there is an anomaly in the future, DOE will be aware of the situation and can address it. Effluent values are currently well below standards; there are some areas where strontium-90 may reach 20 picocuries per liter when entering the pump and treat system but will be returned to the groundwater at one or two picocuries per liter after being diluted in the tanks.

* Please see Attachment 1 – Transcribed Flip Chart Notes for key points/follow up actions recorded during the committee discussion.

Committee Questions and Responses

Note: This section reflects individual questions, comments, and agency responses, as well as a synthesis where there were similar questions or comments.

C. The Board is concerned with using dilution as a means for treating contaminants. It would seem prudent to include a more robust treatment approach when constituents are already being removed from the environment instead of simply pumping them back into the groundwater.

R. [Ecology] Some of the contaminants not being treated are currently listed as contaminants of potential concern (COPCs). Those COPCs may become COCs after the negotiations. The risk factors may be re-evaluated.

R. [EPA] Once a contaminant is classified as a COC instead of a COPC the regulations state that there is a preference for treatment. EPA agrees that there should be treatment prior to reinjection and that dilution is not a means for treatment.

C. The negotiations taking place between DOE and Ecology should be open and transparent.

RAP reviewed the draft advice points and made changes to the wording as well as discussing overarching concerns about the 100-D&H RI/FS and Proposed Plan. Major concerns regarding the potential advice noted during the conversation are summarized below.

C. The Board should not tell DOE what to do and what technologies to use. DOE must evaluate and consider the options throughout the negotiation phase. The Board can emphasize what DOE should be considering without telling them that they must do something. There are factors beyond whether a certain technology is possible or not, such as whether a contaminant really does need a certain level of treatment to meet cleanup goals.

C. The advice does not include any statements about the importance of meeting standards as a driver for treatment. Removal of contaminants is not enough justification to employ a treatment technology; there must be a purpose such as removing a contaminant to address public health concerns. If there is not a risk to public health and the concentrations are below standards than there may not be a justification for treatment.

C. Dispersal is not a sufficient treatment; there is still a risk to the environment because the same amount of contamination is present and may bioaccumulate. Contaminants should be removed from the environment or securely placed in an area that can be continually monitored.

R. [DOE] The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and Model Toxics Control Act (MTCA) contain requirements for examining any contaminant that causes a risk to the environment through the RI/FS to identify which contaminants qualify as COCs.

C. [DOE] The discussions to date and the draft paper provide DOE and the regulating agencies a lot of information that can be used during negotiations. Formal advice from the Board at this point would be

less helpful than if the Board were to issue advice when Revision 0 is issued. DOE will be unable to provide any details in answer to Board advice on Draft A since negotiations are ongoing and decisions have not been made.

The committee discussed the value in issuing advice on Draft A documents or waiting until Revision 0 is released. Some RAP members felt their concerns have been heard by DOE and the regulations, which will hopefully be considered during negotiations and advice can be written once an actual document is released to form the basis of advice. Other RAP members believe it is important for the Board to go on record with their concerns early in the negotiation process before a path forward is determined. The Board has issued advice on other Draft A documents and should set a precedent for commenting on documents early to have the greatest input on decision making. There is a level of clarity and consistency when the Board reaches consensus on a piece of advice. Advice can also act as a tool to educate the public on the issues before the public comment period officially begins. The Executive Issues Committee should consider revisiting the topic of when Board advice is most useful.

RAP decided to bring the advice on 100-D&H to the May/June Board meeting. The issue managers will continue refining the advice and will provide a revised version in advance of the March meeting. RAP members should send any comments on the draft to the issue manager team and the committee will talk about the advice again during a March meeting. The agencies did not expect that an update on the status of 100-D&H will be available at that time, but will provide an update if one is available.

Briefing on the Environmental Restoration and Disposal Facility Work Plan Amendment and Performance Assessment*

(Joint with Health, Safety, and Environmental Protection Committee)

Agency presentation – Work Plan Amendment

Owen Robertson, DOE-RL provided a briefing on Environmental Restoration and Disposal Facility (ERDF) ROD for a CERCLA waiver to allow treatment of hazardous debris within the ERDF landfill (Attachment 7). In his presentation, Owen noted the following points:

- The purpose of the ROD amendment is to grant a waiver that would allow hazardous debris that would normally be subject to disposal restrictions to be treated within the ERDF landfill cells rather than in an outside unit of the cells.
- The waste that would require macroencapsulation includes only a very smaller percentage; 98% of waste will not require treatment. Of the waste that does require treatment, 20% would be macroencapsulated.

* Please see Attachment 1 – Transcribed Flip Chart Notes for key points/follow up actions recorded during the committee discussion.

- The waste requiring macroencapsulation includes large or complex objects as well as bulk hazardous debris.
- In-trench treatment involves a much more simplified process than out-of-trench treatment, requiring fewer debris transport operations and less exposure for workers. In-trench treatment is also less expensive.

Regulator perspectives

Dave Einan, EPA, said several different EPA offices are in the process of reviewing the waiver. He expects to receive comments today or tomorrow. Once those comments are resolved, the waiver will be released for public comment, likely at the end of the month. The ROD is expected to be released sometime in the summer.

Committee Questions and Responses

Note: This section reflects individual questions, comments, and agency responses, as well as a synthesis where there were similar questions or comments.

C. DOE's proposal seems reasonable in not setting radiologically contaminated equipment on the ground and limiting exposures to workers. On the other hand, the regulations are in place for a reason so it is important for the Board to hear a full perspective from the regulators as well as from DOE. At first glance, it does sound like an exception to the regulations could be made in this one instance.

R. [EPA] EPA has fought for these regulations and will question the implications of any regulatory waivers. CERCLA does include several mechanisms for regulators to issue waivers. Decisions are based on whether there is a greater risk to human health and the environment coupled with an equivalent standard of performance. It must be demonstrated that there will be no additional harm to the environment from the remedy.

Q. How does the grouting process work using this methodology?

R. [DOE] Concrete will be poured over a clean area of soil and then the pump will be laced on the concrete, raised off the area to be grouted. There are also berms around the material so the grout flows around the contaminated object; the process is similar to filling a bathtub to completely encapsulate all contamination.

Q. What types of things are included in the estimated 3,000 tons of hazardous debris from the 324 Building?

R. [EPA] There are materials containing asbestos along with the pipelines. Any materials that would pose a high dose to workers if they were removed are part of the estimate.

Q. There are a lot of voids in the materials. How will those be addressed with the proposed in-trench treatment process?

R. [EPA] A concrete pad will be laid in the soil. Materials will then be loaded onto the pad, surrounding by a berm. The concrete will flow around materials to encase the entire object.

Agency presentation – ERDF Performance Assessment

Owen and Sunhil Mehta, CHPRC, next provided an update on the ERDF Performance Assessment (PA) (Attachment 8). In his presentation, they noted the following points:

- The PA is meant to demonstrate that DOE low-level waste facilities comply with long-term performance objectives provided in DOE 435.1.
- The ERDF Amendment requires the preparation of a PA prior to expansion of ERDF beyond super cells 9 and 10. The Board also recommended completion of an ERDF PA to support ongoing ERDF disposal activities.
- The ERDF project team consists of Washington Closure Hanford (WCH), CH2M Hill Plateau Remediation Company (CHPRC), and URS Safety Management Solutions.
- Owen reviewed the PA development history, beginning when the CERCLA ROD was issued in 1994 through November 2013 when a new disposal authorization statement was issued.
- All pathway effective dose equivalents for contaminants are expected to remain well below the 25 mrem/yr objective for all pathway DOE performance objectives.

Committee Questions and Responses

Note: This section reflects individual questions, comments, and agency responses, as well as a synthesis where there were similar questions or comments.

Q. What is the standard being measured against? Can DOE provide a graph similar to the pathway effective dose equivalent for MTCA standards?

R. [CHPRC] The standard is from DOE Order 435.1. A graph measuring against MTCA standards can be provided to the Board.

The Board did not identify any immediate actions on the ERDF PA. The issue managers will continue tracking the topic.

Advice Development on 100-N RI/FS and Proposed Plan Draft A *

Issue manager introduction

Dale said RAP recently held a round table discussion of concerns about the 100-N RI/FS and Proposed Plan Draft A. Those concerns were compiled by the issue manager team into draft advice. RAP has already reviewed the draft once. The goal of this conversation is to review the advice and reach consensus to bring it forward during the March Board meeting.

Committee Questions and Responses

Note: This section reflects individual questions, comments, and agency responses, as well as a synthesis where there were similar questions or comments.

The committee reviewed the draft advice onscreen (Attachment 9). Changes were made to clarify wording and several points were moved into the background section that illustrated Board support or values more than were making an actual recommendation. DOE suggested some minor wording revisions to some of the technical statements for greater accuracy.

C. The Board considered strontium-90 treatment in the past and did not recommend additional treatment.

R. [DOE] DOE believes there would not be a major benefit with strontium-90 treatment. Treatment would risk exposure to workers and require using resources that could be better expended in other areas. Currently, there is no credible exposure scenario that would present a risk to human health from the strontium-90 in 100-N. There are also minimal risks for strontium-90 to enter the groundwater and concentrations are expected to remain within standards for at least 100 years. There are also cultural sensitivity issues that would need to be considered in the contaminated area.

C. The advice point regarding phytotechnology might fit better into the background section since it is more of a statement of Board support rather than an actual recommendation.

R. There are opposing viewpoints where some are excited about the possible benefits of using phytotechnology while others are against it because radioactive materials would be brought to the surface. RAP reached agreement that the committee could support Ecology in their support of the technology. The Board would be requesting that the technical evaluation of phytotechnology should be retained.

R. [Ecology] Ecology is not advocating for phytotechnology; Ecology's comment is only to state that the agency would like the alternative analysis to be brought back into RI/FS evaluations as a potential alternative.

* Please see Attachment 1 – Transcribed Flip Chart Notes for key points/follow up actions recorded during the committee discussion.

C. [DOE] DOE requested additional clarity on the fourth draft advice point, noting that the alternative to a Technical Impracticality (TI) waiver is monitored natural attenuation (MNA). The technology is not available to treat stornitum-90 and the nitrate plume. It is unclear what the Board is asking for in the advice point regarding the TI waiver.

R. The advice point is intended to ask whether DOE is aware of all the issues that the agency would ultimately be responsible for if a TI waiver were employed.

R. [EPA] EPA will determine whether a TI waiver is appropriate based on formal processes based on stringent levels of qualifying criteria. The Board is asking for something that will occur.

C. This draft advice is written with the knowledge that the agencies are still in negotiation. Once Revision 0 is issued the Board can offer stronger advice based on what is actually contained in the document.

The committee reached conceptual consensus on the draft advice. Hillary will distribute the draft for a final look by the committee to ensure final consensus before it is brought to the Board in March.

Committee business

3 month work plan

The committee will request a full-day meeting in March to discuss:

- A briefing on the long term stewardship program
- Continue advice development on 100D&H RI/FS and Proposed Plan Draft A
- Briefing on perched water EE/CA
- Receive a tutorial on groundwater modeling, using 100-N as an example

The committee also identified some potential topics for a possible meeting in April. This meeting may include a tour of the Plutonium Finishing Plant that would also include a drive-by of the 309 and 340 vaults plus the 618-11 and 324 building. Other topics for discussion may include the 100-F RI/FS and Proposed Plan Rev 0, the Central Plateau Strategy, and the RCRA Class 2 Modifications. RAP will also keep a placeholder slot during the April meeting for a potential discussion of budget priorities for the river and plateau, depending on when budget information is available.

The committee decided not to hold a call in February.

Attachments

Attachment 1: Transcribed flipchart notes

Attachment 2: Ecology's Nuclear Waste Program Class 3 Modification Permitting Process presentation

Attachment 3: Class 3 Permit Modification Request presentation

Attachment 4: 2/10/14 Preliminary issue manger discussion draft (Vanni) RCRA Permit modifications background

Attachment 5: 2/10/14 Preliminary issue manager discussion draft (Vanni) RCRA Permit modifications major concerns

Attachment 6: Possible HAB comments for the 100-D&H RI/FS and Proposed Plan Draft A

Attachment 7: Amendment to the ERDF ROD for a CERCLA ARAR Waiver to Allow Treatment of Hazardous Debris within the ERDF Landfill presentation

Attachment 8: The ERDF Performance Assessment update

Attachment 9: Draft Board advice on the proposed plan for remediation of 100-N

Attendees

Board Members and Alternates

Richard Bloom	Liz Mattson	Bob Suyama
Dale Engstrom (phone)	Maynard Plahuta	Gene Van Liew
Gary Garnant (phone)	Ed Revell	Jean Vanni
Pam Larsen	Dan Serres (phone)	Steve White
Susan Leckband	Dick Smith (phone)	

Others

Alex Temuri, DOE-EM	Deb Alexander, Ecology	Sumil Mehta, CHPRC
Kim Ballinger, DOE-RL	Alicia Boyd, Ecology	William McMahon, CHPRC
Mike Collins, DOE-RL	Madeleine Brown, Ecology	Sam Rosenberg, CHPRC
Jim Hansen, DOE-RL	Steven Lowe, Ecology	Jeanie Seaver, CHPRC
Jim Hanson, DOE-RL	Andrea Prignano, Ecology	Nicole Addington, EnviroIssues
Owen Robertson, DOE-R	Deborah Singleton, Ecology	Hillary Johnson, EnviroIssues
Kim Thompson, DOE-RL	Maria Skorska, Ecology	Bill Borlang, WCH
	Kim Welsch, Ecology	Barry Lawrence, WCH
	Dave Einan, EPA	Mark McKenna, WCH
	Emy Laija, EPA	Tom Rogers, W-DOH