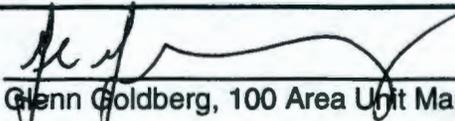
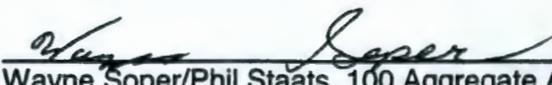
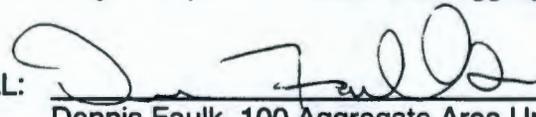


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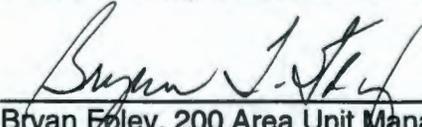
Meeting Minutes Transmittal/Approval
Unit Managers' Meeting
Remedial Action and Waste Disposal Unit/Source Operable Unit
3350 George Washington Way, Richland, Washington
July 1998

FROM/ APPROVAL:  Date 4/19/98
Glenn Goldberg, 100 Area Unit Manager, RL (H0-12)

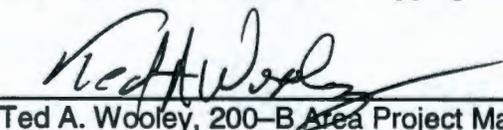
APPROVAL:  Date 11-23-98
Wayne Soper/Phil Staats, 100 Aggregate Area Unit Manager, Ecology (B5-18)

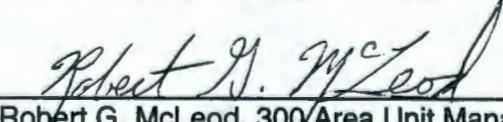
APPROVAL:  Date 11-9-98
Dennis Faulk, 100 Aggregate Area Unit Manager, EPA (B5-01)

APPROVAL: N/A - Did not attend Date _____
Donna Wanek, 100-N Area Unit Manager, RL (H0-12)

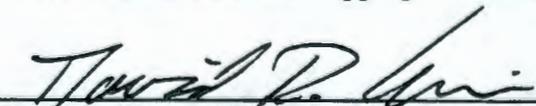
APPROVAL:  Date 11/18/98
Bryan Foley, 200 Area Unit Manager, RL (H0-12)

APPROVAL: N/A - Did not attend Date _____
Joan Bartz/Shri Mohan, 200 Aggregate Area Unit Managers, Ecology (B5-18)

APPROVAL:  Date 12/10/98
Ted A. Wooley, 200-B Area Project Manager, Ecology (B5-18)

APPROVAL:  Date Dec 7, 1998
Robert G. McLeod, 300 Area Unit Manager, RL (H0-12)

APPROVAL: N/A - Did not attend Date _____
Alex B. Stone, 300 Area Aggregate Area Unit Manager, WDOE (B5-18)

APPROVAL:  Date 3 Dec 98
David R. Einan, 300 Area Aggregated Unit Manager, EPA (B5-01)

APPROVAL:  Date 02/10/98
Ted A. Wooley, 300 Area Process Trenches Subproject Manager, Ecology (B5-18)

Meeting Minutes are attached. Minutes are comprised of the following:

Attachment #1a and b	--	Agendas
Attachment #2a, b, and c	--	Attendance Records
Attachment #3	--	Meeting Minutes
Attachment #4	--	Rationale for Not Adding Radionuclide and Nonradionuclide Cancer Risks

Prepared by:

Michelle Peterson Date 12/10/98
Michelle Peterson (H0-10)/Tamen Rodriguez (H0-17)

Concurrence by:

Vern Dronen Date 12/14/98
Vern Dronen, BHI Remedial Action and Waste Disposal Project Manager
(H0-17)

UNIT MANAGERS' MEETING AGENDA
3350 George Washington Way, Room 1B45
July 16, 1998

1:00 p.m. – 100 Area

Remedial Action (100-B/C and 100-D)

- Status of EPA Comments on 116-C-1 Closeout Verification Package and Cumulative Risk Evaluation
- Status of Ecology Comments on 116-C-1 Cumulative Risk Evaluation, Which is the Proposed Language for Future Verification Packages for the 100-B/C, -D, -H, -F, and -K Areas
- Transmittal of July 9, 1998, Meeting Minutes on Pipelines, Plumes, and Overburden, Sampling and Closeout Strategies

100 Area Assessments and Remedial Design

- 100 Area Remaining Sites
 - Remaining Sites Path Forward
 - Appendix C Update
 - Burial Grounds FFS/Proposed Plan Status
 - Detailed Work Plan

2:00 p.m. – 200 Area

- 200 Area Implementation Plan Status
- 200-CW-1 Gable/B-Pond and Ditches Cooling Water Waste Group DQO Status
- Nonradioactive Dangerous Waste Landfill (NRDWL)
 - Scope and Priority
- Detailed Work Plan for FY99-01
 - Development Status
 - Hanford Prototype Barrier Monitoring

UNIT MANAGERS' MEETING AGENDA
3350 George Washington Way, Room 2A01
July 22, 1998

1:00 p.m. – 300 Area

300-FF-2

- Near Term Work at PNNL Sites, Including Schedule
- Sampling Program Status
- DWP

Process Trenches

- Backfill and Regrading Status
- Vadose Zone Clean Closure Report Status
- Independent PE Report and Certification
- Permit Revisions

Landfill 1D

- Treatability Variance Status
- Lead Analytical Study

Burial Ground 618-4

- Drum DQO Status

North Process Pond

- Excavation Status

**MEETING MINUTES
REMEDIAL ACTION AND WASTE DISPOSAL
UNIT MANAGERS' MEETING – 100 AREA
July 16, 1998**

Attendees: See Attachment #2a.

Agenda: See Attachment #1a for copy of meeting agenda.

Topics of Discussion:

Remedial Action (100-B/C and 100-D)

1. Status of EPA Comments on 116-C-1 Closeout Verification Package and Cumulative Risk Evaluation -- Comments from EPA have recently been received, and BHI is in the process of comment resolution, to include inclusion of cumulative risk, and evaluating/including sample splits with Ecology and the Washington State Department of Health (DOH). EPA advised that DOH will be given the opportunity to formally review and comment on the next submittal of the 116-C-1 closeout report, and that they have been given a copy of the first submittal as information.

Discussion ensued on cumulative risk evaluation and presentation/reporting of the analyses in the verification package reports (see Item 2 below).

2. Status of Ecology Comments on 116-C-1 Cumulative Risk Evaluation, Which is the Proposed Language for Future Verification Packages for the 100-B/C, -D, -H, -F, and -K Areas -- The following is a summary of the discussion with EPA and Ecology on the 116-C-1 cumulative risk assessments, which will be the "template" for inclusion in all future closeout verification packages:
 - A. As prepared in a draft analyses and transmittal to RL, the cumulative risk from residual radionuclide COCs will be presented over time, from completion of remediation through a period to at least the year 2018. This demonstrates risk reduction over time, as residual radionuclide COCs naturally decay over time, and the associated dose is reduced over time. No further interpretation of analysis is necessary.
 - B. Regarding applicability of adding cumulative risk from residual radionuclide COCs and residual nonradionuclide COCs, a request for supporting rationale was made by EPA and Ecology. Attachment #4 was provided, citing *Risk Assessment Guidance for Superfund, Volume 1, Human Health Evaluation Manual* (Part A) [EPA/540/1-89-002, December 1989], Section 10.7.3, "Combining Radionuclide and Chemical Cancer Risks," as rationale for not adding radionuclide and nonradionuclide risks, but reporting/tabulating separately.
3. Transmittal of July 9, 1998, Meeting Minutes on Pipelines, Plumes, and Overburden Sampling and Closeout Strategies -- A final draft of the meeting minutes will be transmitted soon concurrent RL, EPA, and Ecology review. The meeting minutes will then be included in the August 1998 UMM minutes.

4. Other --

- A. *116-B-4 site:* The 116-B-4 site at 100-B/C was previously excavated, some sampling was performed, and the excavation was backfilled. EPA advised that the previous sampling data could be used for site closeout purposes. RL requested background on the previous activities at this site.
- B. *FY Small Sites and Grouping:* From the recent detailed work planning activities, numerous small sites at 100-B/C are planned for remediation and closeout in FY 1999 and beyond. ERC requested if several sites could be grouped together (with the same process and/or COCs) for site closeout purposes. EPA indicated that the proposal was agreeable in concept, but the regulators will need to review the details on individual waste site groupings on a case-by-case basis.

100 Area Assessments and Remedial Design*100 Area Remaining Sites*

1. Appendix C Update -- EPA presented a marked-up copy of Appendix C, indicating changes to be made. The mark-up copy was given to BHI for comment incorporation. EPA requested that electronic copies of the file in both Word and WordPerfect be provided in the future, as well as a hardcopy of the material, to review after comments have been incorporated.

Ecology stated that they would like to add 100-D-7 to the Appendix C update, and discussion ensued.

EPA discussed signing the new Appendix C Update, task package, and schedule at the July 28, 1998, IAMIT meeting. EPA then presented their changes to Appendix C to ensure that the group understood the changes being requested. It was noted that Appendix D (the Work Schedule) would also need to be updated to reflect the changes being made to Appendix C.

2. 100 Area Remaining Sites Path Forward -- As discussed at a meeting held on July 14, 1998, RL will proceed with revisions to the Proposed Plan in response to comments received in early June 1998 from EPA Region 10. It was agreed that a draft of the revised documents would be ready for review with the local EPA by August 10, in support of providing to EPA Region 10 review by August 17. As discussed at the July 14 meeting, Ecology will provide the revised Proposed Plan for Lacey review concurrent with the Region 10 review. EPA stated a goal of completing the Proposed Plan by then end of FY 1998.
3. Burial Grounds FFS -- The cost estimates are nearly complete for the burial grounds. BHI stated that the first draft of the report should be ready for ERC review in early August. It was agreed among RL, EPA, and Ecology that the Burial Grounds FFS would not be submitted for regulatory agency review until the 100 Area Remaining Sites Proposed Plan is complete.
4. Detailed Work Plan -- Work is proceeding on the detailed work plan for FY 1999, FY 2000, and FY 2001. RL indicated that EPA and Ecology would be provided with an opportunity to review the detailed work plan products (i.e., scoping statements, schedules, and budget) in the near future.

**REMEDIAL ACTION AND WASTE DISPOSAL
UNIT MANAGERS' MEETING -- 200 AREA
July 16, 1998**

Attendees: See Attachment #1b.

Agenda: See Attachment #1a for copy of meeting agenda.

Topics of Discussion:

1. 200 Area Implementation Plan Status -- The Implementation Plan is currently being reviewed by RL and DOE-Headquarters. The reviews should be completed by next week, and the comments will then be reviewed with the 200 Area Implementation Plan team.
2. 200-CW-1 Gable/B Pond and Ditches Cooling Water Waste Group DQO Status -- RL is currently waiting for comments from Ecology on the DQO workbook. After Ecology's comments are received and resolved, BHI will revise the workbook accordingly.
3. Nonradioactive Dangerous Waste Landfill (NRDWL) -- A letter was issued by Ecology requiring that detailed soil and groundwater surveys (i.e., characterization) be conducted at the NRDWL by June 1999. The NRDWL is part of the Nonradioactive Landfills Waste Group, and no near-term characterization activities are currently scheduled for this group. RL plans to meet with Ecology to discuss workscope expectations and priorities.
4. Detailed Work Plan for FY 1999-2001 --
 - *Development Status* -- A meeting will be scheduled to discuss the workscope for the next FY. RL hopes to share the scoping statements in that meeting.
 - *Hanford Prototype Barrier Monitoring* -- RL discussed the draft detailed work plan scope, which includes an interim treatability test report and the demobilization of field equipment for FY 1999. Workscope for FY 2000 includes asphalt testing, a settlement and subsidence study, and the preparation of a final report. No additional performance monitoring and testing of the barrier is currently planned.

EPA indicated that they would want RL (not necessarily the ER Program) to continue monitoring of the barrier and requested additional discussions on the subject at a future UMM.
5. 241-Z-361 Tank -- EPA discussed that RL EM-30 is planning to characterize the 241-Z-361 tank because of the potential for hydrogen build-up (unresolved safety question). The tank is part of the Plutonium/Organic-Rich Process Waste Group. Vapor sampling is planned in FY 1999, which may be later followed by core sampling.

**REMEDIAL ACTION AND WASTE DISPOSAL
UNIT MANAGERS' MEETING – 300 AREA
July 22, 1998**

Attendees: See Attachment #2c.

Agenda: See Attachment #1b for copy of meeting agenda.

Topics of Discussion:

300-FF-1

300 Area Process Trenches

1. Backfill and Regrading Status -- Regrading is proceeding at the 300 Area Process Trenches. The fencing is mostly taken down, and the regrading work is currently approximately 25 to 30% complete. Regrading is anticipated to be finished within the next couple of weeks. The tribes that have visited the site seem to be pleased with the progress to-date.

Ecology asked if work in light of elevations, wellheads, etc., was proceeding according to plan, and BHI responded that all work is currently proceeding as planned.

2. Vadose Zone Clean Closure Report Status -- Ecology will issue a letter approving the clean closure report, recognizing that the approval applies to the soils, not the groundwater.
3. Independent PE Report and Certification -- Ecology stated that they were ready to approve the certification and would soon be preparing the official.
4. Permit Revisions -- Ecology is working to the date of August 10, 1998, to complete work associated with including the Class 1 permit revisions into Revision 5 of the permit. Ecology will not approve the corrective action status permit related to groundwater at this time.

Landfill 1D

1. Treatability Variance Status -- EPA, via cc:mail, indicated that they will not approve a variance on the treatment of lead-contaminated soils. EPA stated that the treatability variance on soil treatment was not approved because there was not an appropriate basis for the variance.
2. Lead Analytical Study -- BHI has received some of the results from the lead analytical study and will prepare a package to transmit the results to RL and the regulators. BHI briefly discussed correlation of field screening XRF results versus laboratory TCLP results.

Burial Ground 618-4

1. Drum DQO Status -- The DQOs for the burial ground have been worked on, and the sampling plan is currently being prepared. A meeting will be set for early August 1998 to discuss how sampling will actually proceed.

RL stated that they were unsure on the number of samples that would be necessary and also on the nondestructive assay (NDA) testing of the drums. Discussion ensued on the value added (if any) on performing the NDA testing in light of the cost and if any benefit would be gained.

BHI provided information on a recent trip to Rocky Flats to witness some of the drum sampling there. Discussion ensued on using "lessons learned" and how the Rocky Flats visit and similar types of information could provide helpful information with drum sampling at Burial Ground 618-4.

North Process Pond

1. Excavation Status -- Excavation at the North Process Pond is proceeding smoothly. Two test pits were excavated in the southwest quadrant of the pond and radiologically screened to determine how much deeper to excavate this area.

The test pit data suggest that another 4 ft will need to be excavated in the southwest quadrant of the pond, and it currently looks as if cleanup levels will be met in the northwest quadrant of the pond.

300-FF-2

1. Near-Term Work at PNNL Sites, Including Schedule -- 67 of the 300-FF-2 waste sites that are currently under PNNL responsibility will eventually be transitioned to BHI. An assessment of these 67 waste sites is currently being conducted during FY 1998 (currently about 50% through the assessment), with the hope that perhaps some of these sites can be rejected or dispositioned to another regulatory authority.

BHI would like to meet with EPA and RL to discuss how these 67 sites will be addressed in the FFS and Proposed Plan. A meeting to discuss the disposition of these sites will be scheduled for late August or early September 1998.

2. Sampling Program Status -- The second round of groundwater sampling was completed on July 8, 1998. Results should be available within 45 days.
3. Detailed Work Plan -- Preparation of the detailed work plan is nearing completion. RL and EPA reviews are scheduled to begin in the near future.
4. IAMIT Presentation -- Materials relating to the status of RCRA/CERCLA integration and coordination of 300 Area activities were discussed in preparation for the IAMIT meeting, which will be held on July 28, 1998. It was noted that discussion with J. Wallace of Ecology regarding RCRA TSD unites have been initiated and several additional meetings are scheduled.

RATIONALE FOR NOT ADDING RADIONUCLIDE AND NONRADIONUCLIDE CANCER RISKS

Source of Information: *Risk Assessment Guidance for Superfund, Volume 1, Human Health Evaluation Manual (Part A)* [EPA/540/1-89/002, December 1989], Section 10.7.3, "Combining Radionuclide and Chemical Cancer Risks."

The section starts with: "Estimates of the lifetime risk of cancer to exposed individuals resulting from radiological and chemical risk assessments may be summed in order to determine the overall potential human health hazard associated with a site."

The paragraph continues on: "Certain precautions should be taken, however, before summing these risks. First, the risk assessor should evaluate whether it is reasonable to assume that the same individual can receive the maximum radiological and chemical dose. It is possible for this to occur in some cases because many of the environmental transport processes and routes of exposure are the same for radionuclides and chemicals."

There is a paragraph of technical details on the potential differences in modeling assumptions and the use of different statistical values for radionuclide and nonradionuclide risk assessment practices.

The section concludes with the statement: "In light of these limitations, the two sets of risk estimates should be tabulated separately in the final baseline risk assessment."