Public Comments and Responses to the 1993 Hanford Cleanup Five-Year Plan

**United States
Department of Energy**
Richland, Washington

Approved for Public Release

DISTRIBUTION OF THIS DOCUMENT IS UNLIMITED

LEGAL DISCLAIMER

This report was prepared as an account of work sponsored by an agency of the United States Government. Neither the United States Government nor any agency thereof, nor any of their employees, nor any of their contractors, subcontractors or their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or any third party's use or the results of such use of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise, does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof or its contractors or subcontractors. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government or any agency thereof.

This report has been reproduced from the best available copy.
Available in paper copy and microfiche.

Available to the U.S. Department of Energy
and its contractors from
Office of Scientific and Technical Information
P.O. Box 62
Oak Ridge, TN 37831
(615) 576-8401

Available to the public from the U.S. Department of Commerce
National Technical Information Service
5285 Port Royal Road
Springfield, VA 22161
(703) 487-4650

Printed in the United States of America

DISCLM-1.CHP (1-91)

Public Comments and Responses to the 1993 Hanford Cleanup Five-Year Plan

Date Published
August 1993

United States
Department of Energy
P.O. Box 550
Richland, Washington 99352

Approved for Public Release

MASTER

DISTRIBUTION OF THIS DOCUMENT IS UNLIMITED

RESOLVED

MAY 17 1994

CONTENTS

OSTI

1.0	PUBLIC PARTICIPATION, GENERAL ISSUES	1
2.0	GENERAL SITE ISSUES	9
3.0	FACILITY TRANSITION	25
4.0	TRI-PARTY AGREEMENT	28
5.0	TANK WASTE	33
6.0	LIQUID EFFLUENT	64
7.0	SOLID WASTE	67
8.0	ENVIRONMENTAL RESTORATION	69
9.0	TECHNOLOGY DEVELOPMENT	85
10.0	PACKAGING AND TRANSPORTATION OPERATIONS	87
11.0	SUPPORTING ORGANIZATIONS	93
12.0	DEFENSE AUTHORIZATION ACT	97

Introduction

In March 1993, the U.S. Department of Energy, Richland Operations Office (DOE-RL) published its annual Site-Specific Five-Year Plan. The Site-Specific Plan is published to inform the public about the background, status, and plans for Environmental Restoration (ER) and Waste Management (WM) activities at the Hanford site. It is the only document that seeks to bring all ER and WM elements together in one document.

The Site-Specific Plan is a companion document to the National Five-Year Plan that deals with all the sites within the DOE complex on a summary level.

This *Response to Comments* document does not try to address every question or concern raised during the public comment period. Some questions were outside the scope of the Five-Year Plan, some we could not decipher, others were variations of the same question.

The Process:

The initial round of public meetings was held in Portland, Oregon, and Seattle, Pasco, and Olympia, Washington. At the request of the Oregon Department of Energy (ODOE) and the Washington State Department of Ecology (Ecology), a second round of meetings was held in Portland and Olympia. Both agencies felt that the first two meetings were held with too little advance notice, and before the Plan could be distributed.

Typically, the Site-Specific Plan is distributed in October with the public participation effort concluding in late November. However, because of delays in getting authorization from DOE-Headquarters (DOE-HQ) to release the plan, it was not available for public review until the day of the first meeting. (See page 1, comment 2 for further details.)

A series of paid advertisements announcing the meetings and availability of the Plan were placed in Portland, Seattle, Tri-Cities, and Olympia newspapers. However, the meetings were sparsely attended, and there were fewer than 200 requests for the Plan.

Once the public meetings were over and the comment period closed, we then compiled the public comments, largely from audio tapes of the meetings. Individual functions within Hanford were asked to consider and respond to the comments.

What we heard:

The comments were very broad and addressed a variety of issues. However, there were several constant, recurring themes. The following summarizes the most frequently heard subjects:

- The process of involving the public is seriously flawed. The public is consulted only after decisions are made.

- DOE continues to have a credibility problem and cannot be trusted to tell the truth.
- The Five-Year Plan is not designed to be easily understood.
- Notices about the meetings were ineffective, resulting in low turnouts.
- The Five-Year Plan does not have funding information for the out years.
- The public was not given enough time in advance to review the Plan.
- DOE has not been open about environmental and human risk.
- Cleanup is still not a reality at Hanford; too much time and money are being spent on studies and reports.
- Cleanup funds are being diverted to underwrite non-cleanup activities and maintain production capabilities.
- Not enough is being done to develop the technologies needed to deal with cleanup problems.
- Grout is not the solution for low-level waste disposal.
- There should be zero emissions from Hanford.
- The cleanup itself should not produce additional waste.
- DOE has not made a compelling case to restart facilities like PUREX, PFP and UO₃.
- Every effort should be made to prevent contaminants from entering the Columbia River.

What we did with what we heard:

Comments were grouped by program area. The project managers were given the comments with very little editing to preserve the tone of what was said. We had the project managers respond to public comments so they would know how the public feels about their particular projects, and could then factor the public's concerns into their decisions.

What we learned from what we heard:

- We need to make documents readable for the general population.
- We have to make meaningful public involvement an essential part of how we do business.
- We have to do a better job of announcing public meetings.

- We cannot rely solely on public meetings to involve a broad cross-section of the public.
- We must involve the interested public in the decision-making process before decisions are made.
- We cannot expect an uninformed public to provide useful input; it's the responsibility of DOE and its contractors to spend more time and effort informing the public.
- We have enhanced the suspicions of interest groups by proceeding with plans to restart former production facilities without informing or involving the public.
- We have not sufficiently demonstrated to much of the public that we are doing "real" cleanup, and not just paperwork.
- We have not utilized Hanford interest groups in helping to improve the process.

1.0 PUBLIC PARTICIPATION, GENERAL ISSUES

1. COMMENT:

The format of the Portland public meeting was chosen so that DOE could control the flow of information. (Portland meeting)

RESPONSE:

Previous public meetings started with a general overview followed by an open-floor discussion. Other than allowing one speaker at a time, there were few rules. However, when participants are asked to evaluate this format, many criticize it as being intimidating and not conducive to open dialogue. Some comment that the open-floor style is dominated by those already familiar with the issues.

Nevertheless, we felt that the open-floor format had merit because it allowed all the participants to hear what was being said. We also felt obligated to create a setting conducive to an open dialogue. That's why we changed the meeting format. We retained the open-floor format but added small group discussions for those not comfortable with the open-floor style. We remain open to suggestions about the meeting format.

2. COMMENT:

The Site-Specific Plan was delivered too late for the public to absorb it and comment. (Portland meeting)

RESPONSE:

We do not have a plausible excuse for the timing of the release of the Site-Specific Plan. Here's what happened: We knew that we had to have public comment on the Plan. We also knew that, to be considered, public input had to be in by early April. What we didn't know was when we would get authorization from DOE-Headquarters to release the Plan. Because of the lead time required to arrange for meeting rooms and to run advertising, we took a chance and booked rooms and ads hoping that authorization would come in time. When authorization did come, it was too late to mail the Plan for people to get it before the meetings. However, we chose to go on with the meetings knowing that the public would still have some 30 days to review the Plan and offer comments. Also, when requested, we agreed to a second round of meetings in Portland and Olympia to give people a chance to digest the material.

Obviously, we need to show greater coordination between the field office and headquarters, and a keener sensitivity to the public's needs when providing information.

3. COMMENT:

The time lapse between preparation and approval of the Site-Specific Plan makes the information so outdated that public comment is a waste of time. (Portland)

RESPONSE:

This is a valid observation. We recognize that the quality of public input often depends on the timeliness of the information the public is asked to comment on. Even when all the pieces fall into place, preparing and reviewing the Site-Specific Plan takes two to three months. Given the constantly changing nature of work at Hanford, it is practically impossible for such a document to reflect the most current status. In the future, perhaps a supplement could accompany the Plan to update various issues.

Over the past two years we've taken some steps we believe will move us closer to creating more opportunities for the public to participate in the decision-making process. A good example is the Future Site Use Working Group. This 46-member citizens group represented a broad cross-section of interests, including some of Hanford's most ardent critics. It was formed to evaluate alternatives for potential site uses and cleanup strategies. Continued funding and support for cleanup will, to some extent, depend on how successful we are in tearing down the walls that restrict communications.

We also recommend that interested individuals get on the cleanup mailing list to receive current information on the cleanup. To get on the mailing list call 1-800-321-2008, or write to the Washington State Department of Ecology, PV-11, P.O. Box 47600, Olympia, WA 98504-7600. The mailing list is managed by Ecology, EPA, and DOE.

4. COMMENT:

Meeting notification is still miserable. I am on a couple of your mailing lists and I didn't see the meeting notice in the calendar of events. I don't think I received any notification of tonight's meeting at all, except from Heart of America Northwest. I understand there were a couple of ads in the Seattle Times. I read the PI, but I didn't see any ads in there. If Westinghouse is responsible for the publicity, they do a better job of selling light bulbs than of selling public hearings. (Seattle Meeting)

RESPONSE:

The first meeting in Olympia was held March 10. We started running newspaper ads February 27 and radio ads March 5. The Seattle meeting was March 25. We ran newspaper ads starting February 28 and radio ads starting March 18. In Seattle, we purchased space in the *Seattle Times* because it had a higher circulation than the *Post Intelligencer*. We purchased air time on Seattle radio stations KIRO and KOMO because of their high listener ratings.

Publicity for meetings continues to be an issue. Generally we announce the meetings in the "Calendar of Events" in the *Hanford Update*. However, we received authorization from headquarters to proceed after the *Hanford Update's* publication date. We do recognize that internal disconnects are not valid excuses for inadequate meeting notice.

Also, while we could have done more, we find that spending more on paid advertising does not necessarily mean better attended meetings. We've also found the media reluctant to run free public service announcements when an agency is buying advertising in the same market. Buying ads on Radio

Stations A and B while asking Radio Station C to run free announcements is not well received by Radio Station C. To avoid this problem, we would need to purchase time on all the stations in a community, which is not feasible.

Westinghouse Hanford Company (WHC), a prime contractor to DOE-RL since June 1987 is responsible for developing and placing all advertising. Westinghouse Electric Corporation has never manufactured or marketed light bulbs.

5. COMMENT:

We believe that the public participation process needs to be significantly improved. (Olympia Meeting)

RESPONSE:

While we've greatly improved the public participation process over the past few years, much remains to be done. For instance, we're moving away from the public meetings as the sole means of communicating with the public. We've been considerably more proactive in creating opportunities for the public to become informed and express their views. We've included an extensive outreach to civic and service organizations around the region.

We are convinced that simply having more public meetings is not the answer to meaningful public participation. The next logical step is to actually consult the public in the formation of our public participation plans.

6. COMMENT:

We would like to work cooperatively with you in the future to achieve cleanup and to make sure that you have an effective five-year planning process. Stakeholders should be allowed participation, and an opportunity to comment early in the planning process. This will help to ensure sound, credible planning, consistent with existing environmental laws, regulations, agreements, and permits. (Ecology - Olympia)

RESPONSE:

The message that early involvement often means better plans and greater acceptance is one with which we fully agree. Recently we began several new initiatives seeking public input on our program priorities, plans, and resource allocations.

7. COMMENT:

The notices sent for the previous meetings were sent out at the last minute and were not sent to many of the interested organizations. Our organization did not receive them, nor did any of the other public interest organizations we know of in Oregon. As a result, it was left to word of mouth to find out that hearings were going on. Our money would have been better spent not having a second meeting, but having a better and bigger meeting earlier in the process.

RESPONSE:

This is an accurate account of what happened. In the future, beyond the normal meeting announcement through paid advertisements, we will notify interest groups directly.

8. COMMENT:

We are commenting on a plan that is already being implemented, and I think you cannot have effective public participation after decisions are made.
(Olympia Meeting)

RESPONSE:

This is not entirely true. The comments received actually form the basis for the next year's plan. It is correct to the extent that cleanup is an ongoing process. Program managers are given public comments with instructions to factor them into their plans when possible.

9. COMMENT:

What part do the public-interest groups play to influence, educate, or inform? What can public interest groups do for DOE and the public, helping the cleanup and public participation processes? (Olympia Meeting)

RESPONSE:

While we may disagree on a variety of issues, we recognize that interest groups play a vital role in raising public awareness and interest in the Hanford cleanup. In the past, interest groups have not been consulted concerning the public participation process. We believe continuing to exclude them deprives DOE of a potentially valuable resource.

10. COMMENT:

What is going to guarantee that activity data sheets won't be sat on for six months. (Olympia Meeting)

RESPONSE:

The activity data sheets (ADSs) are the start of the budget process. They drive the entire process. ADSs describe the work to be performed and are the basis for allocating funding. Therefore, you can be assured that ADSs are processed. In fact, we released ADSs to the information centers January 30, 1993. (See next response for information centers.)

11. COMMENT:

How do you inform the public about the cleanup? (Seattle Meeting)

RESPONSE:

The primary tool to keep the public informed is the *Hanford Update*, a quarterly newsletter jointly published by the Environmental Protection Agency

(EPA), Ecology, and DOE. The *Hanford Update* contains the most recent information about various cleanup projects, listings of public meetings, and information about how to assess more detailed information.

DOE also maintains four information centers:

- Crosby Library
Gonzaga University
E. 502 Boone
Spokane, WA
- University of Washington
Suzzalo Library - Government publications room
Seattle, WA
- Portland State University
Millar Library, Science and Engineering floor
SW Harris and SW Park
Portland, OR
- Washington State University
Richland Branch Campus Library
DOE reading room
100 Sprout Rd.
Richland, WA 99352

12. COMMENT:

I'm concerned about all the negative comments made about Hanford: (1) little focus on positive, and (2) what can we do to change that? I'm concerned about the image of Hanford that the news media present. We need to help bring to the attention of the press the positive. (Pasco Meeting)

RESPONSE:

We recognize that as a public entity with a history steeped in secrecy, spending considerable amounts of public funds, it is to be expected that there would be considerable public and media interest in Hanford. We have worked, and will continue to work extensively with regional and national media in creating an appreciation for the size and complexity of the Hanford cleanup. We understand that, in many instances, the nature of the media is such that it is more attracted to negative rather than positive news. However, we've noticed that a growing number of reporters are beginning to write fair, balanced, and, in some cases, positive stories about Hanford. Our challenge now is to produce the good work that we hope will lead to more positive coverage of the hard, and sometime dangerous, work our people do.

13. COMMENT:

Seems to be as much time responding to "nit pickers" as there is focusing on cleanup. (Pasco Meeting)

RESPONSE:

DOE has to regard all inquiries and comments as legitimate though some may not be particularly relevant or applicable.

14. COMMENT:

Why do you prepare a Five-Year Plan? (Portland Meeting)

RESPONSE:

DOE is required by the Defense Authorization Act, a federal statute, to publish a Five-Year Plan each year. The objective of the Five-Year Plan is to provide Congress and the public with a road map of where and how facilities like Hanford are meeting the Act's cleanup mandate. The Hanford Site-Specific Plan is published to provide details concerning Hanford, whereas the National Five-Year Plan covers the entire DOE complex.

15. COMMENT:

The current public participation program does not provide for effective participation by stakeholders and the public. The public participation schedule does not allow sufficient time for comment that would influence the current-year plan or the President's budget submission to Congress.

RESPONSE:

We agree. This is a recurring theme from regulators and the public that DOE acknowledges as significant. Over the past two years we've taken many steps we believe will move us closer to creating more opportunities for the public to participate in the decision-making process. A good example is the Future Site Use Working Group. This 46-member citizens group represented a broad cross-section of interest, including some of Hanford's most ardent critics. It was formed to evaluate alternatives for potential site uses and cleanup strategies. Continued funding and support for cleanup will, to some extent, depend on how successful we are in tearing down the walls of communications. (See response to comment #8)

16. COMMENT:

Is there a downward trend of "noise level" and attendance of interest groups at cleanup meeting? (Pasco Meeting)

RESPONSE:

Not really. Attendance and participation in Hanford meetings by interest groups have been fairly consistent. There are, however, noticeable fluctuations in attendance by those not associated with any organized group. For instance, in March, 1993 nearly 200 Columbia Gorge area residents attended a Tri-Party Agreement meeting in Hood River, OR. A few weeks later, only 22 attended a Five-Year Plan meeting in the Tri-Cities. Some interest groups such as Seattle-based Heart of America, have been very effective in generating interest in the meetings and turning out their members.

17. COMMENT:

The Five-Year Plan says that public concerns and values must be identified before making decisions and must be considered as decisions are made. This can only happen if the decision and decision-making process are made clear to the public. The Plan acknowledges the need to do more to involve the public, but there seems to be a tendency to do less and less. (Portland Meeting)

RESPONSE:

The decision-making process at Hanford has been, and to some extent, still is ill defined. Therefore, often the public does not have confidence that their views are considered. However, over the past few years, we've actually done considerably more to involve the public. For example, there have been significantly more public meetings and workshops. The mailing list continues to grow. A toll-free number has been established. Also, we continue to move forward in forming an independent citizens forum.

As an added measure to ensure that comments are considered by the folks responsible for doing the work, we had program personnel (not public relations types) develop the responses contained in this document.

Unfortunately, we have not been able to show clear linkages between public input and decisions made. Until we're able to do this, the public will not trust the process. We have a long way to go, but we are making progress.

18. COMMENT:

We are getting notices out that are a little more informative about when the meetings are. (Portland Meeting)

RESPONSE:

Thank you for the compliment. We'll continue to try to make these better.

19. COMMENT:

I feel your concerns about our comments are just a charade, no attention will be paid to anything we say. We have genuine concerns; you are not dealing with a bunch of nincompoops. Trying to tell us you're concerned about our welfare just will not wash with me. (Portland Meeting)

RESPONSE:

Our track record for consistently demonstrating that public input makes a difference is not good. In fact, it is rather poor. Part of the problem is our inability to design the information systems necessary to ensure that the public has detailed, yet understandable, information about Hanford's complex issues before decisions are made. Second, the internal planning processes often do not have clear, mandatory decision points to serve as alarm bells to involve the public. We are aware that we have to earn public confidence with actions and not words, though there are some whose confidence we'll never gain.

Nevertheless, all comments are forwarded to the appropriate project manager with instructions to consider them in their decision-making process. To make sure that comments are not dismissed without consideration, we required that the responses in this *Response to Comment* document come from the program areas themselves. Furthermore, because it is impractical for all project managers to attend all the public meetings, they are provided with the transcripts or detail summaries of the meetings.

20. COMMENT:

We are disturbed about the lack of notice provided for the upcoming workshops on the Five-Year Plan.

RESPONSE:

The short notice provided by DOE-RL for the upcoming workshops came as a result of the DOE-HQ's approval in March 1993 of the Hanford Site-Specific Plan for FY 1993. DOE's preliminary FY 1993 Five-Year Plan was submitted to the governors and attorneys general of affected states, Indian tribes, and the public for review and comment on May 1, 1992. This Plan was issued in final form on September 1, 1992.

21. COMMENT:

The newspaper notice of the workshop utterly fails to inform the public as to whether this is the public's only opportunity to give comments to DOE on the Five-Year Plan. Is this a hearing or a workshop? How will the public comments be recorded and responded to? (Heart of America)

RESPONSE:

You are correct that the meeting notices did not provide details about the entire comment process. However, we did indicate that comments would be taken through April 9, 1993. The meetings were advertised as workshops. The meetings were recorded on audio tape and this document is the primary means of responding.

22. COMMENTS:

The public cannot offer informed comment on DOE's five-billion-dollar Environmental Restoration and Waste Management (ER&WM) program without the release of the necessary information to the public. The Department will suffer a tremendous meltdown of public and Congressional support for the ER&WM program if it cannot demonstrate in the Five-Year Plan how five billion dollars were spent in the prior year and how the Department plans to spend growing sums in the future.

RESPONSE:

DOE is held accountable by Congress for the money that is spent on any of its programs. However, the Defense Authorization Act requires that the public be allowed to review and comment on the preliminary Five-Year Plan. The 1994 Plan will be reformatted to make it easier to identify accomplishments.

2.0 GENERAL SITE ISSUES

1. COMMENT:

If DOE delays the Hanford Waste Vittrification Plant (HWVP) by three to five years, that saves the DOE three hundred million dollars at least, a year. Theoretically, either you can use that money to reduce the federal deficit or you can use it to honor an obligation to try to get on with cleanup activities. (Seattle Meeting)

RESPONSE:

The three parties have agreed to a delay in the construction of HWVP. (See comment/response #31 of this section.) The 1994 HWVP budget allocation is \$54.3 million, and not \$300 million. The latter figure is the fully funded estimate assuming HWVP were to proceed as previously scheduled. This estimated (but not yet appropriated) funding does not become money to be reallocated to other cleanup projects. In other words, since funding for HWVP construction was never authorized, it does not really exist. The amount of money we have to work with is the amount that has actually been allocated.

By the time this document is produced, we will have conducted a number of public exercises to solicit feedback on how we allocate the funding appropriated to Hanford. We have some flexibility to move funding around, but must stay within the allocated budget.

2. COMMENT:

DOE needs to start planning for the substantial cuts Congress will be forced to make in the Hanford budget. Then all planned work needs to incorporate risk-based prioritization. (Pasco)

RESPONSE:

Risk-based prioritization is part of the Hanford Site's integrated planning process that includes input from all four Hanford Site contractors. The contractors, with input from the regulators and the public, decide which work they feel should be done first and then propose their plan to DOE-RL. Because the *Hanford Federal Facility Agreement and Consent Order* (Tri-Party Agreement) is a legally enforceable document, DOE and the Hanford Site contractors are not taking the position that cuts in the budget will mean that the cleanup work will not be done, only that it may take longer.

3. COMMENT:

No budget figures were included to show how the funds were being allocated. (Portland)

RESPONSE:

Although budget figures were not provided in great detail, a summary of the estimated costs for FY 1993 for corrective actions, waste management,

environmental restoration, and technology development were presented in Table 1-1 on page 1-13.

4. COMMENT:

We are concerned that the comments made to this current Five-Year Plan during this public comment cycle, including our written comments, will not be able to influence this current year's plan. (Olympia Meeting - Ecology)

RESPONSE:

Your comments on this year's (FY 1993) Site-Specific Plan cannot be incorporated because FY 1993 began in October 1992. However, we are conducting extensive briefings on the 1994 budget.

5. COMMENT:

We have been told that, for the out years in the five-year period, activities for cleanup will be described in only very general or generic terms. That, coupled with the fact that there are no out-year funding estimates, does not provide an effective Five-Year Plan. (Olympia Meeting - Ecology)

RESPONSE:

The federal government works on a two-year cycle, therefore funding projections for out-year projects are only estimates. Because of rules established by the Office of Management and Budget (OMB), we are not permitted to share these out-year funding estimates with the public. On the other hand, there is no restriction on discussing out-year scope of work. Therefore, we can only provide the regulators and the public with detailed information on the planned work scope.

6. COMMENT:

We are encouraged by the statements from Secretary O'Leary regarding cooperation with the states in cleanup and, as I have stated, we are also encouraged by some of the initiatives coming out of Richland. Ecology would like to work cooperatively with DOE in the future in a positive way to achieve cleanup. (Olympia Meeting - Ecology)

RESPONSE:

(No response required.)

7. COMMENT:

DOE's current five-year planning approach inhibits the opportunity for timely and effective involvement by the states, tribes, and public. The value of the national and site-specific five-year plans as viable planning documents and communication vehicles has diminished. Both plans represent an ineffective process. (Ecology)

RESPONSE:

DOE recognizes that its planning process is not as effective as it would like, and is working to improve the process, particularly the public involvement element. DOE is reviewing the planning documents that are currently produced for the Hanford Site to determine if there are plans that may be duplicative. A Hanford Integrated Planning Process (HIPP), which includes the major contractors on the Site (WHC, Pacific Northwest Laboratory (PNL), Kaiser Engineers Hanford, and the Hanford Environmental Health Foundation), is being evaluated to improve the effectiveness of sitewide planning.

8. COMMENT:

We understand a lot of [cleanup] money has been sidetracked into other areas. (Portland Meeting)

RESPONSE:

Money that is earmarked for cleanup cannot be "sidetracked" or used for other purposes (for example, to run the UO₃ Plant). The General Accounting Office (GAO), Congress's investigative organization, is responsible to see that funds that are appropriated for specific work are spent to accomplish that work. The GAO has not found any such violations on our part.

9. COMMENT:

Westinghouse has made too many mistakes, so they are no longer to just be given a new contract. They should have to come up for competitive bidding. (Olympia Meeting)

RESPONSE:

We agree that neither Westinghouse, nor any DOE contractors, should "just be given a new contract." DOE awards contracts based on a firm's ability to perform. The decision to rebid a contract or extend an existing contract is made based on assessment of which of these options is the most effective way to get the job done.

10. COMMENT:

I think the only concern that has been expressed as far as employment on the Site is that ERMC may be a way to get out from under the union. That is what the unions are saying. One of the union leaders said that is what they think may be happening, that outside workers may be brought in. It appears that some of the workers from Bechtel will be brought from other sites like Savannah River. (Olympia Meeting)

RESPONSE:

The ERMC was an early concern to labor in that it was viewed as a way to eliminate existing labor contracts. All bidders for the ERMC agreed to honor all existing labor contracts; it is no longer an issue.

11. COMMENT:

Washington State has stated its concern that the establishment of an environmental restoration management contractor (ERMC) at Hanford should not delay cleanup activities. In establishing an ERMC, labor agreements and the integrity of the workforce should be respected. ERMC contracts should contain associate contractor provisions and incentives that ensure coordinated effort between the various operations and maintenance contractors at Hanford. (Ecology)

RESPONSE:

DOE agrees that establishing an ERMC should not delay cleanup activities at the Hanford Site. All bidders for the ERMC agreed to honor all existing labor contracts. The bulk of the WHC workforce associated with cleanup would probably transfer to the ERMC contractor. Hiring people with a knowledge of the cleanup problems and what's been accomplished is the most sensible way to get cleanup done quickly. Unless there is coordination and cooperation between the prime contractors onsite, objectives of the cleanup may not be met on schedule. This would affect DOE and all its contractors.

12. COMMENT:

Does DOE or Westinghouse get calls from people asking if it is safe to move to this region? (Olympia Meeting)

RESPONSE:

Yes. As an example, recently one of the local hospitals was recruiting more doctors. One of them had pretty much decided to accept an offer to move to the Tri-City area, but he had a question regarding the safety of living near the Hanford Site that had to be answered to his satisfaction before he would accept a position. This is not unusual in any community near a DOE facility. We need to make sure that we explain what we're doing and try to remove any fears that a person may have.

13. COMMENT:

When I came to the state and become interested in Hanford issues, the praise I heard was in the form of hearing that WHC had won a huge award fee. All the press I was seeing was the possibility of this tank exploding and leaks and I thought, "they're rewarding this." It's hard to say that something constructive is happening at Hanford and they're [WHC] doing a good job when all you have is a dollar amount to a corporation saying you've done a great job.

RESPONSE:

The situation of a possible explosion in Tank 101-SY and leaking single-shelled tanks were of interest to the media and to groups interested in the Hanford Site. Unfortunately, other activities were being accomplished that usually did not receive the same level of attention. DOE marked WHC down on its award fee for performance on specific activities that they thought needed improvement (tank farm operation was one area). It is important to remember

that the announcement of an award fee follows an evaluation for the previous 6 months; a leaking tank could be discovered within a week after an award fee is announced.

14. COMMENT:

What they do to whistleblowers goes hand in hand with the public meetings I have been at. I have heard USDOE officials flat lie about what is going on. I have caught them in lies and members of my organization [Heart of America] have caught them in lies and the public has caught them in lies. That does not foster confidence in the public that any of the Hanford culture has changed. (Olympia Meeting)

RESPONSE:

The public has the responsibility to report lying by a federal employee to either the Office of the Inspector General for DOE or to one of his or her representatives in Congress. The GAO, the investigative arm of Congress, looks into such matters.

15. COMMENT:

I am given to believe, starting with Secretary Watkins saying a few years ago, "I am committed to cleanup, the new mission is cleanup." We have been told that Hanford's new mission is cleanup. It has changed. It is different. How long will some of the documents remain classified? Can we expect to have the same amount of trouble getting documents; is it still going to be classified where we get documents where you have six words and the rest is blacked out? (Olympia Meeting)

RESPONSE:

Hanford Site documents are being declassified quickly now that the mission for the Site has changed to one of cleanup. A good example of the declassification effort is the one for the Hanford Environmental Dose Reconstruction (HEDR) Project. Over 5000 documents have been declassified over the past few years. If a document contains information that is still classified, the only way it can be released is to have the classified information blacked out.

16. COMMENT:

We are encouraged by your current activities to fully implement an effective Site Management System to adequately and effectively plan and schedule the activities required to: effectively accomplish cleanup, more accurately define required funding, and measure cost/schedule performance effectiveness as cleanup continues. In due time, when your system is fully established, we believe that you will have a viable management system to effectively plan, organize, and control the required work and to clearly establish and maintain accountability among the various individuals, organizations, and contractors designated to accomplish the work.

We encourage full and effective implementation, where appropriate, of earned-value reporting. We also highly encourage the application of earned-value

reporting in relation to the Tri-Party Agreement milestones. In the spirit of "openness" and accountability that you espouse elsewhere in the Site-Specific Plan, public access to your earned-value (and) performance measurement reports would help to establish USDOE's credibility in this area.

We recommend that you provide a summary of your Site Management System and cost estimation improvement initiatives in the Site-Specific Plan. (Ecology)

RESPONSE:

A summary of the Site Management System and the cost estimation improvement initiatives will be included in the Site-Specific Plan for FY 1994. Access to earned-value and performance measurement reports would probably be by special request.

17. COMMENT:

Washington State repeats its position that lack of funding is not an excuse for missing Tri-Party Agreement milestones. According to Paragraph 139 of the Tri-Party Agreement, USDOE is required to seek adequate funding to achieve the requirements specified in the Tri-Party Agreement. (Ecology)

RESPONSE:

DOE, by law, cannot spend dollars that are not appropriated by Congress. If DOE requests adequate funding during any fiscal year to accomplish the planned work, it has satisfied the requirements of Paragraph 139 of the Tri-Party Agreement. If Congress does not provide funds to cover the estimated costs for cleanup during a fiscal year, the only recourse is to try to get additional funding midway through the fiscal year.

18. COMMENT:

If lack of technology is slowing things up, then DOE must devote more money and time in this area. (Portland Meeting)

RESPONSE:

We agree. Increased funding is being requested for technology development as the Site progresses from the investigation stage toward actual cleanup. The actual funding appropriations are made by Congress based on national priorities. The technologies that will be used can be demonstrated through cleanup either at Hanford or another site.

19. COMMENT:

The word cleanup is misleading. Hanford will never be cleaned up. (Portland Meeting)

RESPONSE:

Cleanup is the general term used to describe the process of reducing the levels of chemical and radioactive material contamination to levels that meet standards. Every atom of radioactivity or molecule of chemical hazard will not be removed from the Hanford Site because it is virtually impossible to accomplish that task.

20. COMMENT:

It appears that no funds have been allocated to data management for the Waste Management Program. As a result, data have not been placed into the Hanford Environmental Information System (HEIS), although the effort is now underway. Much of this is essential RCRA-related well data/information. The lack of data could negatively impact the ability to render future Records of Decision. Possible additional significant costs to re-engineer or recreate data may be regulated. Additionally, data management problems in the environmental restoration area have impacted the approval of operable unit work plans. We recommend that you outline your funding approach toward data management and your intent to seek appropriate funding for the forthcoming fiscal year. (Ecology)

RESPONSE:

The issue of data management is part of the Tri-Party Agreement negotiations between Ecology, EPA, and DOE. The three parties will seek agreement as to how to proceed in the future. Negotiations are scheduled to conclude September 30, 1993.

21. COMMENT:

DOE took a positive step in taking comments from states and tribes on the draft [National] Five-Year Plan. However, the 10-day comment period did not allow adequate time for a thorough review. The draft plan states that the public cannot evaluate alternatives unless they are informed about them in a timely manner. (Oregon Department of Energy - ODOE)

RESPONSE:

We agree. The schedule for activities associated with the National Five-Year Plan is set by DOE-HQ. We will forward this comment to them.

22. COMMENTS:

DOE should consider providing access to the results of cost quality management assessments, roadmaps, and progress tracking system reports. (Ecology)

RESPONSE:

We agree. We will provide Ecology with the information requested. For further information call Mr. Jim Peterson at (509) 376-6731, or write: U.S. Department of Energy, Mr. Jim Peterson, P.O. Box 550, MS A5-19, Richland, WA 99352.

23. COMMENT:

Prioritization systems such as the Resource Allocation Support System (RASS) should not be used to circumvent existing agreed-to milestones. Social and cultural values, as well as existing agreements with the states, must be factored into any prioritization scheme. (Ecology)

RESPONSE:

We agree. RASS will not be used to avoid compliance with existing agreements.

24. COMMENT:

Nuclear weapon production facilities at Hanford should not be transferred to the Environmental Management (EM) budget until a decontamination and decommissioning (D&D) decision is rendered. Cleanup funding should not be used to maintain such facilities in standby mode. (Ecology)

RESPONSE:

We agree that the current budgeting system can be misleading about the amount allocated to actual cleanup. However, it is not correct to suggest that the funding now allocated to maintain old production facilities is funding intended for cleanup. To remove these items from the budget would simply be an accounting change. The amount appropriated for environmental restoration and waste management would not change.

Decontamination and decommissioning (D&D) is an activity within the Office of Environmental Restoration and Waste Management (EM). Because "cleanup" is a common term that applies to all the activities in EM (including technology development and facility transition), part of the funding for cleanup will include maintenance of facilities until they can be properly decontaminated.

25. COMMENT:

We are concerned that certain initiatives may be implemented without coordination and compatibility with other management areas, systems, and/or initiatives (e.g., Progress Tracking System to Financial Information System, Site Management System, etc.). Lack of coordination can lead to confusion, wasted resources, and the possibility for delays in cleanup activities. A centralized business management organization at Headquarters can help prevent duplication of effort, and foster agency-wide coordination/compatibility in the implementation of management systems and initiatives. (Ecology)

RESPONSE:

DOE-HQ has a business management organization in Washington, D.C. This organization is responsible for issuing DOE orders, including DOE Order 4700.1, *Project Management System*, which gives the DOE field organizations some coordination. Because cleanup is a relatively new program and many of the sites are still winding down their production operations, there aren't many program-specific systems. DOE-HQ is actively working to avoid duplication of effort, especially in the technology development area,

and to try to apply cleanup technologies that have been developed at other DOE sites or by private industry.

26. COMMENT:

In previous five-year plans, DOE's validated case (VC) and preliminary validated case (PVC) for each activity data sheet was provided in the body of the plan. This information provided good visibility into DOE's planning estimates. This level of visibility should be restored in future five-year plans. (Ecology)

RESPONSE:

This item was forwarded to DOE-HQ for response.

27. COMMENT:

The biggest cleanup problem lies not with DOE, but with Congress because of the complex regulatory measures that they have passed. This is further complicated by regulations at the state level and the number of states that have major DOE sites. (Pasco Meeting)

RESPONSE:

While state and federal regulatory issues occasionally pose obstacles to accomplishing actual cleanup, private industry must comply with the same requirements. At the time Congress wrote many of the public laws for environmental protection, the magnitude of cleanup of lands and facilities owned by the federal government was not known.

28. COMMENT:

The last couple of [Tri-Party Agreement] meetings that I went to in both Hood River and the previous one here in Portland, it bothered me that there was a large number of employees of the DOE, Westinghouse, Department of Ecology, and other agencies, and I think that definitely intimidates the public, stifles public comment. (Portland Meeting)

RESPONSE:

Attendance at public meetings by DOE, Westinghouse, Department of Ecology, and other agencies is not intended to intimidate the public. On the contrary, representatives of state and federal governments and their contractors are interested in what the public has to say. Increased public involvement is one of the objectives that DOE is soliciting. Most federal and state regulations require that public input be evaluated before the regulations are issued in final form. As an alternative to speaking in public meetings, you can write your comment(s) on a card and submit it to DOE. Responses are provide for all comments, either verbal or written.

29. COMMENT:

I am really angered and outraged by this whole procedure. When this mess was created the U.S. Government could spare no expense. Now we are told constantly about the monetary restraints. The mess has to be cleaned up, and in my opinion, no expense should be spared and no expense would be spared if the citizens of the U.S. were given the information they are entitled to. I think that is all nonsense. (Portland Meeting)

RESPONSE:

Cleanup is taking place, though not as fast as we would like. We are making information available to the public, and will continue to do so. However, in light of the growing deficit and other demands on the nation's budget, it is unlikely that Congress will adopt a "no expense should be spared" approach to funding cleanup.

30. COMMENT:

DOE should identify the specific milestones undergoing dispute resolution, and the reason for the dispute. If a milestone was missed by DOE, thereby leading to the dispute, this should be explained. (Ecology)

RESPONSE:

We agree. We will do this in the next Plan.

31. COMMENT:

You are prepared to waste \$300 million of our tax dollars on building a foundation for a plant that we know isn't going to work? (Seattle Meeting)

RESPONSE:

The Hanford Waste Vitrification Plant (HWVP) will be started. The issue is when. The original startup date was 1999. However, EPA and Ecology have agreed to a six-month delay in starting construction to give Secretary of Energy O'Leary time to study the options. HWVP is a \$1 billion plus project. DOE's position is that to proceed with its construction while knowing of significant, unresolved technical problems, may not be responsible. DOE has encountered major obstacles with a similar facility at its Savannah River site. HWVP will also be addressed as part of the Tank Waste Remediation System rebaselining negotiations scheduled to conclude September 30, 1993.

32. COMMENT:

We have a keen interest in the integration of plans and strategies of the Office of Civilian Radioactive Waste Management (OCRWM) with other DOE offices for waste management and environmental remediation. Current integration and coordination within DOE appears to be inadequate. (YIN)

RESPONSE:

This comment was forwarded to DOE-HQ for response.

33. COMMENT:

DOE should consider integrating the defense waste management program with the civilian waste management program. (Yakima Indian Nation [YIN])

RESPONSE:

The civilian waste management program and the defense waste management program are both administered by DOE. The two programs are separate because they operate from separate funding sources to support two different missions. OCRWM is funded from fees on nuclear power-generated electricity; the defense waste program is funded with federal tax dollars.

The two programs have worked together on disposal fee calculation and waste acceptance criteria at a geologic repository. In FY 1994, Congress plans to substantially increase the Defense Nuclear Waste Disposal appropriation for the OCRWM Program.

34. COMMENT:

My understanding about a permanent waste repository in the United States is that it's pretty much on hold, if not dead, at this point. Is that right? And given that, what's the current thinking about where all this stuff is going to go? (Olympia Meeting)

RESPONSE:

You're partially correct. The issue of a national waste repository is not dead. However, thus far we have been unsuccessful in addressing the political and social implications of where to locate such a facility.

Yucca Mountain, Nevada remains the preferred site for the location of a facility to store high-level radioactive waste when or if it becomes operational. WIPP, Waste Isolation Pilot Plant, located near Carlsbad, New Mexico, is currently the only facility in the U.S. specifically designed and constructed for long-term storage of radioactive transuranic waste. Technically, WIPP is ready to begin its test phase, which involves receiving shipments from DOE's Idaho National Engineering Laboratory. However, DOE has not been able to obtain several required approvals and certifications. Until WIPP becomes operational, Hanford will have to store its waste onsite.

35. COMMENT:

Congress recently directed DOE to decommission and decontaminate the Plutonium-Uranium Oxidation (PUREX) Plant and the Plutonium Finishing Plant (PFP). The Five-Year Plan should reflect the new direction. (ODOE)

RESPONSE:

The directive to decommission and decontaminate (D&D) the above facilities came from DOE-Headquarters. All D&D of such facilities will be done in accordance with NEPA (National Environmental Policy Act). Subsequent editions of the Five-Year Plan will reflect the current status of these facilities.

36. COMMENT:

DOE needs to figure out what it's going to do with waste or how it's going to dispose of waste before it develops a Five-Year Plan. (Portland Meeting)

RESPONSE:

The Defense Authorization Act requires DOE to prepare a five-year plan. Hanford's mission is environmental restoration. Our first priority is the protection of workers, the public, and the environment. Figuring out what to do with waste is an on-going effort.

37. COMMENT:

Is there adequate funding in FY 1993 for tank safety issues? (Olympia Meeting)

RESPONSE:

Yes.

38. COMMENT:

How many waste tanks are slated for an emergency response action? To what extent are DOE and Westinghouse Hanford Company satisfied with the technology available to handle the emergency actions? (Portland Meeting)

RESPONSE:

No tanks are scheduled to have an "emergency" action or an expedited response action (ERA) performed on them. Any free liquid in leaking single-shell tanks is being pumped into double-shell tanks, and no double-shell tanks are leaking. The ferrocyanide issue is no longer a concern because PNL scientists determined that the concentrations of ferrocyanide are not as high as originally thought. Employees don't work in Tank 101-SY until there has been a venting of the hydrogen gas. So, while the tanks contain waste that eventually will need to be disposed of, there is no need for emergency action.

39. COMMENT:

DOE uses research and technology as an excuse to slow up the cleanup process. (Portland Meeting)

RESPONSE:

This is not so. The cleanup is governed by a series of milestones agreed to by EPA and Ecology. A milestone cannot be missed simply by claiming that the technology was not available. DOE has to demonstrate the validity of such a claim to the satisfaction of both EPA and Ecology.

40. COMMENT:

There does not appear to be enough effort or money to put the needed monitoring equipment in place for gas and radioactive-material releases.

There isn't a true profile done on the tanks and the monitoring isn't adequate to do this. (Portland Meeting)

RESPONSE:

New monitoring equipment is being designed and will be installed in the existing tanks. Because of the strong chemical environment in the tanks, the original in-tank monitoring equipment doesn't work as well anymore. With the new monitoring instrumentation, up-to-date profiles of the tanks will be obtained.

41. COMMENT:

A significant shortfall in funding occurred in the President's FY 1993 budget submission to Congress, thereby potentially impacting assessment activities for specific, affected operable units. A notable example is 1100-EM-1. We recommend that you explain your plan to absorb the funding shortfall and budget planning for FY 1994. (Ecology)

RESPONSE:

It appears that funding constraints will become a way of life at Hanford and other DOE facilities as the nation deals with the deficit problem. As such, it becomes absolutely crucial to 1) get the maximum out of our resources, and 2) involve stakeholders in setting priorities. We've programmed a variety of activities to inform and involve stakeholders in looking at how we go about dealing with funding shortfalls.

In May, 1993, Assistant Secretary for Environmental Restoration and Waste Management, Paul Grimm, issued a directive to all DOE operations offices to initiate a process by which "we will seek stakeholder input on our program priorities, plans, and resource allocation." At Hanford, we'll implement this initiative by working with the regulators and public in establishing project priorities.

42. COMMENT:

All the intelligent talk now seems to suggest that if that vitrification plant is built, it is not going to take 30 years to vitrify this material, but 100 years. I read that the DOE still wants to go ahead with this foundation to comply with the milestone or whatever. I think that would cost \$300 million. What is the logic in that? (Seattle Meeting)

RESPONSE:

The reason that you've heard a change from 30 years to 100 years to vitrify the tank waste is that ex-Secretary of Energy Watkins decided that the single-shell tank waste would be vitrified in addition to the double-shell tank waste. DOE would vitrify about four times the amount of waste that it originally expected. There are several options being considered, two of which are use of multiple melters or develop a new, higher capacity melter.

43. COMMENT:

Do not reopen UO_2 or PFP. Recognize the terrible problems at Hanford and deal frankly with them. For one thing, UO_2 was declared unsafe in 1987 and hasn't been repaired and, since it is going to be reopened, what will be done with the 180 million gallons of waste that it will produce? Will it be dumped? Will it be treated? Why is it reopening at all? What about the uranium oxide? Is it weapons-grade? (Seattle Meeting) (Card)

RESPONSE:

The UO_2 Plant was not declared unsafe. It went through an extensive safety review before initiation of the current stabilization run. We processed 200,000 gallons of liquid uranium solution into a powder (uranium oxide). The powder, which is not weapons-grade material, is a much safer form for long term storage. The stabilization run was a necessary step toward permanently decommissioning and decontamination of this former production facility.

All emissions were monitored during the run and were maintained within established national and state safety limits. Most of the liquid discharged from the plant was clean water that was used to cool equipment. Validated logs and tables are available documenting each fuel/waste product that resulted from the run. We have already been approached regarding the possible sale of the uranium oxide powder, which will be used as a reactor fuel. We are preparing the necessary documentation to allow shipment of the material in the event the sale is finalized.

(At the time this document was prepared, DOE had just began to solicit public feedback concerning the restart of PFP.)

44. COMMENT:

The Transportation Assessment and Integration Report should include detailed plans for integration of defense and civilian waste, including critical path charts with milestones and cognizant managers and NRC and DOT certification of the various casks. (Yakima Indian Nation - Cook)

RESPONSE:

As already mentioned, defense waste and civilian waste are both administered by DOE. However, they are managed as separate programs because they come under the requirements of two different public laws passed by Congress. The geologic repository will be licensed by the Nuclear Regulatory Commission (NRC). Therefore, there is and will continue to be coordination between the defense and civilian waste programs. NRC will have to certify all casks used for shipment of DOE's high-level waste and spent fuel from private industry.

45. COMMENT:

Washington State recognizes the importance of safeguards and security for special nuclear materials. We do not understand, however, why attitudes and policies appropriate to these materials persist when dealing with other kinds of shipments. Additionally, will there be an increase in special nuclear

materials (SNM) shipments into Hanford as nuclear weapons are decommissioned?
(Ecology)

RESPONSE:

Safeguards and security requirements are applied only when needed. There is no anticipated increase in SNM shipments to the Hanford Site as a result of the dismantling of our country's nuclear weapons.

46. COMMENT:

The I-84 corridor in eastern Oregon is very treacherous in the winter because of weather. A number of accidents involving shipments of nuclear materials have happened in the past along this route. Therefore it's very important that the emergency responders along the route have the appropriate training to respond to an accident. (Portland Meeting--ODOE)

RESPONSE:

DOE-RL concurs that there are tremendous hazards along the Oregon corridor. DOE-RL has worked with the states of Oregon and Washington, and the Umatilla, Yakima, and Nez Perce tribes to develop Transportation Radioactive Emergency Response Courses. The two courses were offered during the summer of 1993 and will continue. Oregon emergency responders had considerable input in developing the course; the lead trainer is from Oregon State University. Also, DOE-RL has taken its mobile Self-Contained Breathing Apparatus Truck down the Oregon Corridor and provided fire fighters with state-of-the-art hands-on training.

47. COMMENT:

What kind of independent oversight is there over DOE. (Seattle)

RESPONSE:

One of DOE's oversight boards is the Defense Nuclear Facility Safety Board. The board, created in 1989 to oversee the nuclear weapons program, is made up of five members nominated by the president. The board reports directly to the president, not to the Secretary of Energy. EPA and the departments of Ecology and Health also perform oversight functions.

48. COMMENT:

Whistle-blower protection. There has been a lot of comment about this. Last year, the Federal Whistle-blower Protection Act was essentially expanded through DOE's budget to include protection for whistle-blowers who are employees of DOE contractors; that will only last a year because a budget bill only lasts a year. Why doesn't DOE establish permanent protection so people who complain and criticize DOE can feel free to speak out? (Seattle Meeting)

RESPONSE:

The Whistle-Blower Protection Act is permanent. Its regulations are published as a Code of Federal Regulation (CFR) 10-708, Furthermore, DOE has

established the Office of Contractor Employee Protection to investigate whistle-blower complaints by employees of DOE, its contractors, and subcontractors.

49. COMMENT:

DOE must give site-specific costs and projects for each of the five years, not just one year, in accordance with the Defense Authorization Act. (Portland Meeting)

RESPONSE:

This comment was forwarded to DOE-HQ for response.

3.0 FACILITY TRANSITION

1. COMMENT:

What in the future for FFTF. (Olympia Meeting)

RESPONSE:

FFTF (Fast Flux Test Facility) went into operation in 1982 to test advanced reactor technology. In 1992, former energy secretary James Watkins ordered the plant to be placed on cold standby after it was determined FFTF had no cost-effective, long-term mission.

Recently, current energy secretary Hazel O'Leary ordered a reassessment of the cold standby order. An independent study committee has been commissioned to assess the viability of several missions for FFTF, including the production of medical isotopes and electrical power and nuclear waste research.

2. COMMENT:

I wanted to know if PUREX was a reprocessing operation or an enrichment operation. Did you use hydrochloric acid as the separator for metals and the other elements? (Olympia Meeting)

RESPONSE:

PUREX was a third-generation nuclear fuels reprocessing plant. We did not use hydrochloric acid in PUREX. Instead, we used sulfuric acid, caustics, and nitric acid. PUREX has been shut down and awaits final deactivation in 1996.

3. COMMENT:

Is there any remnant bath there with materials? (Olympia Meeting)

RESPONSE:

There is nothing in PUREX known as a "bath". However, there are several large pools that contain materials that were run through either N Reactor or the single-pass reactors. That material is still there. Its disposition will be the subject of an irradiated fuels environmental impact statement that will be available for public comment.

4. COMMENT:

Are there spent fuel pools on Hanford? (Olympia Meeting)

RESPONSE:

Yes. There are several large pools that contain materials that were run through N Reactor. That material is still there. Its disposition will be the subject of an environmental impact statement that will be available for public comment.

5. COMMENT:

Is the rod stacking regulated the same as in commercial reactor pools?
(Olympia Meeting)

RESPONSE:

Because Hanford is a DOE facility, the regulations are very similar to, but not the same as those governing commercial reactors. At present, Hanford does not have any fuel rods stacked from N Reactor. We do have rods from the Shippington Port reactor stored in racks in a cooling pool in T Plant. These rods are stored in accordance with stringent DOE regulations put in effect in 1978-1979 when the rods were stored.

6. COMMENT:

The re-regulation of commercial reactor storage pools has been more leniently regulated as years have gone by because there is nothing to do with the waste. Some individuals and groups are concerned that the density of that stacking could lead to problems. Is there a parallel re-regulation that's gone on in DOE facilities regarding that? Have the stacking distances been relaxed, the regulations become more lenient over time, paralleling commercial reactor storage pools? (Olympia Meeting)

RESPONSE:

DOE has not relaxed its stacking distance requirements. Commercial reactors are regulated by the Nuclear Regulator Commission (NRC). Although DOE modeled many of its regulations after those of the NRC, the two are independent of each other.

7. COMMENT:

I read that the Clean Air Act regulations may require upgrades to aging facilities with no identified missions. Why are aging facilities with no identified missions producing air pollutants? (Seattle Meeting)

RESPONSE:

Even though many of these facilities are not operating, they are still radioactive. They were designed in such a fashion that contamination is controlled by directing air flow from clean areas to contaminated areas, through filters, and then to a stack for discharge to the atmosphere. To maintain this contamination control, air must continue to be circulated. This air flow is monitored.

8. COMMENT:

A tremendous amount of dollars are being spent without a whole lot being accomplished. Get on with D&D of facilities. Get out of the maintenance mode. (Pasco Meeting)

RESPONSE:

We are making significant progress in the decommissioning and decontamination (D&D) of old facilities. In December 1992, we issued the final environmental impact statement report on the D&D of the eight surplus production reactors. PUREX, UO₂, N Reactor and the 300 Area Fuel Fabrication facilities have been designated for deactivation leading to D&D.

9. COMMENT:

I question the value of a PFP stabilization run. (Pasco Meeting)

RESPONSE:

The PFP stabilization run is needed to ensure that the safety of plant personnel and the public are maintained. Currently, 711 items of chemically unstable (reactive) plutonium-bearing materials are contained within process gloveboxes and/or stored as liquids. The Plutonium Reclamation Facility (PRF) process within the PFP is undergoing final preparations for the stabilization campaign to convert the remaining in-process inventories of chemically active, plutonium-bearing solids and liquids into plutonium nitrate. Subsequently, the plutonium nitrate will be converted to stable plutonium oxide. After stabilization is complete, the PFP process areas will be placed in a safe standby condition. PFP was never designed as a storage facility. Leaving radioactive materials in PFP is not a responsible option.

10. COMMENT:

What caused the two recent PFP accidents? What will be done to prevent future PFP accidents during the planned restaff? (card)

RESPONSE:

The two recent exposure incidents can be tied to the age of the facility and the equipment deteriorating through exposure to a hostile atmosphere. That is why we are aggressively trying to deactivate these old facilities. To prevent future accidents, we've examined in detail our operating procedurals and placed even more emphasis on safety.

11. COMMENT:

Are old, aging fuel rods monitored? Structural integrity tested? What is the condition of the fuel stored in the K Basin, etc.? (Card)

RESPONSE:

Up to 6 percent of N Reactor fuel assemblies lost cladding integrity during reactor discharge. To preserve the structural integrity of the fuel rods, they are encapsulated in sealed canisters for underwater storage. The KW fuel is encapsulated and preparations are in progress for encapsulating the fuel stored in 105-KE Basin.

4.0 TRI-PARTY AGREEMENT

1. COMMENT:

You have stated that since the Tri-Party Agreement was signed, DOE-RL "...has completed all but two enforceable milestones." This statement does not render a complete picture of the situation. It should be noted that DOE has missed a significant number of originally defined milestone dates, which subsequently required renegotiation. DOE's "milestone completion" statement includes the completion of these "renegotiated" milestones.

To place this in perspective, we recommend that DOE-RL present a table including: (1) a list of all major and interim milestones, (2) the original milestone dates, and (3) the current milestone dates. (Ecology)

RESPONSE:

We agree that the statement in question is misleading. It was revised in the March draft of the Site-Specific Plan to include the original milestones. Specifically, it said "...completed 241 milestones...on schedule or according to a revised schedule approved by EPA and Ecology."

However, to listing major and interim milestones, with original dates and changed dates, would add significantly to the size of the Site-Specific Plan. Perhaps Ecology could make this information available in the *Hanford Update*.

2. COMMENT:

DOE did not portray a complete picture for the public regarding the dispute resolution surrounding DOE-RL's inability to meet milestone M-14 [construction of the low-level mixed waste laboratory]. The Waste Sampling and Characterization Facility (WSCF) low-level laboratory was not built as required by the Tri-Party Agreement because of DOE's unilateral decision to not provide the necessary construction funding. Consequently, a decision was made to offload samples to offsite laboratories without consulting the regulators. (Ecology)

RESPONSE:

Ecology's assessment is correct. In an effort to operate as efficiently as possible, we feel that a portion of the original WSCF mission can best be carried out by commercial laboratories, rather than by using DOE resources. By the time this document is published, we hope to have a commercial analytical services contract in place. We are committed to completing construction of WSCF by April 1994.

3. COMMENT:

The Tri-Party Agreement contains a series of paragraphs that require DOE to fully fund cleanup activities that are specified in the Tri-Party Agreement. Paragraph 139 of the Tri-Party Agreement provides Ecology the opportunity to review your funding plans or your budget requests before they are submitted to DOE-HQ each year to see if you are providing or planning for sufficient

funding for cleanup activities for the forthcoming year. By not having access to your Five-Year Plan in a timely manner, including funding estimates, we cannot do what is required by Paragraph 139. Again, we believe that your process for five-year planning needs to meet the requirements for the National Defense Authorization Act and the Tri-Party Agreement, Paragraph 139. (Olympia Meeting)

RESPONSE:

Tri-Party Agreement Paragraph 139 continues to be a bone of contention between DOE and the regulators. In part, Paragraph 139 states, "Ecology and EPA shall assist DOE-RL in determining the funding levels required to support the corresponding negotiated work schedule for each year." It further states that EPA and Ecology will not "become involved with the internal budget process." Part of the problem is this: According to the Office of Management and Budget, we cannot disclose budget information until it has been formally transmitted to Congress. This issue is part of the Tank Waste Remediation System negotiations that are scheduled to be completed September 1993.

4. COMMENT:

How many Tri-Party Agreement milestones have you made so far? (Seattle Meeting)

RESPONSE:

The original Tri-Party Agreement had 160 milestones. Through several renegotiations, that number has increased to 417. As of May 7, 1993, 252 milestones are complete and four are in the dispute resolution process.

5. COMMENT:

A majority change to Tri-Party Agreement Milestone M-17 occurred as a result of negotiations between Ecology, EPA, and DOE over the 300 process trenches. You should provide additional details regarding the changes to interim milestones that occurred as a result of these negotiations. (Ecology)

RESPONSE:

In the future, we will do this.

6. COMMENT:

You list a number of milestones that have been "completed." The public should be aware that a number of these milestones are being reviewed and have not been finalized and approved. In these cases, the issue involves adequacy of the document submitted by DOE. (Ecology)

RESPONSE:

Submittal of documents to Ecology and EPA (for example, RCRA Part B permit application) constitutes completion of certain milestones. DOE-RL does not mean to imply that transmittal of documents to Ecology or EPA means that these agencies have approved the document. In addition, many times there is an

opportunity for public review and comment before a document can be approved by the regulatory agencies.

7. COMMENT:

The cleanup plan offends the public. The public can't accept the cleanup plan if DOE doesn't know what it's doing. (Portland Meeting)

RESPONSE:

The cleanup plan is intended to help DOE-RL schedule the work to be performed and must satisfy the environmental requirements that Ecology and EPA are authorized to enforce. There will be changes to the plan that result from renegotiations of the Tri-Party Agreement, funding cuts, and establishing revised priorities for cleanup actions to ensure the safety of the workers, the public, and the environment. Public input on the entire cleanup process is welcomed. Quarterly Tri-Party Agreement meetings are announced several weeks in advance, and written comments from the public are encouraged so that the Hanford Site cleanup addresses what the public wants.

8. COMMENT:

Some statements in the Site-Specific Plan may be true, but lack definition. Address dispute resolutions and show the full picture. (Olympia Meeting)

RESPONSE:

Dispute resolution is a process to resolve disagreements between the parties to the Tri-Party Agreement. When EPA, Ecology, and DOE negotiated the Tri-Party Agreement in 1989, the parties understood that legitimate differences would arise between the parties. To avoid costly litigation, the parties agreed to the dispute resolution process. If a dispute is not resolved through this process, EPA and Ecology retain the right to initiate legal action.

9. COMMENT:

Decisions to "miss" legal commitments should not be taken or implemented lightly. Stakeholders, regulators, and the public must be fully apprised of the circumstances and rationale that support a decision to miss a legally defined commitment. In any case, ongoing poor management controls, policies, and procedures, inadequate training, and insufficient or poorly maintained surveillance and monitoring systems must be quickly corrected/repared to avoid emergency situations where such legally defined commitments might be missed. (Ecology)

RESPONSE:

DOE does not take missing a Tri-Party Agreement commitment lightly. However, overriding circumstances occasionally do not allow DOE-RL to meet its Tri-Party Agreement commitments. In most situations, Ecology and EPA have cooperatively worked with DOE when these situations have arisen to ensure that the impact to the cleanup process is minimized.

10. COMMENT:

DOE has not provided access to the integrated database as required by the Tri-Party Agreement. (Ecology)

RESPONSE:

Ecology and EPA were granted access to validated data in the Hanford Environmental Information System (HEIS) in October 1991. Since that time, the accessible file has grown to approximately 130,000 records, and additional records are being added each month. The problem is that not all developed data is accessible by Ecology and EPA because of problems in validating or electronically loading the data into HEIS. However, efforts are underway to reduce this "backlog," and we expect to be current by December 1993.

It should be noted that both validated and unvalidated data are being provided in hard copy to Ecology and EPA at the monthly unit managers' meetings. DOE will provide access to the HEIS. This needs to be done quickly so that Ecology and EPA have earlier access to environmental data and can review them for potential problems that may affect the cleanup schedule. Access to this information should shorten the time it takes for some regulatory decisions and, subsequently, improve the efficiency of the Hanford Site cleanup.

11. COMMENT:

The Tri-Party Agreement lists 17 waste units including unplanned releases instead of the 11 listed in the SSP. (Ecology)

RESPONSE:

We made a mistake, the September 1992 version of the Tri-Party Agreement lists 22 waste units.

12. COMMENT:

The standard "model" agreement provisions should not be viewed as a tool to renegotiate existing agreements and/or milestones. (Ecology)

RESPONSE:

They are not used to renegotiate existing agreements. The standard "model" agreement provisions were developed at DOE-HQ in coordination with EPA-HQ. The provisions are viewed as a mechanism to ensure an element of consistency in DOE's cleanup agreements around the country. DOE-HQ realizes that other things must be considered in the cleanup of a specific site, particularly state environmental regulations. These provisions make up a framework of the necessary topics to be included in any cleanup agreement and will be modified as necessary to meet the needs of specific agreements.

13. COMMENT:

The Tri-Party Agreement's recently proposed Communities Relations Plan proposes to have meetings only once a year in Portland. DOE or Ecology or EPA

should have meetings in Portland as the issues come up. We didn't even have a meeting in Portland on the proposed plan. (Portland Meeting)

RESPONSE:

True. However, as in the past, additional meetings will be held as important issues arise. The three parties to the agreement will continue to be responsive to the public's request for meetings.

5.0 TANK WASTE

1. COMMENT:

Has the technology for retrieval been developed for single-shell tanks?
(Portland Meeting)

RESPONSE:

Several retrieval technologies are being evaluated, and the decision will be made later as to which technology is most appropriate for a specific tank. The first single-shell tank retrieval demonstration is scheduled for 1997.

2. COMMENT:

Westinghouse Hanford Company was paid to monitor the levels in the tanks. Are these level monitors properly calibrated and operated? (Portland Meeting)

RESPONSE:

Many of the liquid level monitors in the tanks are not state-of-the-art monitors and replacement parts are no longer available. Some of the instruments can no longer be calibrated to the specifications that were originally set. They have been operated according to procedures. However, there is a program to install new instrumentation in the tanks.

3. COMMENT:

Have you dried out all the single-shell tanks? When will this be finished?
(Portland Meeting)

RESPONSE:

Westinghouse Hanford Company has pumped free liquids from 105 of the 149 single-shell tanks into double-shell tanks. The removal of the remaining free liquid is scheduled to be finished by December 1999.

4. COMMENT:

What is red oil and why aren't red oil and ammonium nitrate mentioned?
(Portland Meeting)

RESPONSE:

The reason red oil was not mentioned in the Five-Year Plan is because we have no evidence it exist within the tank waste. Red oil is formed when tributylphosphate, nitric acid, and heavy metal nitrates are mixed and allowed to react chemically. The reaction is explosive. The formation of red oil requires the presence of an acidic environment (that is, low pH) and temperatures greater than 300° F. Scientists now believe that, because the ferrocyanide wastes were put into the tanks at pH>10, red oil could not form.

Although the Plan did not single out ammonium nitrate in discussing tank issues, it made frequent reference to nitrates in general. Ammonium nitrate has no distinctive properties that would warrant differentiation from other nitrates. DOE and its contractor continue to investigate nitrates in tank core samples.

5. COMMENT:

Provide a definition of active and inactive tanks. (Olympia Meeting)

RESPONSE:

Active waste tanks are those that receive high-level waste. Inactive tanks are those that no longer receive waste.

6. COMMENT:

What is the distance from one tank to another? (Portland Meeting)

RESPONSE:

There is a distance of about 25 feet between the tanks.

7. COMMENT:

If there is only 100 feet separating tanks, aren't you concerned about a criticality situation? (Portland Meeting)

RESPONSE:

No, for a criticality to occur, several things need to happen at the same time. First, there must be enough neutrons to keep a reaction going. Second, there must be fissionable or source material, such as ^{238}U , present to capture the neutrons. Third, the geometry (shape) of the source material must be exact to keep a reaction going. None of these criteria are present in the tanks.

8. COMMENT:

How deep are the tanks? (Pasco Meeting)

RESPONSE:

They actually range in size and height. In a million-gallon tank, the distance from the bottom to the top of the dome is about 46 feet, with about a 7-foot cover of dirt. In some of these smaller tanks, the distance is shorter.

9. COMMENT:

How far are the single-shell and double-shell tanks located above bedrock? What is the bedrock? (Seattle Meeting)

RESPONSE:

Depth to bedrock varies from one tank farm to the next, but it's generally about 250 feet. The bedrock on the Hanford Site is basalt.

10. COMMENT:

Design criteria for grout storage facilities should include that the location has been geologically stable since the Holocene era and should meet the EPA/RCRA definition of fault-free, rather than the common definition used by Hanford geologists. (Yakima Indian Nation)

RESPONSE:

Design criteria for the grout facilities will meet EPA and Ecology's requirements under the RCRA regulations, and will meet DOE's design criteria for low-level radioactive waste disposal facilities. While RCRA facility design criteria have been considered before construction of vaults 102 through 105, they are not the only criteria that the vaults must meet.

11. COMMENT:

The statement: "The larger portion of the waste will be low in radioactivity and toxicity" is not true. Waste specified for grouting is considered to be highly toxic. (Ecology)

RESPONSE:

The DOE waste that is currently expected to be put into the grout vaults is considered to be low-level radioactive mixed waste (MW). The NRC determined that it is not high-level waste. Chemical toxicity and radiological toxicity of tank waste were considered before the decision was made to dispose of selected wastes in the grout form. State and federal regulations place limits on the disposal of chemically toxic and radioactive materials.

12. COMMENT:

Regarding the statement "Vault 103 acceptance has been resolved with Ecology," it should be noted that the vault has not passed the second leak test. Ecology has not accepted Vault 103 for use. (Ecology)

RESPONSE:

Vault 103 was retested in June 1993 and passed the leak test per the vault acceptance criteria agreed to by Ecology.

13. COMMENT:

The grout process has a heat-of-hydration problem. The NRC ruled that you can mix the waste that you are planning to vitrify in grout so that you do have a mixture of high-level waste (HLW) and low-level waste (LLW). The distinction between HLW and LLW is no longer so clear cut. LLW is an issue, as are the grout and the vitrification processes. (Portland Meeting)

RESPONSE:

After years of working on the Heat-of-hydration problem, we have identified a solution using grout formulations which generate less heat. The solution also includes pouring the grout in lifts and cooling provided by a vault exhausters. The NRC ruled that the waste that is expected to be solidified into grout is not considered HLW. The NRC did not state, nor did they have the authority to state, that HLW and LLW could be mixed to constitute the grout matrix.

14. COMMENT:

I agree with the Hanford Education Action League (HEAL) that the grout process should be halted and other alternatives for disposal of those wastes evaluated. (Portland Meeting)

RESPONSE:

Grouting (a cement-based solidification process) has been successfully used in the commercial nuclear power industry for many years to dispose of radioactive waste. In 1989, we successfully completed full scale a demonstration run grouting one million gallons of nonhazardous low-level waste. Currently the Grout Treatment Facility is in a scheduled shutdown, and its future is under review by Ecology and EPA. In the meantime, funding for grout operations has been reduced to support a safe standby mode. Plans are to proceed with limited grouting in the late 1990s while enhanced waste forms are being developed.

15. COMMENT:

We question DOE's proposed disposal of HLW from DSTs in near-surface mixed-waste disposal facilities (grout vaults) on the Hanford Site. Because of conclusions that the pretreatment processing to remove ⁹⁹Tc, ¹²⁹I, and ¹⁴C will not be 100 percent effective, a long-term problem may be created because grout does not retain these isotopes or other toxic substances, such as nitrates. (Yakima Indian Nation - Cook)

RESPONSE:

The waste that is going to be solidified into grout is low-level radioactive mixed waste (MW), not high-level waste (HLW). The initial performance assessment predicted that ⁹⁹Tc, ¹²⁹I and nitrates were the contaminants of most concern. However, we're confident we have designed a disposal system with barriers and covers that will control the eventual release of these long-lived contaminants. The preliminary calculations done as part of the performance assessment required by DOE for LLW management facilities estimate that the dose from those radionuclides over a person's lifetime is about 2.5 percent of that received annually from natural sources. The nitrate concentrations are less than those that enter the Columbia River from agricultural activities east of the Hanford Site. DOE is working to develop pretreatment technology to reduce or remove these contaminants.

16. COMMENT:

You determined that grout may be categorized as Class A waste. What category is the commercial low-level waste that U.S. Ecology disposes of at its disposal site at Hanford? (Pasco Meeting)

RESPONSE:

Low-level radioactive wastes in the commercial industry are classified A, B, C, and Greater Than Class C. Class A wastes are the least radioactive of all low-level radioactive wastes generated by private industry (that is, by hospitals, nuclear power plants, and research reactors at universities). Class B and C wastes are more radioactive than A, but still fall under the title of low-level radioactive waste. U.S. Ecology disposes of Class A, B, and C wastes from these sources on a piece of land that is leased from the state of Washington. DOE disposes of low-level radioactive waste in a manner similar to the one used by the NRC, however, DOE imposes additional requirements that the NRC does not.

17. COMMENT:

What is the volume and type (class) of waste to be grouted? (Pasco Meeting)

RESPONSE:

Currently, about 44 million gallons of double-shell tank waste is anticipated to be grouted. The volume of single-shell tank (SST) waste is currently in excess of 200 million gallons. DOE is looking at pretreatment options to reduce the volume of these wastes. This waste is classified low-level radioactive and hazardous mixed waste (also known as "mixed waste").

18. COMMENT:

If the high-level waste will be vitrified, what happens to the low-level waste? (Seattle Meeting)

RESPONSE:

Plans are to solidify the liquid fraction of low-level radioactive waste (LLW) as grout. (Liquid waste designated as "listed," meaning it contains chemicals such as ammonia, acetone and other commercial chemicals, can not be disposed in grout.) Low-level mixed waste or incidental waste will be treated and disposed of using grout. Monitoring wells surround a LLW disposal facility to detect possible leakage from the waste packages. Similarly, any liquid collected from the sumps at the base of the grout vaults will be monitored not only for radioactive constituents, but also for hazardous or chemical components.

19. COMMENT:

How long is grout supposed to keep? (Seattle Meeting)

RESPONSE:

Grout is expected to maintain its form or structure for at least 10,000 years. A performance assessment has been prepared which assesses the long term behavior of the disposal system under a variety of conditions. Releases of contaminants from the disposal system are not expected for several thousand years, and then only gradually.

20. COMMENT:

What is the volume of waste to be grouted?

RESPONSE:

The volume of waste to be grouted depends on the pretreatment option selected and the efficiency of that option. At this time, 44 million gallons of double-shell tank waste is expected to be processed for grout disposal.

21. COMMENT:

So, what sort of standards would you have for grout? How low would low-level waste be? (Seattle Meeting)

RESPONSE:

Grout will have to meet the requirements of the permit for Dangerous Waste to be issued by Ecology and the requirements for low-level radioactive waste in DOE Order 5820.2A. Grout also will need to meet the environmental protection requirements of DOE Orders 5400.1 and 5400.5.

22. COMMENT:

What exactly constitutes low-level waste? My understanding is that low-level waste means it doesn't have plutonium in it. Other than that, it can have uranium and lots of other elements.

RESPONSE:

For DOE wastes, low-level waste (LLW) can be a confusing category. The LLW category covers waste that is radioactive, but excludes high-level waste, transuranic waste, spent nuclear fuel, radioactive and hazardous mixed waste, or byproduct material. LLW can have small concentrations of plutonium and other transuranic materials (those elements with atomic numbers greater than 92) as long as the concentrations do not exceed a concentration of 100 nCi/g.

23. COMMENT:

Are there reasonable ways to vent the grout vaults? (Pasco Meeting)

RESPONSE:

Powered exhauster units will be used for containment and to remove heat while the grout is curing. Once the vaults are filled and capped, the exhausters will be disconnected.

24. COMMENT:

How much radioactivity is going into the grout vaults? (Pasco Meeting)

RESPONSE:

The estimates vary from about 5,000 curies to 1,500,000 curies per vault depending on whether the waste is pretreated.

25. COMMENT:

Would the grout facility dispose of waste from both single-shell tanks (SSTs) and double-shell tanks (DSTs)? (Pasco Meeting)

RESPONSE:

Yes, grout will dispose of wastes from both SSTs and DSTs.

26. COMMENT:

There are concerns about hazardous materials in the water table. (Olympia Meeting)

RESPONSE:

Groundwater that is contaminated with hazardous materials is a concern to DOE-RL, EPA, and Ecology. We are all focusing on the areas on the Hanford Site that are most contaminated first. These areas will have the groundwater flow direction and flow rate and the extent of contamination determined. One example of remediation is the expedited response action (ERA) in the 200-West Area where we've removed more than 8,000 pounds of carbon tetrachloride from the groundwater. Another groundwater-related ERA that is scheduled to be completed in the next several years is N Springs. The groundwater protection strategy at Hanford involves both near-term and long-term action. In the near term, we plan to eliminate liquid waste discharges to the ground. The long-term strategy is to remove, treat, or stabilize waste released to the ground.

The Tri-Party Agreement as well as federal and state regulations require that uncontaminated groundwater be protected and that contaminated groundwater be cleaned up to reduce the risk to human health and the environment.

27. COMMENT:

How will you completely stop the leakers? (Olympia Meeting)

RESPONSE:

The only tanks that are known to leak are some of the single-shell tanks. Removal of the free liquid greatly reduces the potential of a leak. Eventually the tanks will be completely emptied and the waste disposed of.

28. COMMENT:

When did the 67 tanks begin leaking? (Olympia Meeting)

RESPONSE:

The first leaks were discovered in the early 1960s.

29. COMMENT:

The tank leakage figure of 750,000 gallons is not current. DOE's latest estimates indicate that as much as 1 million gallons have leaked. (Ecology)

RESPONSE:

The leakage figure was corrected to 1 million gallons in the January draft of the SSP.

30. COMMENT:

Have any of the double-wall tanks leaked? (Pasco Meeting)

RESPONSE:

None of the double-wall tanks has leaked.

31. COMMENT:

Has anybody looked at the possible situation that one of the tanks developed a major crack and leaked its contents to the soil column? (Pasco Meeting)

RESPONSE:

Yes, these are the kind of accident scenarios that are addressed in the safety analysis report. After pumping of the liquids from the SSTs into the DSTs is completed, this type of accident could only happen in the DSTs. Because the DSTs have the extra barrier between the waste and the soil, and because no DSTs have leaked, the chance of this happening is probably very small.

32. COMMENT:

How do you determine if a tank is leaking? (Seattle Meeting)

RESPONSE:

In the early 1960s, monitoring wells were drilled around the tanks. Monitoring devices in the wells check for changes in radiation levels in the ground near the tanks. If a reading between two tanks shows increased radiation levels, and we couldn't be certain which tank the reading was coming from, both are listed as potential leakers. In the case of double-shell tanks (DST), we take photographs of the space between the two walls to check for the formation of crystals that would be present if the tank was leaking. DSTs are also equipped with leak detection pits. So far none of the DSTs have leaked.

33. COMMENT:

Do the tanks containing the ferrocyanide waste present the greatest danger to the Columbia River? (Seattle Meeting)

RESPONSE:

No. Tests on ferrocyanide wastes have shown the concentrations of ferrocyanide to be so low that a reaction could not be induced in the laboratory. Researchers at PNL now believe that the risk from the tanks containing ferrocyanide wastes is much lower than was anticipated. At this time, we have no evidence that any tank waste has gotten into the aquifer, let alone reached the river.

34. COMMENT:

There are 67 leakers. Is there a plan addressing the tanks in addition to pumping off the rest of the liquids? (Portland Meeting)

RESPONSE:

Current negotiations between DOE, the U.S. Environmental Protection Agency, and Ecology are developing potential strategies for disposition of the waste. Strategies include stabilizing the wastes by various methods of retrieval, treatment and stabilization (e.g., vitrification and/or grouting). The final decision will be forthcoming after completion of negotiations and an environmental impact statement, both of which will include additional public involvement.

35. COMMENT:

With the tank leaks, what is the rate of migration to the river? (Pasco Meeting)

RESPONSE:

The groundwater flow rate varies across the Hanford Site. However, no contamination from the tanks has been discovered in the groundwater from monitoring the wells around the tanks. A soil layer with low permeability reduces the chance that leakage from tanks would reach the groundwater.

36. COMMENT:

The tanks that are leakers are an outrageous problem that demands action. You need to go ahead and try getting something going. In some of the tanks the detection of less than 2,000 gallons of leak seems to be impossible. That is the kind of outrageous thing that makes the public wonder how the scientists can be both competent and incompetent at the same time. Any five-year-old can detect a 2,000-gallon leak. (Portland Meeting)

RESPONSE:

In addition to pumping the free liquids from the leaking single-shell tanks (no double-shell tanks leak), Westinghouse Hanford Company is installing new liquid level detection instruments. Using current technology, instruments to detect leaks in tanks this size would be very expensive. DOE has determined that drying the tanks is more important, primarily because detecting a leak does not always mean that something can be done to mitigate the leak.

37. COMMENT:

How are we coming with characterization of the waste in the tanks? (Pasco Meeting)

RESPONSE:

Characterization of the waste in the tanks is proceeding although not as quickly as we had hoped. Several things that are slowing the process include lack of analytical capabilities for the more highly radioactive samples, unexpected problems in sampling the tanks, and regulations that do not clearly address some of the problems associated with the characterization work.

38. COMMENT:

The statement "We are constructing the new Waste Sampling and Characterization Facility (WSCF) to handle low-level radioactive and hazardous waste samples" is somewhat misleading. WSCF, as currently defined, is a quality assurance/quality control laboratory, not a full-scale onsite laboratory as originally contemplated in the Tri-Party Agreement. It should be noted that DOE failed to meet the defined milestone for construction of the facility. (Ecology)

RESPONSE:

The January draft of the SSP clarifies the point that WSCF is intended for quality assurance/quality control, not for the processing of large numbers of samples. In addition, the January draft has been revised to state there are plans to increase the capabilities to analyze highly radioactive samples in the 222-S and the 325 laboratories. Currently, we have four contracts with commercial laboratories. DOE proposed redefining the WSCF construction milestone by contracting with a private laboratory, but Ecology and EPA denied the request. That decision was appealed through the dispute resolution process.

39. COMMENT:

The GAO report says they need to stick to their high-end level of at least 14 samples per tank and so those kind of things just create problem on problem. (Portland Meeting)

RESPONSE:

We believe that 14 samples per tank is an unnecessarily high number of samples. While we agree that 14 samples should give us a better understanding of what's in the waste and how the concentrations change with depth in and across the tank, the cost is prohibitive and there isn't sufficient laboratory capacity to analyze that many samples. Two samples should give us enough information to determine what's in the waste and give us an idea how it's distributed in the tank.

40. COMMENT:

Why is tank characterization proceeding so slowly? Is the paper work a prime reason for the slow progress? (Portland Meeting)

RESPONSE:

Characterization is a very involved process. The administrative requirements are lengthy necessary to assure worker and environmental safety, and the quality of the samples. Requirements to gain access to the tanks are established through the federal and state legislative process. Prior to sampling any tank, certain review processes must be completed which includes a full safety assessment (SA) and an environmental assessment (EA). These are lengthy but necessary safety measures. The process of getting authorization, taking samples, and doing the analytical work, are all under review to look for ways to streamline and accelerate tank characterization.

41. COMMENT:

There seems to be the general consensus that you do not know what is in these tanks. And what I assume is that there is not a whole lot of instrumentation out there to determine it. But there is a lot of things available for this. (Portland Meeting)

RESPONSE:

We have a good idea what's in the tank waste from past analyses and records of what went into the tanks. However, we don't know what changes in waste composition have occurred over time and with the organic chemicals that may be in the tanks. Some of the organic compounds have broken down since they were put in the tanks, and the waste composition has probably changed. Cleanup regulations require that we know exactly what is in the tanks before we dispose of it.

42. COMMENT:

How do you determine what's in the tanks? (Pasco Meeting)

RESPONSE:

We have data from two sources: historical records and results from core sample analyses. The historical information comes from knowledge of the specific chemical processing. The core samples are analyzed in the laboratory for all possible materials of concern that are believed to be in a tank.

43. COMMENT:

How does characterization relate to pretreatment? Does a certain percent of the waste have to be characterized before it can be pretreated? (Seattle Meeting)

RESPONSE:

Characterization is process of determining what chemical and radioactive constituents make up the waste stream. Pretreatment is the process of actually separating a waste stream into different fractions. For example, pretreating waste to separate low-level radioactive waste from high-level waste. Waste may need to be characterized before it's pretreated, but this isn't always necessary. No set percent of the waste has to be characterized before it can be pretreated.

44. COMMENT:

If these waste tanks are being mischaracterized on purpose, that's a pretty big thing. I'm sure the numbers you're sharing with me are your most attractive looking numbers. That's the essence of the coverup. (Seattle Meeting)

RESPONSE:

This statement is not correct. The intentional mischaracterization of waste would have no benefit to DOE nor its contractors. To manufacture characterization data that suggest that the problems are less severe than they are would serve no logical purpose. If an individual has reason to believe that waste is being mischaracterized, they should inform Ecology, EPA, and the General Accounting Office. Accurate characterization is essential in treating, storing, or disposing of tank waste.

45. COMMENT:

Besides looking and sampling and checking pits in certain parts of tanks for red oil why not look at the ingredients that have gone into the tanks? (card)

RESPONSE:

We have looked at the waste that went into the tanks and materials that may have been part of the process and accompanied the waste into the tanks. Red oil is an explosive reaction product of tributylphosphate, nitric acid, and heavy metal nitrates. Red oil can only form in an acidic environment and at temperatures greater than 300° F. By knowing this information, PNL scientists have determined that the risk from red oil in the tanks is much less than was originally anticipated.

46. COMMENT:

How are you coming with the current waste sample characterization? I would imagine that the pretreatment chemistry process is already perfected. You must have millions of analytical holes from samples from all the tanks that are highly variable. (Pasco Meeting)

RESPONSE:

One of the major challenges in preparing for any kind of pretreatment option is characterization of the tank waste. Characterization is key to resolving the safety issues, defining the pretreatment process, and planning for

disposal. Laboratory capacity is now on the upswing. Capacity is increasing with the expansion of 222-S Laboratory and the PNL's 325 Laboratory. The next step will be to add more core sample trucks and more crews in the next year or two to keep the laboratories filled with samples.

47. COMMENT:

The statement "At this time all liquids that could be removed by way of in-tank transfer pumping have been transferred to the newer double-shell tanks" is not true. Transfer pumping is still being accomplished. (Ecology)

RESPONSE:

A change was made in the January draft of the SSP to indicate that the in-tank transfer pumping from single-shell to double-shell tanks was continuing. The free liquid from 44 SSTs still needs to be pumped to DSTs.

48. COMMENT:

There is concern about liquid still being pumped out of tanks.

What will you do with the remaining liquid in the tanks? (Olympia Meeting)

RESPONSE:

Any leaking single-shelled tank will first have all the liquids pumped from them into a double-shelled tank. (No double-shelled tanks have leaked.) Once the free liquid has been pumped out of a tank, no liquid or waste may be added to that tank. The remaining waste will be mostly solid in form and will not be as likely to leak from the tank as the liquid component. This liquid from the double-shelled tank(s) will be evaporated in the 242-A Evaporator.

49. COMMENT:

When you pump out the liquids in the single-shell tanks, where does it go? (Portland Meeting)

Where does the radioactive liquid go when you pump it out? (Seattle Meeting)

RESPONSE:

We pump the free liquid from the single-shell tanks into the double-shell tanks.

50. COMMENT:

Is the immediate goal to turn this liquid into solid material that will leach out? (Seattle Meeting)

RESPONSE:

The immediate goal is to get the free liquid out of single-shell tanks and into double-shell tanks.

51. COMMENT:

Describe the air monitoring of tank contents. (Olympia Meeting)

RESPONSE:

There is vapor and radiation monitoring in the tank farms. In addition, some SSTs have passive ventilation systems and no monitoring of the air released to the environment. Other SSTs have active ventilation systems that monitor pressure and radioactivity. Some tanks have special monitoring for such things as organic vapors and hydrogen. There are specific safety issues with these tanks, and, as a result, the tanks have special monitoring equipment.

52. COMMENT:

Is there telemetry or monitoring for the tanks? (Pasco Meeting)

RESPONSE:

Yes, both the single- and double-shell tanks contain thermocouple trees to measure the vertical temperature profile of the waste in that tank.

In addition, the tanks contain liquid level indicators, which work on a conductivity principal. Conductivity is a measure of the electrical current because of the salts in the waste.

Some of the tanks contain a fiberglass pipe in which a neutron probe is placed to measure the moisture content and interstitial liquid of the waste.

There are also pressure and radiation detection monitors on the air systems. Some information is sent directly to an information room where it is analyzed by computers and trends for a particular tank can be displayed.

The tanks do have monitoring systems; the systems are being upgraded. Most of the improved instrumentation is scheduled to be installed in the next several years. This instrumentation includes improved temperature monitoring devices (thermocouples) and improved liquid level indicators.

53. COMMENT:

How long do the cameras last in the tanks? (Pasco Meeting)

RESPONSE:

Some of the cameras are radiation "hardened" and last a long time. The cameras have hardened glass lenses that won't "fog" in the higher radiation areas inside the tanks. The cameras also have hardened electronics that won't be destroyed by the radiation field inside the tank. The video camera now in Tank 101-SY has these characteristics. It cost \$50,000 and is expected to last about two years.

54. COMMENT:

As you go down through the liquid toward the sludge, does it get hotter?
(Pasco Meeting)

RESPONSE:

Yes, but the temperatures vary from tank to tank. The wastes in the hottest tanks are cooled. After they are cooled, the temperatures in the wastes range from 60° F to 160° F. Variation in the temperatures from top to the bottom of the waste is generally 20 to 30 degrees for the hotter tanks and closer to 5 to 10 degrees for the cooler tanks.

55. COMMENT:

Sonja Anderson claims radioactive thorium is coming out of tanks. Is this true? Do you have instruments to test for this presently installed? (card)

RESPONSE:

Anytime that you have natural uranium, thorium will be present. Thorium is a decay product of uranium. The concentrations of thorium (or uranium) in the tanks or coming out of the tanks is not easily measured. Levels measured do not pose a health risk to the workers, the public, or the environment.

56. COMMENT:

What will be done with the salt cake? (Pasco Meeting)

There is concern about what is being done with the crystal after removing liquid from tanks. (Olympia Meeting)

Where will it be disposed of? (Pasco Meeting)

RESPONSE:

The salt cake will be retrieved and processed for disposal. The high-level fraction will be vitrified (that is, made into "glass logs"), stored, and eventually sent to the high-level waste repository. The low-level mixed fraction is destined to go to the Grout Treatment Facility (GTF) when Ecology issues a permit to operate GTF.

57. COMMENT:

Is salt cake homogenous? (Pasco Meeting)

RESPONSE:

No. The salt cake is crystalline and stratified. This is to be expected because waste was added to the tanks during different production "campaigns" and the consistency is different.

58. COMMENT:

Is the intention to eventually take care of all the tanks and kind of decommission and clean them up? (Pasco Meeting)

RESPONSE:

Currently, we plan to retrieve the waste out of single-shell tanks using the best available technology. The current strategy is to dispose of the tanks in place including any residual waste remaining after retrieval is complete. This strategy is being discussed with Ecology and EPA.

59. COMMENT:

If you could dry the cake up even more, would you have to do anything else besides cover it up? (Pasco Meeting)

RESPONSE:

Simply drying the salt cake was an option that we looked at early in the 1980s during the EIS process. The idea was discarded because it would not meet the long-term requirements for the performance assessment. Even if you dry the cake out, its inventory of radionuclides remains. As such, a post-closure plan will have to be developed that takes this into consideration and satisfies any conditions required by Ecology.

60. COMMENT:

Is the cake fairly homogenous or stratified? (Pasco Meeting)

RESPONSE:

Generally, the saltcake is stratified because waste is put into tanks in layers as space is available in that tank.

61. COMMENT:

Describe the vitrification process. (Olympia Meeting)

RESPONSE:

Vitrification is a process where the HLW is mixed with ground glass, also known as glass frit. The mixture of the waste and frit is heated and the molten solution is poured into a steel canister. The canister is allowed to cool and the glass-waste mixture inside forms what can be best described as a "glass log." These canisters will eventually be shipped to the national high-level waste repository.

62. COMMENT:

The \$1 billion figure outlined for the Hanford Waste Vitrification Plant (HWVP) is inaccurate. Current program estimates indicated an approximate \$1.7 billion program. (Ecology)

RESPONSE:

The January draft was changed to reflect that the cost of the HWVP is currently estimated at \$1.7 billion.

63. COMMENT:

The arbitrary assignment of a fee for accepting glass canisters of HLW for disposal to the repository is unfounded. It leads to unrealistic estimates of disposal costs and promotes the undesirable waste management practice of dilution instead of concentration of wastes. (Yakima Indian Nation - Cook)

RESPONSE:

The management practice of diluting instead of concentrating wastes is not upheld by DOE, Ecology, or the EPA. DOE Orders 5400.1 and DOE 5820.2A require that waste volumes be minimized, not increased. Also, Ecology and EPA require waste minimization as part of a program to comply with the state and federal hazardous waste regulations. Assigning a fee is the normal waste management and disposal practice in this country. We are working with the repository program to minimize the costs through packaging and other initiatives.

64. COMMENT:

I'd like to know what is being done with vitrification process. Has there been much progress since 1991? (Olympia Meeting)

RESPONSE:

Tank safety issues and the increased volume of tank waste to be vitrified has raised questions about the size of the HWVP and about pretreatment of the waste before it is vitrified.

DOE is reviewing the vitrification process, including some lessons learned from the problems associated with the vitrification plant at the Savannah River Site, and will present options they feel are improvements to the current design. Evaluating the options may delay vitrification. A technical strategy has been developed to answer questions and resolve concerns about the effectiveness of the process. The strategy is being discussed with Ecology and EPA as part of the Tri-Party Agreement renegotiations.

65. COMMENT:

How many storage pools are there on Hanford for high-level production wastes? (Olympia Meeting)

RESPONSE:

Storage pools contain irradiated fuel (fuel that has been in a reactor); tanks store production wastes. Irradiated, or spent fuel is stored in the K Area Basins (K East and K West). About 2,300 tons of irradiated fuel will be stored in these basins until a final decision is made on its disposal. In addition, about 1,900 cesium and strontium capsules are stored in the Waste

Encapsulation and Storage Facility (WESF). Production wastes are stored in 149 single-shell tanks and 28 double-shell tanks.

66. COMMENT:

When you get around to getting rid of tank waste, will most of it be vitrified? (Pasco Meeting)

RESPONSE:

We're looking at a couple of options right now. Simply, what will happen is that the waste will go into a pretreatment plant where it will be split into a high-level waste (HLW) fraction and a low-level (and mixed) waste (MW) fraction. The high-level fraction will be vitrified and the low-level portion will be put into grout. The amount of waste going to HLW and to MW will be determined by the process which is selected for the pretreatment facility.

67. COMMENT:

There's been quite a stir in the news about the Vitrification Plant. How important is it to the cleanup? Will cleanup come to a halt without it? (Seattle Meeting)

RESPONSE:

HWVP is called the cornerstone of the Tri-Party Agreement because it deals with the high-level liquid waste in double-shell tanks. We will vitrify the high-level portion of tank waste. However, we need to pretreat the waste first. The pretreatment process must be selected so we can define the waste to be vitrified and the HWVP can be built to the proper size. Without the HWVP, cleanup will continue; we can move ahead on decontamination and decommissioning of the eight surplus reactors, the reprocessing facilities, and more than 300 other facilities. We can also continue to clean up soil contamination and address contaminated groundwater issues.

68. COMMENT:

Is it correct that the Vitrification Plant was designed to process waste from only the double-shell tanks and that the waste in the single-shell tanks is going to be left in place? (Seattle Meeting)

RESPONSE:

The HWVP was scoped and sized to handle only the double-shell (DST) waste volume. We are pumping the liquid from all the single-shell tanks (SST) into DSTs. In December 1991, the Secretary of Energy decided that the contents of the SSTs would be retrieved and vitrified like the contents of the DSTs. This increased the volume of waste to be processed by four times, which caused DOE to rethink the HWVP design.

69. COMMENT:

Your original plan was to vitrify the double-shell tanks but not that from the single-shell tanks. What was the original plan for single-shell tank waste? (Seattle Meeting)

RESPONSE:

The original 1988 record of decision on the defense waste EIS for the Site stated that not enough technical information was available to make a decision on SST waste. Therefore, the decision on whether to retrieve the waste, leave it in place, or treat it in place, would be delayed. The Secretary evaluated the information and determined in 1991 that the SST waste would be retrieved and processed the same way as the DST waste. This effectively moved decisions on SST waste forward by 10 years. By combining the volumes of waste from the SSTs and the DSTs, planning for a single plant (HWVP) could proceed.

70. COMMENT:

There are other ways to stabilize the waste in the tanks. And one of the ways to do that is to build a glass furnace in a pit right next to each pair of tanks and then to vitrify the waste right there. No separations, no nothing, no pretreatment. Everything that comes, including the water, will go right into the furnace. This is known technology. We have been using this since 1948 and 1950 and building new furnaces for melting glass. The point is that our processes using electrodes, electric melting, had been producing 16 million tons of glass every year all over the world. It is well-established technology, so I propose to the Department of Energy at Richland that they put one of our 30-ton-per-day furnaces into a pit next to a pair of tanks and you should be able to, at 4,000 tons per tank, 8,000 tons, and divide by 30; you have it in less than a year. The idea would be to have 90 of these furnaces, each one built to last for 6 years, but you are only going to use it for 1 year and you have dealt with all the Hanford waste as fast as you can put the tanks in place plus 260 days. One argument brought against me when I proposed this was there was no agreement by Congress or anybody to leave waste at Hanford. The point is that it is being left at Hanford. Yucca Mountain, forget it.

Everything in the tanks can be made into stable glass at far lower cost. We have estimated \$100 per ton in ordinary work. We have counted \$500 a ton radioactive. (Seattle Meeting)

RESPONSE:

(No response needed.)

71. COMMENT:

Why are you constructing storage buildings while HWVP construction is being debated? (Pasco Meeting)

RESPONSE:

Facilities will be needed for storing wastes and materials associated with the cleanup. These facilities may need to be permitted depending on what waste will be stored in the building. High-level waste that's been processed into glass logs will need to be stored until the geological repository is built. Additional temporary storage capacity may be needed for hazardous wastes and mixed wastes that result from cleanup activities.

72. COMMENT:

Has vitrification been proven? I understand it's not working in France. (Portland Meeting)

RESPONSE:

Vitrification is a proven technology that has many applications. Some of the applications are not initially successful because our knowledge of the components in the waste stream isn't as complete as we'd like it to be. The Hanford Site has learned several lessons from problems that the French have had and problems that DOE has had at the Savannah River Site.

73. COMMENT:

There is a discrepancy between the Site-Specific Plan and a report in the Tri-City Herald about when construction was supposed to start on the Hanford Waste Vitrification Plant. The Site-Specific Plan says fiscal year 1992 and the Tri-City Herald said March 1993, which is halfway through the next fiscal year. (Pasco Meeting)

RESPONSE:

Site preparation for HWVP began in April 1992. That may be where the confusion lies. DOE, Ecology, and EPA agreed to delay construction until September 30, 1993. This will give all three parties time to review the new technical strategy and develop a position.

74. COMMENT:

Describe how you decide if and what type of problems we have with ferrocyanide and hydrogen. How do you assess the tank contents? (Olympia Meeting)

RESPONSE:

In sufficient concentrations, hydrogen is explosive. To protect worker health and safety and minimize potential contamination and exposure of the public and environment, concentrations of hydrogen must be at low enough levels to safely allow work in the area of tanks that contain waste with a history of producing hydrogen. Instruments are used that measure the concentration of hydrogen in a tank, and controls are in place to prevent the ignition of hydrogen.

Ferrocyanide was initially thought to be a problem in several waste tanks because of the potential for an explosive reaction. However, PNL scientists have discovered that the potential is not present because the waste does not

contain enough ferrocyanide to react and the temperature is too low and the waste is too moist to support a spontaneous reaction.

Without sampling, the composition of wastes in the tank are known from records that were kept during operations. To completely characterize the waste in a tank requires sampling and analysis of the waste. This has been successfully done on Tank 101-SY by coring through the waste in the tank, then extracting and analyzing the core.

75. COMMENT:

What happens if the tank does blow up? Is that possible? (Portland Meeting)

Is the public at risk from exploding tanks? (Pasco Meeting)

People have expressed fear at the possibility that a tank at Hanford could explode. They're trying to make sure that DOE understands that there is a genuine fear by members of the public. (Olympia Meeting)

RESPONSE:

It is very unlikely that a tank will blow up. While some tanks contain chemicals that could create an explosive atmosphere, precautions are taken to ensure that these tanks are vented to remove the explosive gases or compounds.

DOE is very aware that some people are afraid of living close to the Hanford Site, but the public should also be able to understand that the families of employees of DOE and its contractors live closer to the Site than the residents of Seattle, Portland, or Olympia. If a tank exploding and contaminating individuals and property off the Hanford Site were truly a danger, these people would probably take steps to relocate.

During the early investigation of tank waste safety issues, we determined that it may be possible for certain tanks to explode under specific circumstances. Studies were undertaken to test the assumptions made in these early investigations, and results of these studies indicate that the concerns were not as serious as originally thought.

Nevertheless, DOE has in-depth emergency response procedures and conducts frequent emergency exercises with the States of Washington and Oregon and local municipal governments.

76. COMMENT:

The prevailing winds? What is in the tank, what is the chemical in the tank? Is it petroleum? (Portland Meeting)

RESPONSE:

The prevailing wind at the Site is from the southwest to the northeast. The tanks that we are speaking of are the 177 tanks that contain primarily radioactive waste from the reprocessing of nuclear fuel. We are not referring to petroleum tanks.

77. COMMENT:

Are you on top of the ferrocyanide reactions problem? (Pasco Meeting)

RESPONSE:

Yes, we now know more about the ferrocyanide problem than we did earlier. We have researched the possible reactions of ferrocyanide, a chemical contained in tank waste, and now believe that the risk from the ferrocyanide tanks is much smaller than was originally anticipated. In addition, we have sampled the tanks to confirm the concentrations of ferrocyanide in them.

We are in the process of removing 20 of the 24 tanks from the "Watch List" because the amount of ferrocyanide combined with the low temperatures and high moisture content of the waste will not support an explosive reaction.

78. COMMENT:

Would the things they eventually, through residual decay activity and heating, dry themselves out if you do not periodically add a little water? (Pasco Meeting)

RESPONSE:

A certain amount of moisture will be locked into the crystals and will remain there. We are finding that the two tanks we sampled have a range of between 25 and 60 percent water in the ferrocyanide portion of the sludge.

79. COMMENT:

About a year and a half ago we ran across some photographs from about 1969 that showed tar leaking into 19 tanks because of the acidic oxygen interface at the liquid level with the tank wall. Has there been any investigation of tar leaking into the tanks? Is that flammable? (Seattle Meeting)

RESPONSE:

When the single-shell tanks (SST) were built, a layer of a tar-like substance was placed between the steel liner and the concrete to serve as a moisture barrier. The barrier would prevent condensation and corrosion of the exterior surface of the steel liner. Evidently, in the photographed tank, the liner and/or weld bead corroded allowing the tar through. A report was written after the tar rings were investigated. The material isn't flammable at the temperatures maintained in the tank. The tar-like substance is not expected to pose any problem with the vitrification process.

80. COMMENT:

Do hydrogen and ferrocyanide problems exist in the same tanks? (Olympia Meeting)

RESPONSE:

No, the hydrogen and ferrocyanide concerns are in different tanks.

81. COMMENT:

What is the relationship between ferrocyanide and hydrogen problems and safety issues? (Olympia Meeting)

RESPONSE:

There is no relationship between the ferrocyanide and hydrogen problems. However, both ferrocyanide and hydrogen in tanks constituted unresolved safety questions that had to be answered before work in the tanks could progress.

82. COMMENT:

These processes still sound experimental. Have any emergency actions been taken? Is an explosion still possible? (Portland Meeting)

RESPONSE:

The processes are not experimental. Historical records have been kept that describe the processes very well. We are now determining what is in the waste in each tank. Because these wastes are radioactive, making this determination is not simple.

Emergency precautions have been taken. Detailed emergency preparedness procedures have been prepared by DOE and the States of Washington and Oregon, and practice exercises have been held to ensure that everyone is familiar with the procedures and knows what to do. In addition, restrictions and operating controls have been placed on tank operations in accordance with technical information gained from safety studies.

The possibility of an explosion is very unlikely.

83. COMMENT:

Los Alamos disagrees about the probability of a tank explosion. (Portland Meeting)

RESPONSE:

Based on our earlier technical knowledge, we made some assumptions that showed a higher probability of a tank explosion than now expected. We have refined our assumptions based on information that we've collected from the tanks since those first assumptions were made. We believe the Los Alamos work uses very conservative assumptions.

84. COMMENT:

Won't destroying the organics by heating them cause the hydrogen and organics to burn? (Portland Meeting)

RESPONSE:

The heating approach is used to drive off volatile organics as vapors. Temperatures are not high enough for combustion. Hydrogen will only burn if there is enough of it and if there is an ignition source (that is, a spark).

85. COMMENT:

Are the conditions getting worse in any tanks? (Portland Meeting)

RESPONSE:

No, the conditions are improving in the tanks because of the attention we have given waste tank safety in the past year. The perceived ferrocyanide problem was found not to be a problem, and workers have developed methods to work safely in the tanks that contain hydrogen.

86. COMMENT:

We are concerned about delays in interim stabilization of single-shell tank wastes and how these delays may affect a potential criticality. We need more information on the plutonium content in the tanks and the potential for a criticality incident. The Five-Year Plan should outline what the criticality issues are. (ODOE)

RESPONSE:

Interim stabilization of the single-shell tanks involves removing the liquid from them. This program was delayed until technical information could be gathered on safety issues and moisture content of the waste. Ecology agreed that we should investigate potential technical issues. We are now proceeding with the interim SST stabilization.

A better determination of how much plutonium may be in the tanks will be available when the characterization of each tank is complete. From the characterization done to this point, plutonium concentrations compare well to past records.

The Five-Year Plan is designed to provide information related to the environmental restoration and waste management (cleanup) activities at DOE sites. While criticality issues may be mentioned, it is not the purpose of the Plan to describe the safety issues at a site.

87. COMMENT:

Activity data sheets associated with single-shell tank assessment and characterization experienced significant cuts in the president's FY 1993 budget submission. How will you address the funding shortfall in FY 1993, and in the FY 1994 ADS sheets? What are the technical/schedule impacts on the funding shortfall? (Ecology)

RESPONSE:

All budgets are subject to adjustments before and during the fiscal year for which the funds have been appropriated. Funding shortfalls in FY 1993 will most likely extend deadlines for different activities within a program.

88. COMMENT:

There is very little funding for technology development. This is a big problem because none of the cleanup technologies is proven at Hanford. (Portland Meeting)

RESPONSE:

We agree. Increased funding is being requested for technology development as the Site progresses from the investigation stage toward actual cleanup. The actual funding appropriations are made by Congress based on priorities at a national level. The technologies that will be used can be demonstrated through cleanup either at Hanford or at another site.

89. COMMENT:

The public does not see enough budget information. As a result, the public does not understand why funding is reduced in areas like tank safety and how the Hanford Site deals with the shortfalls. (Olympia Meeting)

RESPONSE:

This comment was forwarded to DOE-HQ for response.

90. COMMENT:

What is the rationale for burying the tanks? (Pasco Meeting)

RESPONSE:

The rationale for burying the tanks is to provide additional shielding, which results in lower doses to the workers. Generally, about 7 feet of soil cover the tank. In fact, the newer DSTs, when filled, caused a lower dose of a radiation to the worker than living at 2,000 to 3,000 feet of elevation.

91. COMMENT:

What kind of exposure do the workers get when removing a core sample from the tank? (Pasco Meeting)

RESPONSE:

The workers receive very little radiation during core sampling of a tank. They bring the sample out directly into a shielded "closet." The dose is in the neighborhood of 20 to 25 mrem, which is about 12 percent of what a person receives each year from natural background.

92. COMMENT:

What is the shield closet made out of? (Pasco Meeting)

RESPONSE:

The shielded closet is made of stainless steel. It may contain some lead for additional shielding.

93. COMMENT:

I wonder if you can really rely on workers to follow procedures as it relates to tank safety...worker safety around venting tanks. (Seattle Meeting)

What is the possibility of inadequate procedures causing tank safety problems? (Olympia Meeting)

RESPONSE:

We remain concerned about the entire issue of safety; especially about the level of training and management oversight at tank farms. We recognize that we have to do a better job of elevating the importance of understanding and following, to the letter, all safety and operating procedures. We will continue to communicate to ALL DOE and contractor personnel the fact that we have no greater priority than tank safety. We were pleased recently to see that WHC, the Site's prime contractor, announced that safety was now a condition for employment and that violating safety procedures would be grounds for termination.

When we took a second look at our training programs, we found that there were things we could do better. So we stopped all but the essential work at tank farms and put all employees (management and rank-and-file) through an exhaustive retraining program to reinforce the absolute importance of safety.

94. COMMENT:

I am concerned about radioactive contamination of fish in the Columbia River. (Seattle Meeting)

RESPONSE:

PNL conducts the effluent monitoring and environmental surveillance for the Hanford Site. Part of that program is the monitoring of the Columbia River, including fish collected from the river. While some fish in the river have detectable concentrations of radionuclides, it is difficult to distinguish between the contamination from fallout and what may come from Hanford. There appears to be no difference between the fish collected from above Priest Rapids Dam (upstream from the Hanford Site) and those collected downstream from the Hanford Site. Fish species such as salmon do not eat while moving toward spawning grounds, reducing their chance to become contaminated.

95. COMMENT:

What's the difference between retrieval and in-tank characterization.
(Seattle Meeting)

RESPONSE:

In-tank characterization only identifies what materials are in the waste. Retrieval deals with removal of the waste and/or tank. Retrieval is done after the characterization of that tank's waste is complete.

96. COMMENT:

The Plan should state when the leave-or-retrieve decision will be made.
(ODOE)

RESPONSE:

The leave-or-retrieve decision will be made after all the alternatives are evaluated as part of the NEPA process. The public will have an opportunity to provide comments on the preferred alternative before the decision is made. There is no scheduled date at this time for this decision.

97. COMMENT:

The statement regarding a formalized position on retrieving waste from single-shell tanks is misleading. This is still in the planning stage; no final commitment has been made. (Ecology)

RESPONSE:

In December 1991, Secretary Watkins determined that sufficient information was available to support removing waste from the single-shell tanks and vitrifying it for disposal. This position has been incorporated into the new technical strategy now being reviewed by Ecology and EPA. The actual decision would not be made until the NEPA Record of Decision is issued.

98. COMMENT:

Is waste being removed and treated now? (Pasco Meeting)

RESPONSE:

Free liquid is being removed from the single-shell tanks (SSTs) to the double-shell tanks (DSTs) to stabilize the SSTs. Samples are being removed from SSTs and DSTs for analysis of the waste components. DST volume is being reduced for eventual processing in the evaporator.

99. COMMENT:

Are there technical concerns in retrieving the waste out of these tanks at the moment? (Pasco Meeting)

RESPONSE:

We have all kinds of technical challenges to overcome (mechanical systems or transport systems, exposure control for people doing the work, control of the waste itself). Resolving these concerns will take a lot of technology; it won't be simple. They are researching waste disposal right now. Approaches will be documented in the Tri-Party Agreement being renegotiated.

100. COMMENT:

Will the waste from the single-shell tanks be moved into existing double-shell tanks? Will new double-shell tanks be built? (Seattle Meeting)

RESPONSE:

The liquid is being removed from the single-shell tanks (SSTs) into double-shell tanks (DSTs) as part of the stabilization program. There are plans to construct more double-shell tanks.

101. COMMENT:

Are the volumes of the double- and single-shell tanks similar? (Pasco Meeting)

RESPONSE:

Yes. The 28 double-shell tanks contain approximately 25 million gallons of waste. Four of the 28 tanks hold a million gallons; 24 hold 1.1 million gallons. The 149 single-shell tanks (SSTs) hold 36 million gallons of waste. SSTs contain either 55,000, 500,000, 750,000, or 1 million gallons.

102. COMMENT:

Are the capacities of the double- and single-shell tanks similar? (Pasco Meeting)

RESPONSE:

Some single-shell tanks hold 0.5 million gallons and a number hold 1 million gallons; a few hold 750,000 gallons.

103. COMMENT:

Are they all fairly full? (Pasco Meeting)

RESPONSE:

No. Most of the single-shell tanks are only one third or less full. Some double-shell tanks are filled to operating limits.

104. COMMENT:

Is there anything in place to tell the public when experiments will be performed (such as starting the pump in 101-SY)? (Portland Meeting)

RESPONSE:

Yes, this information is provided in media releases and in monthly press conferences.

105. COMMENT:

How is the communication between Oregon and Washington State? (Portland Meeting)

RESPONSE:

DOE meets routinely with Oregon and Washington State to brief them on the status of the cleanup. In addition, the two states communicate directly, but separately from their meetings with DOE. Either state may be able to provide you with a better idea about the communications between the two states.

106. COMMENT:

If you separate the plutonium from the tritium than maybe you stored that? You are trying to extract as much plutonium and enriched uranium and so forth during this separation process. Would that material then be viable for future use or would that be put in the defense stockpile? Because if there are 40 kilograms of plutonium in the tank, what is going to happen to it? (Seattle Meeting)

RESPONSE:

These materials are being stockpiled for eventual disposal.

107. COMMENT:

I guess I would take some exception to some of the comments that have been made about that environmental report. I rather think it is a good report and I rather think it has had some good peer review. (Portland Meeting)

RESPONSE:

(No response required.)

108. COMMENT:

It is reprehensible that the monitored retrievable storage sites, which are the sites that are supposed to be interim storage for radioactive waste, are being foisted on the Indian Nations. It is being made to look like a good thing. It is interesting that the Government has not had enough money to really help the Indians, but is now willing to give them a lot of money to take radioactive waste. To me it is just one more piece of our genocidal nature in this country and it needs to stop. (Portland Meeting)

RESPONSE:

It is our impression that this was an initiative by the Indian Nations that has since been withdrawn.

109. COMMENT:

When is the 242-A Evaporator going to be ready? That looks like a very promising method to really get some action moving on cleaning up that tank waste. (Portland Meeting)

RESPONSE:

Although we still have some unresolved issues, we're pushing to go operational about June 1994. DOE is completing a \$15 million upgrade of the 242-A Evaporator which will operate under RCRA interim status. The 242-A Evaporator is the cornerstone of the waste management treatment facilities because it reduces waste volumes and, thus, minimizes tank space needs. Operation of the evaporator will reduce 5 to 10 million gallons of waste in the tanks annually.

110. COMMENT:

I believe that more of the decommissioning and decontamination work should be done by contractors who are trained in that work. (Card 2)

RESPONSE:

Decontamination and decommissioning will become an increasing aspect of the cleanup of the Hanford Site in the next 10 years. DOE will ensure that the contractors who perform the work are experienced and trained in the D&D area and can do the work cost effectively.

111. COMMENT:

I read in the newspapers that you tried to stick a mixing pump in Tank 101-SY. The pump was not tested and did not fit. (Seattle Meeting)

RESPONSE:

We never tried to put the pump in the tank. A plug, which was the same size as the pump, was inserted to check the dimensions. We took information from engineering drawings and made a plug to reduce radiation exposure of the workers. It did not fit by about a quarter of an inch. The tanks were not built to the rigid specifications required in the reactor industry today, so the dimensions we had were different from the actual opening. The opening was measured using two different methods. We then removed a sleeve from the pump so it would fit the opening.

On July 3 the pump was successfully installed. It is undergoing test to see if mixing the waste in the tanks will cause a slow, constant escape of gases instead of the potentially dangerous large releases that have been occurring about every 150 days. The mixing pump is being operated in 10-minute intervals at about 340 revolutions per minute to collect data and to ensure all systems are working as planned. Once this initial phase is successfully completed, we'll analyze the data and run the pump at about 920 rpm for up to four hours a day.

112. COMMENT:

Would the waste be disposed of onsite? (Pasco Meeting)

RESPONSE:

The grouting process will dispose of low-level radioactive and mixed waste onsite. The current plan calls for at least the high-level fractions to be vitrified and sent to a geologic repository. Transuranic waste will be certified and shipped to the Waste Isolation Pilot Plant. The Hanford Site Future Land Use Working Group recommended that the 200 Areas be set aside for storage and disposal of waste from the cleanup of the Hanford Site.

113. COMMENT:

What is the target date for completing the Tank Waste Remediation System (TWRS) rebaselining negotiations? (Pasco Meeting)

RESPONSE:

Talks between DOE, Ecology and EPA are scheduled to be completed September 30, 1993. (However, it's likely that some issues will require further talks to resolve.) The public will then have an opportunity to offer input on the terms of the agreement before it is made final in January 1994.

114. COMMENT:

I noticed in this plan that a lot of things were said that were very vague. You have a whole section in the Plan on goals and the status of the goals and there is a tremendous amount of vagueness. (Portland Meeting)

RESPONSE:

Objectives and goals are less specific than plans that are written to engineering descriptions or procedures. You may have expected a different level of information than the Plan was envisioned to present. The Site-Specific Plan (SSP) is intended to provide information to DOE, Washington State, Oregon, the Indian tribes, stakeholders, and the public about the ongoing cleanup at the Hanford Site. The SSP presents a view of the activities that occurred during the past fiscal year, including the different programs' accomplishments and shortcomings. While we could have added more detail to the SSP, it probably would have made it harder to read.

6.0 LIQUID EFFLUENT

1. COMMENT:

You state that the Liquid Effluent Retention Facility (LERF) was completed in July of 1992. As of August 11, 1992, the LERF project has not been completed. (Ecology)

RESPONSE:

The statement was not correct. Construction was officially completed in November 1992. However, we subsequently discovered leaks in one of the LERF basin liners. Efforts to locate and repair the liner leak are continuing. Although the other two basins are ready to receive wastes. LERF operations will begin when the 242-A Evaporator resumes operations.

2. COMMENT:

Construction of LERF has been delayed due to concerns regarding subcontractor performance, cost estimating, and the inability to cover cost overruns with additional funding. We recommend that you describe these problems, the causes, and your remedy plans. (Ecology)

RESPONSE:

As indicated, the problems were related to contract performance. However, all contract related issues have since been resolved.

3. COMMENT:

Recently we had a Corps of Engineers report that started dredging the river at Kennewick. That seemed unwise especially to Columbia River United people who weren't too pleased with the idea of stirring up the sediments. I think I saw it on the front page of the Tri-City Herald. I saw the dredge. It's just below the Blue Bridge I believe. There's a lot of people downstream that are concerned. (Seattle Meeting)

RESPONSE:

DOE is not aware of any dredging of the Columbia River near Kennewick by the Corps of Engineers. There would be some resuspension of sediments with very small concentrations of radionuclides.

4. COMMENT:

There are some areas in the vadose zone in the 200 plateau that are contaminated with carbon tetrachloride. Has any of this reached the groundwater? (Seattle Meeting)

RESPONSE:

Yes. In fact, planning is underway to initiate groundwater treatment specifically for carbon tetrachloride. This chemical was used in plutonium processing and is heavier than water.

5. COMMENT:

What is the radiation level at the surface of the K Basin? (Seattle Meeting)

RESPONSE:

The radiation level in the 105-KE Basin work areas ranges from 5 to 15 millirem per hour. The radiation level in the 105-KW basin work areas is 2 millirem per hour.

6. COMMENT:

What is the radiation level at the at 100-N Area? (Seattle Meeting)

RESPONSE:

General area radiation levels at 100-N Area are at or slightly higher than background. Most areas are well below levels requiring radiological controls. The highest radiation levels along the shoreline are in the vicinity of N Springs. Even at this location, extended occupancy of the area would still result in an annual radiation dose well under the 300 millirem average dose to people in the U.S. from all sources of natural radiation.

7. COMMENT:

A proactive plan needs to be established so we have more than temporary fixes such as LERF. (Pasco Meeting)

RESPONSE:

There may be some confusion as to the purpose of the Liquid Effluent Retention Facility. LERF is not a temporary fix. The LERF basins were constructed to store 242-A evaporation process condensate pending completion of an effluent treatment facility for the treatment of the evaporator process condensate. Once the effluent treatment facility becomes operational, the evaporator process condensate will be piped directly to the treatment facility for treatment prior to disposal. The LERF basins will then be cleaned out and closed in accordance with RCRA requirements.

8. COMMENT:

What is the origin of the 100-N waste water? (Olympia Meeting)

RESPONSE:

We believe you are referring to the waste water from 100-N Springs. This is groundwater that probably became contaminated from low-level radioactive waste that was discharged to the cribs (seepage basins) when N Reactor operated. The contaminated water moved downward into the groundwater, then laterally, eventually discharging at the surface at N Springs.

9. COMMENT:

Does the analysis include an analysis of sediments? (Pasco Meeting)

RESPONSE:

The analysis of the water column itself does not include the sediments. We sample surface sediments upstream at four locations along Priest Rapids Dam and take single samples at three separate locations along the Hanford Reach of the Columbia River. We sample downstream at McNary Dam, approximately 50 miles downstream from Hanford. We also sample near the Boise Cascade plant. These samples are taken in four locations in a pattern that forms a transect across the river. If you consider the samples taken at Priest Rapids Dam as background, we see background levels of contamination downstream. We see little difference at McNary Pool except for ^{60}Co and some europium isotopes.

7.0 SOLID WASTE

1. COMMENT:

Please explain where and how thermal treatment has been applied at the Hanford Site. (Ecology)

RESPONSE:

Thermal treatment of solid waste is an activity planned for the future. Burning combustible solid low-level and/or mixed waste not only destroys some hazardous constituents, but also reduces the volume that has to be disposed of. EPA views incineration as an acceptable method of treating waste before disposal.

2. COMMENT:

Several years ago a problem was discovered with the zirconium cladding of fuel rods in commercial reactors. The rods became brittle after irradiation in the reactor. Is there a known embrittlement problem with existing cladding on fuel rods that are being stored at the Site? (Olympia Meeting)

RESPONSE:

There is a program to monitor embrittlement of fuel rods. To our knowledge there is no embrittlement of the fuel rods stored on the Hanford Site.

3. COMMENT:

It's okay, I appreciate your honesty. I also want to say I am not a technical person. I'm not an engineer or anything like that, I have followed controversies about nuclear power and nuclear weapons production for some years. I became acquainted with some of the issues involved, so I'm just curious if there is a body of knowledge of these kinds of problems at Hanford. (Olympia Meeting)

RESPONSE:

There is a "body of knowledge" for most types of problems at the Hanford Site. This knowledge comes from education and the experience the workers gain on the job. The engineers and scientists also maintain professional contacts with other individuals in the DOE complex and in the commercial nuclear industry who share their areas of expertise.

4. COMMENT:

I do think that some of the questions I've been asking are significant, and I hope that somebody out there is looking into those now. I mean, if there's a collection of plutonium at the bottom of the PUREX plant or something, that's important to know about. (Olympia Meeting)

RESPONSE:

There is some known accumulation of plutonium within a few of the cells at PUREX. Right now it does not present a risk to workers, the public, or the environment. However, we will deal with it as part of the Decontamination and Deactivation (D&D) process.

5. COMMENT:

Is it correct that things being brought in for disposal at U.S. Ecology's commercial low-level radioactive disposal site are buried in the ground? (Pasco Meeting)

RESPONSE:

Yes. U.S. Ecology is a private firm licensed by the NRC and Washington State. They operate a commercial low-level radioactive waste disposal site on 1,000 acres of the Hanford Site leased by Washington State from DOE.

7. COMMENT:

DOE has a section on technology development in the Five-Year Plan. There is a technology on enzymes, but not on organic composting. (Portland Meeting)

RESPONSE:

Organic composting uses natural microbes to decompose organic-based substances. Unfortunately, it is not effective on substances containing heavy metals or radionuclides. The process can take an extensive amount of time, and the resulting substance is not always desirable.

8.0 ENVIRONMENTAL RESTORATION

1. COMMENT:

Instead of studying and spending time on just the operable units, why isn't a more comprehensive (total site) study being done? (Olympia Meeting)

RESPONSE:

The entire site is being looked at. The old reactors, for instance, are not part of an operable unit, but decommissioning and decontamination work is going on.

The idea of operable units is not to limit the scope of the cleanup. When the Tri-Party Agreement was signed in 1989, the parties agreed that it made sense to divide the site in some logical order (operable units)...by geographic proximity, waste similarity, site type, etc.

2. COMMENT:

With respect to the referenced draft environmental impact statement, the statement that the document is in "final review" is misleading. The draft has been in final review for two years. DOE's Richland Field Office (DOE-RL) must finalize the document to the satisfaction of the regulatory agencies in order to enable rendering of a final decision. (Ecology July Draft Review 9)

RESPONSE:

The Final Surplus Production Reactor Decommissioning-Environmental Impact Statement (SPRD-EIS) was published in December 1992. Although the Record of Decision (ROD) has not been issued for the SPRD-EIS, it is expected by September 30, 1993. DOE is considering the final comments from the U.S. Department of the Interior before announcing the final ROD. The EIS document follows all of the requirements of the NEPA process, including consideration of alternatives. DOE has attempted to satisfy every change or comment made by the public or regulatory agencies.

3. COMMENT:

What will Bechtel's role be at Hanford? (Olympia Meeting)

RESPONSE:

Bechtel was announced as the successful bidder for what is called the ERM or Environmental Restoration and Management Contract. The bid has not been awarded because it was contested by the other bidders. When awarded, the ERM contractor will conduct remediation of contaminated waste sites and decontamination and decommissioning of surplus facilities. Westinghouse Hanford will remain as the Site's Management and Operations contractor.

4. COMMENT:

We disagree with the statement that "N Reactor discharges have contaminated the groundwater with trace amounts of ⁹⁰Sr." Significant amounts of ⁹⁰Sr have contaminated the groundwater, which does affect the Columbia River. (Ecology)

RESPONSE:

Some liquid effluents discharged from N Reactor contain ⁹⁰Sr. Whether these amounts are considered "trace" or "significant" is a matter of opinion. ⁹⁰Sr is the principal contaminant in the water that discharges from N Springs into the Columbia River. Scientific studies have shown no effect on the biota from these discharges. An ecological risk assessment for the 100 Areas will determine the risk to the biota in the Columbia River from the discharges.

5. COMMENT:

Are there plutonium deposits by the John Day Dam? (Portland Meeting)

RESPONSE:

A study was done on radionuclides in the sediments behind McNary Dam, the first dam downriver from Hanford. In this study, published in 1984 by Oregon State, analysis of 57 core samples from the sediments behind McNary Dam showed small amounts of fission products from Hanford. Plutonium could have gotten into the river only if a fuel rod ruptured. Some such ruptures occurred and plutonium did get into the river. Some very small quantities of plutonium have been detected in the sediments behind McNary Dam, but none that would create a health hazard to either the fish in the river or to persons wading along the shoreline.

6. COMMENT:

Removing dirt from a trench, piling it up at the end of the trench, and covering it with a black plastic tarp does not constitute cleanup. The trench is still receiving hundreds of gallons of additional waste. This should not be considered an accomplishment. (Seattle Meeting)

RESPONSE:

The dirt was removed to eliminate the source of contamination in the 300 Area process trench. The trench receives uncontaminated water, not waste. By removing the contaminated soil, this expedited response action (ERA) allows clean water to be discharged to the trench until new wastewater treatment facilities can be funded and constructed. Because the source of contamination was removed, this successful ERA can be considered an accomplishment until the final remedy can be completed.

7. COMMENT:

The expedited response actions (ERAs) appear to be selected because they are easy "victories" that have no real cleanup value. One example is the sodium dichromate landfill where no contamination was found. (Seattle Meeting)

RESPONSE:

ERAs are not intended to be great technological "victories," but interim actions moving toward cleanup that can be accomplished quickly and easily without spending a lot of money. In some cases, potential health hazards are cleaned up and the risks to the public or the workers are reduced to an acceptable level. ERAs are divided into two categories: time-critical (those that remove a potentially hazardous situation) and non-time critical (cleanups for which technologies do not have to be developed and that can be completed quickly). Non-time critical ERAs, such as the 300 Area process trench, must have an engineering evaluation/cost analysis (EE/CA) done before work can proceed. This is intended to ensure that all technical alternatives are evaluated before a cleanup remedy is selected.

8. COMMENT:

We disagree with your position that the regulatory structure may slow the progress of remediating contaminated sites. The National Environmental Protection Act (NEPA) has not constrained development of remedial action work plans. (Ecology)

RESPONSE:

Our statement has been modified in the January 1993 draft of the SSP. Our concern was the integration of NEPA and CERCLA processes to ensure that the decisions made under one process are not inconsistent with the other.

9. COMMENT:

DOE's funding for work plan development in the past year has been a concern because of the perceived imbalance between actual cleanup versus paper studies. We believe that a more positive statement should be made to the public. (Ecology)

RESPONSE:

Because of the Hanford Site Past-Practices Strategy (HSPPS) that was proposed by DOE and approved by Ecology and EPA, more emphasis will be placed on actual cleanup with reduced emphasis on studies. The HSPPS is action-oriented and emphasizes the use of existing information. New or additional information is collected only when it has been determined that the existing information is insufficient or that no information exists at all. Cleanup actions such as ERAs will focus on removing contamination, not further characterization of the contaminated site.

10. COMMENT:

While site use is obviously a very important consideration, it is only one component in the overall scheme to define cleanup. For example, CERCLA and the State Model Toxics Control Act (MTCA) are major drivers for cleanup. (Ecology)

RESPONSE:

Several things need to be considered in the cleanup of the Hanford Site. One of the most important is the selection of cleanup criteria or applicable or reasonably achievable requirements (ARARs) as defined by CERCLA. While MTCA may be considered an ARAR, ARARs should be evaluated and selected very soon to ensure that cleanup of a site is meeting the agreed-on criteria. If cleanup is allowed to proceed before the cleanup standards are defined, there is a risk that more money will be spent doing additional work. Future land use is an important consideration because the risk assessment under CERCLA is performed based on the intended use of the site. For example, a previously contaminated site that will be used for recreation in the future may not be cleaned to the same criteria as a site that is planned for residential use.

11. COMMENT:

The entire 100 Area involves work plans based on interim response measures. We suggest that you expand this paragraph to include activities for all operable units in the 100 Area, including those in which Ecology has lead responsibility. (Ecology)

RESPONSE:

Interim response measures (IRMs) are not the only cleanup activities scheduled for the 100 Areas. Listing all activities for all operable units in all areas (not just the 100 Areas) would make the SSP difficult to handle. This information is available to the public in the Administrative Record located at 740 Stevens Drive, Richland, WA 99352.

12. COMMENT:

Is there contamination on the Hanford Site that is not nuclear, like chemical contamination? (Seattle Meeting)

RESPONSE:

Yes. There are wastes that are not completely radioactive, but still may be harmful. These wastes fall into the general categories of hazardous waste and mixed waste. Hazardous wastes are chemicals and solvents that EPA has determined are harmful if they are present in sufficient amounts. Examples of hazardous wastes are battery acid, antifreeze, and cleaning solvents. Just north of Richland, in the 1100 Area where the motor pool is located, oil and grease, antifreeze, gasoline, and other solvents were used to clean and maintain the buses and other government vehicles. Before 1970, these materials were routinely released into the environment.

13. COMMENT:

It appears that cleanup money is not being spent wisely. One example is the plans for vitrification, which are in a constant state of flux. If DOE hopes to continue to receive support from the public and to build its credibility, it will have to show progress with the cleanup money that's been authorized by Congress. The press will not be sympathetic and it may eventually cost the Site funding and jobs. (Seattle Meeting)

RESPONSE:

DOE and the Hanford Site contractors are working harder to use the cleanup dollars that they receive from DOE-HQ in a more efficient manner. Part of the overall plan is to use the Hanford Site Past-Practice Strategy (HSPPS), which focuses on actual cleanup, not on studies (characterization) of waste sites. As we demonstrate that actual cleanup is what we truly want to accomplish, we believe that Congress will continue to fund the cleanup here at Hanford and the public and news media will believe that the Hanford workers are sincere in their commitment to cleaning up the Site.

14. COMMENT:

Neither the National Five-Year Plan nor the Hanford Site-Specific Plan meet the requirements of the Defense Authorization Act passed by Congress in 1991. Congress stated that the Department of Energy was to prepare a Five-Year Plan, which was supposed to be released to us for comment no later than May 1, 1992 so that we could effectively comment on it and use the information in working with Congress on your budget for FY 1994. That budget is about to be submitted. Second, the law said that the Department of Energy was to identify for each of the five years the specific projects and the cost of each project to carry out the environmental restoration and waste management missions at the Site. Instead, we have a 1993 budget document released to us when fiscal year 1993 is half over. There is absolutely no cost data or specific project data in this plan for FY 1994 through 1998. Unfortunately, by telling you not to release the costs and projects and the justification for spending 1.8 billion dollars of our tax funds at Hanford next year, Headquarters has jeopardized the support of Congress for the entire program because we can't see what you're spending the money on. Congress asked you to explain the expenses. The public can't support it either because we can't see it. Therefore, the whole program gets undercut because Headquarters refused to allow you to release activity data sheets for each project sharing the cost over the five years. (Seattle Meeting)

RESPONSE:

Comment forwarded to DOE-HQ for response.

15. COMMENT:

Are you finding sediment settling in the river that contains contaminants from past releases? (Olympia Meeting)

RESPONSE:

Yes, there is sediment behind McNary Dam that contains some radionuclides from past operations. However, except for ⁶⁰Co and europium isotopes, these contaminant concentrations are similar to those in other fresh water streams, rivers, and lakes.

16. COMMENT:

What technology is being developed to contain the plumes of contaminated water from reaching the river? (Olympia Meeting)

RESPONSE:

There are several technologies that have been developed that appear as though they may contain plumes of contaminants and keep them from reaching the river. One of the more promising is what is known as a "freeze wall." This method uses a process known as cryogenics to stop the movement of contaminants by "freezing" them in place. This method is being considered to either halt or slow the movement of plumes of contamination on the Hanford Site.

17. COMMENT:

The cleanup process gets bogged down on insignificant issues. (Pasco Meeting)

RESPONSE:

Because the cleanup process at Hanford is performed with agreement of the DOE, Ecology, and EPA, it sometimes appears that very little is getting accomplished. Insignificant issues to one party may be very significant issues to another. Because we're still in the initial stages of cleanup, it can be expected that work has not progressed as efficiently as it will in later stages, but overall the process is working. Some issues need to be resolved to allow cleanup to progress more quickly and smoothly.

18. COMMENT:

To what extent will the Westinghouse Hanford Company/Bechtel issues impact the cleanup? (Portland Meeting)

RESPONSE:

Westinghouse Hanford Company and Bechtel are committed to working together to quickly clean up the Hanford Site including decontamination and decommissioning of existing and future facilities and removal of waste from the tanks to a permanent repository. Both contractors will be evaluated on how they are working to achieve their respective goals.

19. COMMENT:

Implement the use of organic composting teas to deactivate the radioactive soils. This was used in area adjoining Chernobyl to reclaim the soil in a natural manner in Austria by a man named Lucphe who had been researching and formulating compost teas for specific uses. I am hoping to get the name and address of Lucphe, to be able to get more specific information and/or formulas. (card)

RESPONSE:

Information on the scientist from Austria who studied organic composting was not found. Please see the response to Comment 7 for general information on composting.

20. COMMENT:

To what extent have DOE contractor negotiations impacted expedited response actions? (card)

RESPONSE:

DOE contractors have and are cooperating in the cleanup of the Hanford Site. There have been no impacts to the expedited response actions (ERAs). Time-critical ERAs have proceeded without delay, and non-time critical ERAs have taken longer to complete because of the requirement to complete an engineering evaluation and cost analysis of the alternatives. Ecology and EPA officials are working with DOE to identify new candidate sites for ERAs.

21. COMMENT:

To what extent has RCRA corrective actions contributed to the value of the cleanup at Hanford? (card)

RESPONSE:

Corrective actions are performed under the requirements of RCRA. The value of completing the corrective actions is that Ecology and EPA can measure DOE's progress towards RCRA compliance against an established set of criteria.

22. COMMENT:

"Monitoring" measures a trend for a specific parameter over time. "Tank safety" implies there is (are) a goal(s) related to safety. What are those goals, who will do what and when to assure tank safety?

What are the long and short-term goals related to tank safety? (card)

RESPONSE:

Tank safety relates to the safety of the worker and the integrity of the tank structure.

Short-term goals include placing instrumentation into the tanks to get a better understanding of the working environment before decisions are made on how to remove the waste.

Long-term goals include removing all waste from the single- and double-shell tanks, vitrifying the high-level waste fraction, grouting the low-level/mixed waste fraction, and evaporating and concentrating any residual liquid in the tanks.

23. COMMENT:

A one-half reduction in liquid discharges since 1985 is not a great accomplishment. Even clean discharges may move contaminants that are already in the soil. (Ecology)

RESPONSE:

Construction of effluent treatment facilities which will reduce the volume of liquid discharges, has been delayed due to the time it takes to do the design work, and to a lesser extent, inadequate funding. The ERA for the 300 Area process trench removed most of the contaminated soil from the trench, piled it, and covered it with plastic to prevent the leaching of contaminants into the groundwater. Discharges of clean water into the trench continues, but the volume of the discharge has been reduced.

24. COMMENT:

The basis for the 3.5- to 7-year span for the remedial investigation/feasibility study (RI/FS) pathway should be provided. (Ecology)

RESPONSE:

Experience has shown that it takes between 3.5 and 7 years to complete an RI/FS. However, in some instances with the appropriate regulatory consultation, interim decisions on cleanup can be made using the existing data. While additional cleanup of the site may be needed, that will not occur until final cleanup standards (ARARs - Applicable or Relevant and Appropriate Requirements) have been agreed on. This decision may not happen until the RI/FS is completed.

25. COMMENT:

The engineering evaluation and cost analysis for the expedited response action should be referenced. (Ecology)

RESPONSE:

(It is not clear which engineering evaluation and cost analysis Ecology wants to have referenced.)

26. COMMENT:

There is apparent misunderstanding of the process for expedited response actions and the use of RI/FSs, or duplicate work is planned. (Ecology 20)

RESPONSE:

Expedited response actions (ERAs), interim remedial measures (IRMs), and limited field investigations (LFIs) are intended to use existing data or to collect a minimal amount of new data to reach an interim record of decision (ROD). Remedial investigations/feasibility studies (RI/FS) are a more detailed characterization of a contaminated site. RI/FS data are collected when additional information is needed because there isn't any or enough existing information to identify the contaminants at a site. As a result, time and money are saved and cleanup can progress before doing an ERA, IRM, or LFI.

27. COMMENT:

The discussion on the carbon tetrachloride plume is incomplete, data provided need to be verified, and implications of the scope of the work are inaccurate. (Ecology)

RESPONSE:

Discussions on the ERA on carbon tetrachloride in the 200 West Area are intended to provide an overview of the activities associated with this particular cleanup. As such, the data are not complete and will need to be verified after they are collected and analyzed. The SSP for FY 1994 will report our progress on this ERA.

28. COMMENT:

Describe where contaminated soils in the 300 Area process trenches were isolated. (Ecology)

RESPONSE:

Most of the contaminated soils from the 300 Area process trenches were removed and piled near the north end of Trench 316-5. After the soil was removed, it was covered with impermeable plastic to keep precipitation from leaching contaminants from the excavated soil back into the trench.

29. COMMENT:

Ecology's involvement in operable unit cleanup should be outlined. It should be noted that DOE has a statutory requirement to implement remedial action 15 months after the ROD is signed. (Ecology 29)

RESPONSE:

The purpose of the SSP is to provide the reader with an overall understanding of the cleanup mission; an understanding of the programs, accomplishments, and shortcomings in the past fiscal year; discussion of the Tri-Party Agreement; general funding information; environmental protection requirements; and public participation in the process. To detail Ecology's responsibilities, as well as each of DOE's statutory requirements, would make the document unwieldy and far too detailed to be useful to the general public.

30. COMMENT:

The 100-D ponds should be classified as treatment, storage, and disposal units. (Ecology)

RESPONSE:

This change was made in the January draft of the FY 1993 SSP.

31. COMMENT:

The text indicates that no intrusive activities have occurred within the 100-BC-1 operable unit. However, test pits were dug in the 100-BC Area making this an inaccurate statement. (Ecology)

RESPONSE:

The text was changed in the January draft of the FY 1993 SSP to indicate that intrusive activities, such as drilling groundwater monitoring wells, were done in the 100-BC-1 operable unit.

32. COMMENT:

Regarding the interim acquisition strategy for obtaining necessary EM laboratory capacity, we request that details of this acquisition plan be provided to the Washington State Department of Ecology. (Ecology)

RESPONSE:

Details for obtaining the necessary EM laboratory capacity were provided to Ecology, but separately from the SSP.

33. COMMENT:

The discussion on risk assessment methodologies and risk-based standards might be contradictory to prescriptive standards established by a state. Will risk assessment methodologies and risk-based standards be used to justify a waiver from an individual state's regulations? (Ecology)

RESPONSE:

The Hanford Site Baseline Risk Assessment Methodology (HSBRAM) is the methodology that was developed by DOE, Ecology, and EPA to determine human health risk and ecological risk at the Hanford Site. As part of the development of HSBRAM, both federal and Ecology's Model Toxins Control Act risk-based standards were considered to be potential ARARs (Applicable or Relevant and Appropriate Requirements) standards.

34. COMMENT:

I am concerned about the contaminated groundwater. What is known about the migration of contaminated groundwater to the Columbia River? (Pasco Meeting)

RESPONSE:

Primary contaminants in the groundwater on the Hanford Site are tritium, ⁹⁰Sr, chlorinated hydrocarbons, and nitrates. Uranium, cesium, ⁶⁰Co, ¹²⁹I, fluoride, and other constituents are also present, but in much lower concentrations. The contaminant plumes form beneath cribs and retention basins that received low-level radioactive wastes. The contamination migrates downward through the soil into the upper unconfined aquifer, and eventually discharges into the Columbia River. Although radionuclides associated with Hanford operations

(²³⁴, ²³⁵, ²³⁸U, hydrogen, strontium, tritium) are detectable in the Columbia River, their levels are extremely low.

As a result of the groundwater discharge to the river, visible seeps or springs appear along the banks when the water level in the river is low. Groundwater is estimated to take up to 30 years to reach the river depending on the starting point. Most contaminants move slower than the groundwater because of reactions with the soil particles.

35. COMMENT:

What can you tell me about the biota sampling program? (Pasco Meeting)

RESPONSE:

There is a comprehensive environmental monitoring program on the Hanford Site and in the Columbia River that runs along the Site. The program consists of effluent monitoring and environmental surveillance. Sampling and analyzing the biota are included in the environmental surveillance part of the program. Environmental surveillance is done to identify potential contaminants and to determine their risk or impact to human health and the environment. We take a wide variety of samples onsite and offsite; including samples from ducks, fish, deer, and rabbits. Also, perennial vegetation samples consisting of new growth taken from rabbitbrush and sagebrush are collected.

PNL prepares an annual report to demonstrate that the program and the information collected meet the requirements of DOE Order 5400.1, *General Environmental Protection Program*, and DOE Order 5400.5, *Radiation Protection of the Public and the Environment*.

36. COMMENT:

How long has the sampling program been in force? (Pasco Meeting)

RESPONSE:

The sampling program has been done in some capacity since the construction of the Hanford Site in 1944. While no regulations at that time required environmental monitoring, it was done because of concern that production of nuclear materials for the war effort may have a negative impact on salmon and other fish species in the Columbia River.

37. COMMENT:

Does DOE plan to remediate the contaminated groundwater? (Pasco Meeting)

RESPONSE:

Contaminated groundwater under the Hanford Site will be remediated to the satisfaction of DOE, Ecology, and EPA. In addition, DOE Order 5400.1, *General Environmental Protection Program*, contains a requirement to have in place a groundwater protection plan. Several actions are currently underway to clean up portions of the groundwater onsite. At the 300 Area process trench, contaminated soils were removed from the trench, deposited next to the trench,

and covered to prevent leaching of contaminants back into the groundwater. There are plans to remove ⁹⁰Sr and other radionuclides from N Springs near the 100 N Area. Treatments being considered for N Springs include freeze control technology and pumping and treating the water. Removing the carbon tetrachloride from 200 West will reduce the chance for it to migrate to the groundwater. Treatment of the tritium plumes onsite is also being considered.

38. COMMENT:

Where is tritium measured, in a groundwater sample or a sample taken from the Columbia River? (Pasco Meeting)

RESPONSE:

Tritium is measured in groundwater samples and in water samples taken from monitoring wells and the Columbia River. The best discussion of tritium measurement of the groundwater can be found in the 1992 Annual Site Environmental Report. The report is published about the first of July by PNL.

39. COMMENT:

Why do we compare concentrations of contaminants to drinking water standards when no one is drinking the water from the springs where the samples are taken, and the drinking water standards are for water coming from the faucet in the home? (Pasco Meeting)

RESPONSE:

We compare samples taken at the springs to drinking water standards because Washington State water quality standards specify that Class A streams, including the Hanford Reach, should meet the drinking water standard for radionuclides. Our routine sampling station is at the pumphouse for the City of Richland, the first point where public drinking water is withdrawn.

40. COMMENT:

Cleanup funds should be allocated based on risk levels that have been determined by an engineering technical assessment. The liquid waste tanks should probably have a higher priority for cleanup. Other things don't need attention other than to be identified. (Pasco Meeting)

RESPONSE:

Funding is allocated by Congress based on a budget prepared by DOE for the president. At the Hanford Site, the budget for FY 1994 is based on the milestones agreed to by DOE, Ecology, and EPA in the Tri-Party Agreement. When total funding is not provided, priorities for these milestones are established based on risk, when needed technology is likely to be available, and compliance with federal and state environmental regulations. Tank waste is probably the highest priority on everyone's list, but until the technology to remove and safely dispose of the waste has been proven and is available, it cannot hold up other cleanup work. In addition, while it appears as though paperwork and documentation are excessive, they are required by state and federal regulations.

41. COMMENT:

Portland residents are concerned about contamination in the Columbia River threatening their drinking water supply. (Pasco Meeting)

RESPONSE:

Portland residents receive their drinking water from Bull Run Lake, not the Columbia River. They may use the Columbia River for recreation and other pastimes such as hunting and fishing. Therefore, the small amount of contamination in the Columbia River from Hanford operations would not affect the Portland drinking water supply.

42. COMMENT:

Please explain what kind of information is being collected as part of the cleanup. Why should the public believe the data? (Pasco Meeting)

RESPONSE:

Concentrations of radionuclides and chemicals are determined from samples from the different contaminated sites. These samples are collected and analyzed for the chemicals according to established procedures cited in the state and federal environmental regulations. The samples are analyzed by laboratories that are familiar with the requirements of EPA and Washington State. Should a laboratory fall out of favor with Ecology or EPA, DOE and the Hanford Site contractors will discontinue using the laboratory. The laboratory results must satisfy the regulators, or additional time and money will be spent to resample. The radionuclide concentrations are determined either by DOE or by contracted laboratories experienced with analyzing radioactive materials. These laboratories participate in a quality assurance program, either DOE's Environment Measurements Laboratory in New York or EPA's QA program, conducted at the Eastern Environmental Radiation Facility in Alabama.

43. COMMENT:

Decontamination and decommissioning of the older facilities need to begin. Currently approximately 3.8 billion gallons per year of condensate and coolant are generated. (Pasco Meeting)

RESPONSE:

We agree that it is time to proceed with the decontamination and decommissioning (D&D) of some of the older facilities that are not in use. However, other pressing issues, such as waste tank safety, need to be addressed before the D&D effort can really progress at the rate it should. In addition, NEPA documentation needs to be completed before D&D can proceed. Decommissioning of the 201-C Strontium Semiworks has been ongoing since FY 1985. Decommissioning of the contaminated facilities at the complex has been completed. The remaining work includes remediation of three below-grade tanks.

44. COMMENT:

Did FMEF ever actually run? Is it even a hot facility? (Pasco Meeting)

RESPONSE:

The Fuel Materials Examination Facility (FMEF) was not run.

45. COMMENT:

What are you doing about facility stabilization? (Pasco Meeting)

RESPONSE:

DOE has established the Facilities Transition Program to hasten the stabilization and final disposition of old facilities. The Facility Transition portion of the complex-wide DOE budget has expanded to over \$700 million, a 3,930-percent increase. Likewise, at Hanford we have stepped up our efforts by designating the following facilities for transition: PUREX, UO₂ Plant, PFP, N Reactor, 300 Area Fuel Fabrication Facilities, and the K Basins. To complete the transition of these facilities, we have tentatively scheduled the necessary stabilization activities (activities necessary to place the facilities in a safe shutdown mode).

46. COMMENT:

A lot of material at PFP is stored in L10 containers, a purpose for which the containers were never designed. More than 10 years ago some of these canisters were unloaded and were found to have a significant failure of the inner polyethylene containers. Since that time, a greater percentage of the inner containers may have failed and allowed the caustic solution to move into the outer containers. These containers would not be part of the stabilization run. With this situation, what would be gained by making a stabilization run? (Pasco Meeting)

RESPONSE:

The L10 containers consist of an outer steel drum, containing a layer of insulating material, and an inner stainless steel container with has another inner liner (polyethylene) that's intended primarily to facilitate materials handling. DOE is aware these inner liners are probably deteriorated and has taken that into account when planning the stabilization run. We intend to process all the materials contained in the subject containers (with the exception of the small percentage containing chloride compounds, which will be disposed of through the EIS). Safety procedures include taking steps to safely handle those containers with failed plastic liners.

47. COMMENT:

How much waste are you going to generate [from the PFP stabilization run] for the amount of solution you are going to process? (Pasco Meeting)

RESPONSE:

Exact amounts can not be determined until the stabilization run is complete. However, liquid wastes will be sent to a tank dedicated for this purpose. Solid wastes from the gloveboxes will be stabilized, packaged, and stored onsite until the Waste Isolation Pilot Project (WIPP) becomes operational. (See page 19, Section 2, Comment/Response 34.)

48. COMMENT:

The plutonium that is now in PUREX has to be cleaned up, removed, and/or stored somewhere. Whether you recycle it into the weapons program or store or dispose of it, it cannot remain in PUREX forever. (Pasco Meeting)

RESPONSE:

Several options currently under consideration include vitrification and disposal to the tank farms, as well as those suggested by the questioner.

49. COMMENT:

A recent newspaper article indicated that a contract to construct a storage building for the HWVP was to be awarded. At the Tri-Party Agreement quarterly meeting, DOE indicated that the building was undersized and HWVP would have to run 100 years because of the design. Most recently I've heard that DOE is not building a storage facility. Would you please clarify the status of the storage facility for HWVP? (Pasco Meeting)

RESPONSE:

The contract to construct the HWVP canister storage building has been awarded. Preliminary site preparation work has been completed. The current schedule, which is likely to change, calls for construction to be completed in 1995. If the canister storage building is completed before HWVP, it may be used to store nuclear materials.

50. COMMENT:

The Oregon Department of Energy (ODOE) is very concerned about potential impacts to species in the Columbia River, and about a potential onsite accident that could have an impact on agriculture and public health in neighboring counties in Oregon. (Portland Meeting-ODOE)

RESPONSE:

DOE shares ODOE's concern about impacts to species in the Columbia River and about potential accidents. Hanford is not affecting any species in the river. Potential accidents are carefully analyzed using computer modeling to predict concentrations and engineering barriers are used to minimize any offsite release.

51. COMMENT:

Why not put the waste where there is a greatly reduced potential for surface water and groundwater contamination and where risk to the public is minimal because of a small population in the vicinity? I'm concerned about the cost of moving waste and about storing it in containers that will fall apart before it is moved. (Portland Meeting)

RESPONSE:

The high-level waste repository is planned for a place like Yucca Mountain because the potential contamination of groundwater is small and the risk to the public is minimal because the area is not densely populated. If a decision is made to relocate the repository, these criteria will again be given serious thought. The cost of moving waste will be small compared to the cost of producing the glass logs and maintaining the facility. The vitrified waste (glass logs) will not be stored in containers that will disintegrate before or during shipment. The containers will be designed to remain intact during the lifetime of the repository.

52. COMMENT:

The cleanup operations at Hanford need to be cost effective. DOE must consider the risks posed from the different hazards and the environmental requirements for cleanup, but not at unreasonable costs to the taxpayer. (Portland Meeting)

RESPONSE:

With the cleanup that is ongoing at many of its sites around the country, DOE is working hard to spend the taxpayers' dollars effectively. The increased oversight of DOE operations by independent organizations such as the General Accounting Office will make it necessary to spend our cleanup dollars wisely. While some of the activities do not seem that useful, state and federal regulations require that a specific process or procedure be followed. DOE and its Hanford Site contractors are committed to the cost-effective cleanup of the Site.

9.0 TECHNOLOGY DEVELOPMENT

1. COMMENT:

The Yakima Indian Nation strongly supports technology development given its potential to reduce costs associated with storage, transportation, and disposal of spent fuel and wastes. We request that we be informed of actions occurring and reports being generated in this area. (Yakima Indian Nation - Cook)

RESPONSE:

Technology Development would be glad to provide information on its program. Please make requests for specific information through the Technology Development Division, U.S. Department of Energy, P.O. Box 550, Richland, WA 99352 or the Office of Planning Integration, U.S. Department of Energy, P.O. Box 550, Richland, WA 99352 (Attn: Mr. Jim Peterson). Mr. Peterson can be reached at 509/376-6731.

2. COMMENT:

Technical references should be provided for the entire technology development section so that the basis for planning and the effort to date can be fully understood. (Yakima Indian Nation - Cook)

RESPONSE:

The FY 1994 Site-Specific Plan will include guidance for finding additional information in the area of Technology Development.

3. COMMENT:

Is there any university program or private industry program where new technologies are being developed? (Seattle Meeting)

RESPONSE:

There are many universities and private industry participants involved with technology development. The Office of Technology Development (EM-50) within the Office of Environmental Restoration and Waste Management (EM-1) has established cooperative programs with universities. One of those cooperative programs is the hazardous materials curriculum at Columbia Basin College. Florida State University is developing the Raman Spectrometer that will be used for characterizing tank waste, and Texas A&M is researching new separations technologies. In addition, DOE has entered into agreements with private companies to develop technologies that would benefit not only cleanup at DOE sites around the country, but also private industry in the cleanup of contaminated privately owned sites around the country.

4. COMMENT:

Tremendous amount of time and dollars wasted when we are driven by schedule without available technology or technical logic. (Pasco Meeting)

RESPONSE:

DOE, Ecology, and EPA realize that the Tri-Party Agreement was an aggressive effort to clean up the Site without developed and demonstrated technologies when the Agreement was signed. For this reason, the parties are looking to identify available technologies and technological needs before the schedule is revised. Where successful technologies exist, DOE is using them to proceed with cleanup of the Site.

5. COMMENT:

I would like to see some focus on technologies that reduce volume, and I'd like to see focus on calcining or direct oxidation to get the waste in a more stable form.

PRF and the RMC line are incredible volume generators. Running those processes generates more solution. (Pasco Meeting)

RESPONSE:

DOE is committed to reducing the waste volume from activities at its sites. In DOE Orders 5400.1 and 5820.2A, DOE directs its operations offices and contractors to minimize waste generation. Volume reduction is one focus of technology development. The 242-A Evaporator is a proven waste reduction technology currently being used for most high-level and low-level wastes. Separations technologies, such as the Compact Processing Unit (CPU) for cesium extraction and TRUEX (transuranic element extraction), are also being investigated. Calcination is a good option for volume reduction.

The statement about PRF and RMC lines is inaccurate. Operating these lines does not generate large volumes of waste. The waste from 20 years of PFP operations are contained in only two of the 177 tanks.

6. COMMENT:

Right now I think all your technology should concentrate on volume reduction. Grout is a horrible plan. It increases the volume seven times and that's a horrible use for land. (Pasco Meeting)

RESPONSE:

Occasionally, there are reasons for increasing waste volume. Focusing all our efforts toward developing technology for reducing waste volumes is not reasonable. While tying up radioactive materials in concrete (grout) may not reduce the waste volume, it removes a hazard without the unnecessary expense of vitrification. The Hanford Future Site Uses Working Group recommended in its final report that all waste from the Hanford Site be placed in the area known as the 200 plateau. This is the area where the Grout Disposal Facility is located. On the other hand, compaction of solid low-level radioactive waste (LLW) and incineration of LLW, radioactive and hazardous mixed waste (MW), and hazardous waste (HW) are demonstrated ways to reduce the volume of several types of waste. (See page 36, comment/response 14)

10.0 PACKAGING AND TRANSPORTATION OPERATIONS

1. COMMENT:

Does the ICC have the authority to enforce the transportation laws and regulations? How does DOE determine whether a trucking company is maintaining its fleet and that the driver's logs and manifests are current and accurate? (Portland Meeting)

RESPONSE:

The U.S. Department of Transportation (DOT) has the authority to enforce its regulations. DOT has very specific requirements for placarding (signs) and manifesting (what's being shipped). DOE is required to comply with DOT and state regulations for shipments of wastes or materials between its sites. For shipments made offsite via a commercial carrier, DOE contractors verify that the trucking company is maintaining its fleet of trucks, that training is current, and that manifests and drivers' logs are current and accurate. DOE and the trucking company are both liable under RCRA regulations in the event of improper handling and disposal of hazardous wastes. The shipper Motor Carrier Evaluation Program evaluates carrier strengths and weaknesses. These evaluations are intended to improve carrier efficiency, while reducing shipper liability.

2. COMMENT:

I think the Government and the companies who created this mess have not done enough to mitigate it and one of the reasons they have not is because the information has not gone out to the general public on which types of decisions should be made. (Portland Meeting)

RESPONSE:

(No response required.)

3. COMMENT:

My question is where is the waste being shipped? It appears that it's a shell game, move it here for now and move it somewhere else later. (Portland Meeting)

RESPONSE:

Most of the waste DOE accepts at Hanford is nuclear submarine reactor vessels from the Navy in Bremerton, Washington. The center portion of the submarines (reactor compartments) are radioactive, but the fuel has been removed. These reactor compartments are moved by barge up the Columbia River to the Hanford Site where they are disposed of. We have shipped very little waste offsite.

Except for HLW or TRU waste, further evaluation and waste characterization studies are needed before a final disposal decision for Hanford Site wastes is made. DOE is continuing to present storage options for these wastes pending a decision(s) on their disposal.

4. COMMENT:

We should evaluate and eventually implement a universal cask concept for interim storage, transportation, and disposal of defense wastes, defense spent fuel, and commercial waste and spent fuel. (Yakima Indian Nation - Cook)

RESPONSE:

Casks that are moved over highways traveled by the public are approved by the NRC. Because there can be considerable differences between defense wastes and commercial wastes, it may not be practicable to have a universal cask concept. However, the idea has merit and should be investigated further because of the potential reduced costs in the long run.

5. COMMENT:

The use of truck transport is extremely costly and promotes systems that do not minimize transportation accidents. This option should be reconsidered. (Yakima Indian Nation - Cook)

RESPONSE:

The cost for truck transport of waste is quite reasonable when all things are considered. Truck transport is flexible when compared with rail transport where waste shippers and/or receivers are limited by the railroad's schedule. Truck shipments can maintain radio contact with the receiver of the waste if a shipment is delayed. If safety is a key component to a company or agency's way of doing business, transportation accidents will be minimized because of good practice, not because of the materials shipped.

6. COMMENT:

You indicated that trucks are loaded with radioactive materials. Would you please explain what kind(s) sorts of materials; specifically, is it high-level waste or low-level waste? (Olympia Meeting)

RESPONSE:

At this time high-level waste is neither shipped nor received. The Hanford Site receives a small amount of low-level radioactive waste (LLW) from DOE sites nationwide. Commercial LLW from hospitals, commercial nuclear power reactors, and research reactors is currently disposed of at the U.S. Ecology site at Hanford. (See page 68, Section 7, Comment 5)

7. COMMENT:

How frequently do the submarine reactor compartments get shipped and what is their shipping route? (Olympia Meeting)

RESPONSE:

Since 1991 we have received 29 submarine reactor compartments for burial in the 200-East Area. The defueled submarine reactor compartments (SRC) are shipped from Bremerton via the Puget Sound, Pacific Ocean, and Columbia River

to a Port of Benton barge slip near the Hanford Site. The SRC are off-loaded and transported by flatbed carriers to the 200 East Area.

8. COMMENT:

With respect to the reference that treatment, storage, and disposal (TSD) will occur offsite until onsite TSD is shown as cost effective, please expand on this statement. What are the criteria for cost effectiveness?

RESPONSE:

The goal of improving TSD operations is to increase efficiency and reduce cost while maintaining a high level of safety. An efficient operation begins by injecting TSD issues into the earliest stages of project planning. This will result in redefining discrete operational criteria to maximize the efficiency of the entire operation. Improved efficiencies will have the largest impact on reducing the costs associated with TSD operations.

9. COMMENT:

Regarding shipments within Hanford Site boundaries and the statement that shipments meet all applicable standards. Does this include vehicle and operator standards? This statement could be more explicit, e.g., vehicle inspections and driver qualifications.

RESPONSE:

All contractors operating government-owned vehicles for offsite transportation shall comply with the federal regulations governing private truck operations. All drivers are required to have a Commercial Driver's License. All vehicles traveling south of the Wye barricade must be registered with the DOT as private carriers, which includes meeting federal requirements for insurance coverage, maintenance, and safety fitness review.

10. COMMENT:

Last year, Ecology asked for a schedule and program to overcome DOE's inability to meet Department of Transportation (DOT) standards for onsite shipments. This will become more of a problem as: (a) restrictions on public access to parts of the site are relaxed or removed, (b) work to consolidate hazardous materials storage/disposal in the 200 areas accelerates, and (c) privatization increases. (Ecology)

RESPONSE:

Shipment of hazardous materials and wastes at the Hanford Site complies with the revised requirements in Change I of DOE-RL 5480.1, Chapter III, issued in 1982. When it is not technically or economically feasible to comply with federal requirements for onsite shipments, the order allows other means that provide an equivalent degree of safety. The Hanford Site uses a three-phase approach that includes materials packaging, administrative controls, and risk analysis. Although not all shipments on the Hanford Site meet the federal requirements for packaging, they do provide an equivalent degree of safety.

We received guidance from DOT that transportation on a road where access is controlled at all times through the use of gates and guards is not commerce and is not regulated by DOT.

11. COMMENT:

We understand that DOE-RL continues to resist executing a memorandum of understanding with the Washington State Patrol to cover offsite emergency response. (Ecology)

RESPONSE:

DOE's Transportation Emergency Preparedness Program (TEPP) assigns responsibility to DOE-HQ (EM). TEPP is designed to develop and integrate emergency preparedness in two principal areas. First, the program focuses on planning and executing proper response to transportation incidents involving DOE shipments. Second, TEPP ensures that DOE can perform it onsite and offsite duties as required by the National Contingency Plan and the Federal Radiological Emergency Response Plan to provide technical advice and assistance as needed for incidents involving transportation of radioactive or mixed hazardous materials. The secret to TEPP's success rests with the integration of the Program with all affected organizations, including DOE, the appropriate states, and local and tribal organizations. (See page 91, Comment/Response 15)

12. COMMENT:

We would be delighted if DOE-RL would share this draft outreach guide with the rest of us in "the institutional network." It is not clear what specific document is referenced. (Ecology)

RESPONSE:

By the time this document is printed, Ecology, the Oregon Department of Energy, and Tribal representatives will have received a copy of the Transportation Coordination Guide. (See page 91, Response/Comment 15 of this section.)

13. COMMENT:

What is missing from the list is explicit reference to vehicle and equipment safety, and to driver qualifications. This may be inferred in the second bullet, but this item receives little attention compared to packaging. Additionally, we believe that what is missing is an acknowledgement that inspection by an independent agency (e.g., Washington State Patrol, Washington Utilities & Transportation Commission, and Washington Department of Health) is an effective audit/quality assurance mechanism. (Ecology)

RESPONSE:

According to 49 CFR Parts 383, 385, 387, and 390-399 of the Federal Motor Carrier Safety Regulations, all DOE contractors that operate federal government-owned vehicles for offsite transportation shall comply with the federal regulations governing private truck operations. All vehicles driven

south of the Wye barricade must be registered with the DOT as private carriers and the owner must meet federal requirements for insurance coverage, maintenance, and safety fitness review.

14. COMMENT:

It is important that DOE develop adequate data regarding the nature of constituents/material to be transported, and the location where the material will be shipped. This is essential for technology development, logistics, and emergency response planning. (Ecology)

RESPONSE:

DOE prepares shipping manifests for each offsite shipment that specifically identifies what material is being transported, its origin, and its destination. This information is required by federal law for carriers of hazardous, radioactive, and radioactive and hazardous mixed waste.

15. COMMENT:

We understand that DOE is developing a shipment guide for its operations offices. The guide will help ensure that uniform policies are followed, particularly with regard to such things as notifying state and local officials, public involvement, emergency planning, inspections, etc. We encourage DOE to acknowledge and commit to this guide in the Five-Year Plan. (Ecology)

RESPONSE:

We will.

16. COMMENT:

Our recent experience indicates that only pressure from a party accepting materials for shipment from Hanford has led to minimal institutional interface with the State. We have not seen any outreach program dealing with the public about Hanford shipments. Public acceptability of DOE's transportation management plans depends on working openly, early, and cooperatively with state, local, and tribal officials. (Ecology)

RESPONSE:

We agree. See the following response.

17. COMMENT:

RL has little public involvement regarding transport shipment. Although work by Westinghouse Hanford Company, Pacific Northwest Laboratory, and DOE-HQ has been good, RL is extremely reluctant to provide Washington State and Oregon State with courtesy notification of upcoming shipments. (Ecology 37)

RESPONSE:

DOE acknowledges the legitimate interest of the states and tribes on this issue. DOE has convened a Transportation External Coordination (TEC) working group of national associations representing states, tribes, local governments, industry, and health and safety professionals. This working group will focus on transportation and emergency management issues and look at ways to improve communications with all parties.

DOE-HQ is also developing a Transportation Coordination Guide to better coordinate shipping activities inside and outside DOE. Also, DOE-HQ's Office of Special Programs, EM-56, is developing a Long-Range Liaison and Communications Plan which will detail specific programs and community outreach activities to resolve the concern. To receive a copy, please call (509) 376-8372, or write:

U.S. Department of Energy
Mr. Sen K. Moy
P.O. Box 550
Richland, WA 99351

18. COMMENT:

The Transportation Assessment and Integration Report should include detailed plans for integration of the defense and civilian waste, including critical path charts with milestones and cognizant managers, and NRC and DOT certification of the various casks.

RESPONSE:

No further work is contemplated on DOE/EM-0075. However, we are forwarding this comment on to the DOE-HQ division responsible for publishing it. We have asked that if they release this document or publish another similar document, they consider this comment.

19. COMMENT:

RL is extremely reluctant to provide Washington State and Oregon State with courtesy notification of upcoming shipments. (Ecology)

RESPONSE:

DOE Order 1540.1A prescribes the DOE policy on shipment notification. This policy mirrors the policy applicable to commercial shippers. Specifically, written notification is required only for high-level radioactive waste and spent nuclear fuel.

11.0 SUPPORTING ORGANIZATIONS

1. COMMENT:

My deepest concern is worker safety. The SSP states in several places that DOE's top priority is worker safety. In a brief overview of the safety and health program for the Hanford Site (page 3-20) of the SSP for FY 1993, it states that there will be a voluntary protection program and assigns the responsibility for workers' safety to the Site contractors. It does not indicate oversight by DOE or any other organization, as required by law.

DOE Order 5482.1B, *Environmental Safety and Health Appraisal Program*, says internal appraisals shall be conducted by persons not directly responsible for performing the activities being appraised.

Within the past three years, Tiger Teams have noted numerous violations of the Occupational Safety and Health Act. In a management appraisal conducted about one year ago, we found individuals who monitor workers' safety were not properly trained.

The Office of Technical Assessment (OTA), which is a department of the U.S. Government, warns that DOE and its contractors have devoted too little attention to serious safety problems for cleanup workers. Safety remains a low priority in other government cleanup programs as well. The regulations are ineffective. OTA states that the Office of Environmental Restoration and Waste Management lacks adequate qualified staff to develop safety programs and the capacity to assess contractors' performance of safety and health and safety matters.

Within the same article, former cleanup chief, Leo P. Duffy, states that constraints imposed by the Clinton administration on hiring, particularly in hiring needed toxicologists and industrial hygienists, do not help the worker-safety aspect of cleanup. All the evidence leads to the conclusion that the workers are not being protected. (Olympia Meeting)

RESPONSE:

The Hanford Site contractors are responsible for the ensuring adequate protection of worker health and safety. Several independent environmental, safety, and health organizations are responsible for performing independent audits as stated in DOE Order 5482.1B. The Tiger Team found many OSHA violations, but many of them had already been identified by either DOE or its contractors. Actions have been completed on the majority of the Tiger Team findings. Industrial hygienists and toxicologists will be difficult to hire because of the competition from private industry. Nevertheless, DOE will need to try to recruit those specially trained persons to ensure the health and safety of workers at its sites.

2. COMMENT:

Despite all the Tiger Team findings, we still have a safety record that is much better than just about any other industry. However, one of the down

sides that we have with cleanup right now is worker contaminations. We attribute that to maybe not having quite as much concern about contamination anymore.

RESPONSE:

With the increased cleanup effort, there will be a potential for increased worker contaminations. These contaminations will result from a number of circumstances, most noteworthy of which is contamination that has become resuspended from the ground. Hanford contractors will need to remain alert to the possibilities of contamination from working in contaminated areas that are not as well defined in terms of contamination.

4. COMMENT:

We are dealing with an application of industrial hygiene and health physics in cleanup that is not common. Most applications of industrial hygiene and health physics are for manufacturing processes.

RESPONSE:

This is partially correct. Obviously the Hanford Site is not a typical manufacturing setting. However, many of the industrial hygiene principals associated with manufacturing are applicable at Hanford. In instances where there may be differences, we've developed and applied site-specific applications.

5. COMMENT:

Is there a commitment to fund further staffing for the change in mission from production to cleanup and the new sophistication that entails? (Olympia)

RESPONSE:

Yes. We have a manpower planning effort under way to develop a comprehensive approach to defining staffing needs. The plan will describe specific employee numbers and corresponding job skills. However, the issue of staffing is not limited to adding more employees. The mission change has also made it necessary to develop retraining programs for employees whose old jobs will no longer be needed.

6. COMMENT:

The Hanford philosophy has been to hire professionals from within the nuclear industry who are not that concerned with worker safety. These individuals are trained onsite. In an in-depth study of safety professionals last year in the 100 and 200 Areas, the people who were responsible for surveillance of worker safety had a maximum of six weeks of training. (Olympia Meeting)

RESPONSE:

This statement is not correct. On the contrary, we recruit and employ the best available talent on the market. Every employee, regardless of job assignment, is required to undergo an extensive 1 1/2-day orientation session

that focuses on safety. Additional job-specific training is also conducted. Six weeks of on-the-job training for persons responsible for worker safety surveillance is sufficient to ensure worker safety as born out by our safety record--a record we are constantly trying to improve. This is not to say that six weeks of training is sufficient to qualify a person as a safety professional.

7. COMMENT:

An internal DOE report on Hanford's health and safety indicated that the training at Hanford was insufficient for workers to do the work safely. (Seattle Meeting)

RESPONSE:

Workers on the Hanford Site are required to go through the 40-hour OSHA hazardous worker training course. Each year Site workers are required to complete an eight-hour refresher course to maintain their certification. This is in addition to radiation-worker training and the facility-specific training required for all major buildings on the Site.

8. COMMENT:

Is there going to be an increase in the budget for infrastructure? (Seattle Meeting)

RESPONSE:

The 1993 infrastructure (Landlord) budget was \$63.1 million. The 1994 budget allocates \$52.8 million. Though the infrastructure budget does not contain funding to actually operate facilities, it does provide for necessary support functions like fire protection, telecommunications, water treatment, roads, and environmental monitoring.

9. COMMENT:

I would like to know the medical condition and the name of the PFP worker who was injured last week in the accident? (Seattle Meeting)

RESPONSE:

It would violate the Privacy Act for us to share his name. He has returned to work at PFP. He inhaled a small amount of radioactivity and received an inhalation dosage. The dose he received hasn't been completely evaluated yet.

10. COMMENT:

Are you using "he" generically, not stating if it was a male or female? (Seattle Meeting)

RESPONSE:

Yes, "he" is used being used generically, not to distinguish between a male or female.

11. COMMENT:

I was made aware that there was another accident at PFP a day or two ago. I never read about the nature of that accident. Could you briefly describe what happened? (Seattle Meeting)

RESPONSE:

Two workers mixed two solvents together and the reaction produced some noxious fumes.

12. COMMENT:

The perception of what is safe keeps changing because of changes in the regulatory environment. (Pasco Meeting)

RESPONSE:

(No response needed)

13. COMMENT:

What about RCRA compliance? Are you in full compliance? (Portland Meeting)

RESPONSE:

The Hanford Site is not yet in full compliance with RCRA. The Tri-Party Agreement is an agreement between the DOE, Ecology, and the EPA to comply with the treatment, storage, and disposal and the corrective-action provisions of RCRA, as well as the CERCLA remedial-action provisions. In the Tri-Party Agreement, the three agencies agreed to a schedule for cleanup of the Hanford Site. DOE plans to meet the schedule provided technology(ies) are available and sufficient funding is provided to complete the work.

12.0 DEFENSE AUTHORIZATION ACT

1. COMMENT:

DOE must give site-specific costs and identify the projects for each of the five years, not just one year, in accordance with the Defense Authorization Act.

RESPONSE:

DOE identifies site-specific projects and estimates their costs for environmental restoration and waste management activities for a five-year period. The Hanford Site-Specific Plan (SSP) lists the principal cleanup projects for the next five years, but only estimates costs for the planning year because of the uncertainty associated with the funding of cleanup work beyond a year.

The Five-Year Plan published by DOE-HQ meets the requirements set by Congress in the Act. DOE's decision to have each site produce an SSP (also covering five years) as a separate document was to give each operations office an opportunity to provide more information to the public than would be possible in the DOE Five-Year Plan. There is not a requirement to prepare an SSP for each DOE site.

2. COMMENT:

What particular instrument do you use to monitor radioactivity, a scintillation counter? (Seattle Meeting)

RESPONSE:

Tritium is most often measured using a liquid scintillation counter. It is a beta emitter with a very low energy level, making detection and counting more difficult. Although there are other methods for measuring tritium, liquid scintillation counting is usually the method of choice due to its higher sensitivity.

Depending on the radioactive material, we use a variety of monitoring instruments. See the following response.

3. COMMENT:

How are you counting? (Seattle Meeting)

RESPONSE:

Several counting techniques are used at the Hanford Site. Gamma ray spectra are used to identify those radionuclides that emit a gamma photon with enough energy to be detected by the instrument. Liquid scintillation counting is used for lower energy beta emitters. Alpha emitting radionuclides can be detected either by surface barrier detectors or by liquid scintillation counting. Field instruments use Geiger-Mueller tubes to detect ionizing radiation in the environment or on the surface of contaminated equipment. The

thermoluminescent dosimeter is used for atmospheric monitoring. A low background beta counter is used for elements like strontium.

4. COMMENT:

Are you testing for everything in the drinking water at the Richland site? Does this include testing for strontium? (Seattle Meeting)

RESPONSE:

We test the drinking water for everything that may come from the Hanford Site. The drinking water samples are collected at the Richland water treatment plant. In addition, we check for radionuclides from world-wide fallout and for chemicals and pesticides that may come from sources other than the Hanford Site. This includes testing for strontium. No radionuclides or chemicals in the drinking water at the Richland water treatment plant are close to the allowable limits specified by the EPA. While strontium is present in greater concentrations at N Springs, by the time it is mixed with Columbia River Water, the concentrations of strontium are not above background levels.

5. COMMENT:

We request the necessary materials to review the Hanford Site-specific portions of DOE's Five-Year Plan. The Plan released for comment fails to comply with the requirements of the National Defense Authorization Act for Fiscal Years 1992 and 1993. Congress mandated that actions associated with the environmental restoration and waste management at DOE sites be described in the Five-Year Plan. We request that you provide the detailed description of actions and projects to comply with Section 3135(a)(4) of the Act.

RESPONSE:

It is important to know that there is a difference between the Hanford Site-Specific Plan (SSP) and the DOE Five-Year Plan. The DOE Five-Year Plan, which is required by the Defense Authorization Act, contains information from all of the DOE sites involved in environmental restoration and waste management. This Plan provides the information that is required by the Act. The SSP that DOE required to be prepared at a local site level may provide information to support preparation of the Five-Year Plan, but generally it is not as extensive. For example, estimated budget information covers only the next fiscal year in the SSP; the estimated budget for major projects for the following five years is contained in the Five-Year Plan. Activity data sheets (ADSs) describe the specific project or program information and are submitted by DOE-RL to DOE-HQ for the preparation of the Five-Year Plan.

6. COMMENT:

Section 3135(a)(1) requires that the Five-Year Plan describe environmental and waste management activities "to be conducted during the fiscal year beginning on October 1 of the same calendar year." The Department is already unconscionably late in releasing this plan, release coming some five months after the statutory deadline in the Act. This irrevocably harms the public and states' abilities to influence the creation of a sensible plan for spending in the coming fiscal year.

RESPONSE:

The Hanford Site-Specific Plan (SSP) was delayed because DOE-RL did not receive DOE-HQ approval for its release until March 1993. We agree that a late plan does not offer the public sufficient opportunity to comment on the proposed budget for the upcoming fiscal year.

**DATE
FILMED**

6 / 1 / 94

END