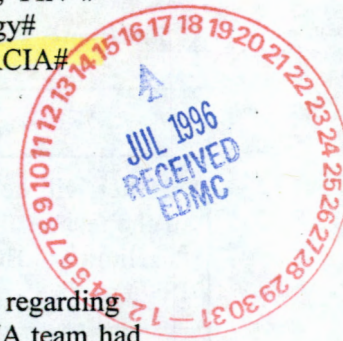


Meeting Minutes
Columbia River Comprehensive Impact Assessment
Weekly Management Meeting
July 2, 1996
Battelle's ETB Building, Columbia River Room, 1:00 - 5:00

Attendees(*)/Distribution(#):

Charlie Brandt, PNNL#	Stuart Harris, CTUIR#	Doug Palenshus, Ecology#
Amoret Bunn, Dames & Moore*#	RD Hildebrand, RL#	Ralph Patt, Oregon*#
Sandra Cannon, PNNL*#	Dave Holland, Ecology*#	Stan Sobczyk, NPT#
Paul Danielson, NPT*#	A Knepp, BHI*#	Bob Stewart, RL*#
Greg deBruler, HAB*#	Jay McConnaughey, WDFW#	Dan Tano, RL*#
Kevin Clarke, RL#	Terri Miley, PNNL#	Mike Thompson, RL#
Roger Dirkes, PNNL*#	Dick Moos, BHI#	JR Wilkinson, CTUIR#
Sue Finch, PNNL*#	Nancy Myers, BHI*#	Thomas W. Woods, YIN*#
Larry Gadbois, EPA*#	Bruce Napier, PNNL#	Jerry Yokel, Ecology#
Rose Gentry, Oregon#	Lino G. Niccoli, YIN*#	Admin Records-CRCIA#
Dick Gilbert, PNNL*#	Roger Ovink, BHI#	



Summary of Discussions:

Draft Response on Technical Peer Reviewer Involvement on Comment Resolution

Bob Stewart handed out a "Preliminary Response to the CRCIA Technical Peer Reviewer" regarding involvement of the technical peer reviewers in the comment resolution process. The CRCIA team had previously concluded to not hold a meeting with the technical peer reviewers to resolve comments on the draft final report. Also, Bob Stewart had a conference call with the directors of the technical peer reviewers and the same conclusion was reached. No comments were received from the team on the handout. A letter will be prepared and submitted to the directors based on the handout.

Options for Comment Resolution of the Comprehensive Section

This agenda item was deferred to 7/16/96.

Overview Information for the CRCIA Home Page

A proposed overview for publication on the internet was handed out at the 6/25/96 meeting with a request for comments by 7/2/96. Agreement was reached to put the overview on the internet.

Items Not on the Agenda

Sandra Cannon handed out a package containing the up-front information (title page, contributors, technical peer reviewers, and contents) of the *Screening Assessment and Requirements for a Comprehensive Assessment* for review with comments due back on 7/16/96. Agreement was reached to delete the headings "Part I: Screening Assessment" and "Part II: Requirements" on the contributors page. It was also requested that roles not be identified for the Oregon State Department of Energy team members.

A draft preface to be used in the *Screening Assessment and Requirements for a Comprehensive Assessment* was handed out for team review with comments due back on 7/16/96.

At the morning comprehensive meeting, Dick Gilbert passed around a copy of the NCRP Commentary No. 14, *A Guide for Uncertainty Analysis in Dose and Risk Assessment Related to Environmental Contamination*.

Copies can be obtained for team members at a price of \$20 each. An action was assigned to Sue Finch to contact NCRP and explain how the team would be using the copies and request that permission be granted to copy the document. If this is not obtained, enough copies will be ordered to allow one copy per organization represented in the CRCIA team.

The remainder of the meeting was devoted to working on the comprehensive section which is not captured in the meeting minutes.

Comprehensive Chapter: None identified at this meeting.

Agreements:

- Agreement was reached to put the overview on the internet.
- Agreement was reached to delete the headings "Part I: Screening Assessment" and "Part II: Requirements" on the contributors page.

Action Items:

Action Description	Assigned To	Due Date
A letter will be prepared and submitted to the directors of the technical peer reviewers based on the proposed "Preliminary Resopnse to the CRCIA Technical Peer Reviewer"	Bob Stewart	ASAP
Review the up-front information (title page, contributors, technical peer reviewers, and contents) on the <i>Screening Assessment and Requirements for a Comprehensive Assessment</i> and provide comments.	CRCIA Team	7/16/96
Review the draft preface to be used in the <i>Screening Assessment and Requirements for a Comprehensive Assessment</i> and provide comments.	CRCIA Team	7/16/96
Contact NCRP and explain how the team would be using the copies of NCRP Commentary No. 14 and request that permission be granted to copy the document. If permission is denied, order copies for team members.	Sue Finch	7/8/96

Attachments (file only - copies available upon request):

- 7/2/96 meeting agenda
- Preliminary Response to the CRCIA Technical Peer Reviewer, prepared by Bob Stewart
- Up-front information (title page, contributors, technical peer reviewers, and contents) of the *Screening Assessment and Requirements for a Comprehensive Assessment*
- Draft preface to be used in the *Screening Assessment and Requirements for a Comprehensive Assessment*

Prepared by SM Finch on 7/8/96

AGENDA
Columbia River Comprehensive Impact Assessment
Weekly Project Management Team

Scheduled from 1:00 - 4:00 p.m., Monday, July 1, 1996
 Battelle's ETB Building, Columbia River Room

Scheduled from 9:00 - 12:00 p.m., Tuesday, July 2, 1996
 Bechtel Building, 3350 George Washington Way, 2A01 Conference Room

Scheduled from 1:00 - 4:00, Tuesday, July 2, 1996
 Battelle's ETB Building, Columbia River Room

7/1/96 - Monday Afternoon

1. "Polishing" of Comprehensive Text
 - Section 1.3 - Transport-to-River Requirements
 - Section 1.4 - Waste Entry to River Requirements

7/2/96 - Tuesday Morning Session

1. Content Development:
 - Section 2.1 - Required Impact Assessment Quality
 - Section 2.2 - Identification of River Impact "Drivers"
 - Section 2.3 - Analysis Architecture & Integration Requirements
2. Material to Hand Out for Review
 - Section 1.9 - Dose Effects Requirements
 - Section 1.10 - Develop Climate, Geological & Political Scenario Requirements
 - Section 1.11 - Develop Tech B/L Requirements
3. Comments from Team Members Due Today
 - NONE - Behind Schedule on Sections 1.9, 1.10, and 1.11
4. Material turned over for Editorial Review Today
 - Section 1.5 - Review Hydrodynamics Requirements
 - Section 1.6 - Habitat & Critical Uptake Locations Requirements
 - Section 1.7 - Ecosystem Relationships & Cultural Dependency Modeling Requirements
 - Section 1.8 - Dose-to Receptor Calculation Requirements

7/2/96 - Tuesday Afternoon Session

1. 1:00 - Bob Stewart - Introduction
2. 1:05 - Bob Stewart - Draft Response on Technical Peer Reviewer Involvement on Comment Resolution
 - Bob Stewart will bring a draft letter summarizing the response of the CRCIA Team. Also, Amoret Bunn and Sandra Cannon will look at the schedule and develop comment resolution options.
3. 1:35 - Bob Stewart - Options for Comment Resolution of the Comprehensive Section
 - Draft options for comment resolution of the comprehensive section will be presented.
4. 1:55 - Sandra Cannon - Overview information for the CRCIA Home Page
 - A draft Overview was handed out for review at the 6/25/96 meeting. Currently, the Overview section on the home page states "under construction". Comments will be received and discussed with the hope of reaching agreement on material for the Overview section of the home page.
5. 2:15 - Content Development of Comprehensive Section
 - Section 2.4 - Identification & Management of Uncertainty
 - Section 2.5 - Data Quality Requirements
 - Section 2.6 - Requirements for Development of New Analysis Methods

- Section 2.7 - Development of Risk Assessment Methods

6. 4:30 - Review of Upcoming Meetings

7/8/96 - Monday Afternoon - ETB Columbia River Room

1. "Polishing" of Comprehensive Text
 - Section 1.5 - Review Hydrodynamics Requirements
 - Section 1.6 - Habitat & Critical Uptake Locations Requirements
 - Section 1.7 - Ecosystem Relationships & Cultural Dépendancy Modeling Requirements
 - Section 1.8 - Dose-to Receptor Calculation Requirements

7/9/96 - Morning - Bechtel Building, Room 2A01

1. Content Development:
 - Section 2.8 - Analysis Verification Requirements
 - Section 2.9 - Applicable Standards
 - Section 2.10 - Management of Changes
2. Material to Hand Out for Review (Comments due to Lino on 7/16)
 - Section 2.1 - Required Impact Assessment Quality
 - Section 2.2 - Identification of River Impact "Drivers"
 - Section 2.3 - Analysis Architecture & Integration Requirements
 - Section 2.4 - Identification & Management of Uncertainty
 - Section 2.5 - Data Quality Requirements
 - Section 2.6 - Requirements for Development of New Analysis Methods
 - Section 2.7 - Development of Risk Assessment Methods
3. Comments from Team Members Due Today
 - Section 1.9 - Dose Effects Requirements
 - Section 1.10 - Develop Climate, Geological & Political Scenario Requirements
 - Section 1.11 - Develop Tech B/L Requirements
4. Material turned over for Editorial Review
 - None - Behind Schedule

7/9/96 - Afternoon - ETB Columbia River Room

- Make-up session for Comprehensive Section

7/15/96 - Monday Afternoon - ETB Columbia River Room

1. "Polishing" of Comprehensive Text
 - None - Behind Schedule

7/16/96 - Morning - Bechtel Building, Room 2A01

1. Content Development:
 - Develop Abstract, Purpose, Uses
2. Material to Hand Out for Review (Comments due to Lino on 7/16)
 - Section 2.8 - Analysis Verification Requirements
 - Section 2.9 - Applicable Standards
 - Section 2.10 - Management of Changes
3. Comments from Team Members Due Today
 - Section 2.1 - Required Impact Assessment Quality
 - Section 2.2 - Identification of River Impact "Drivers"
 - Section 2.3 - Analysis Architecture & Integration Requirements
 - Section 2.4 - Identification & Management of Uncertainty
 - Section 2.5 - Data Quality Requirements
 - Section 2.6 - Requirements for Development of New Analysis Methods
 - Section 2.7 - Development of Risk Assessment Methods
4. Material turned over for Editorial Review
 - Section 1.9 - Dose Effects Requirements
 - Section 1.10 - Develop Climate, Geological & Political Scenario Requirements
 - Section 1.11 - Develop Tech B/L Requirements

7/16/96 - Afternoon - ETB Columbia River Room

- Make-up session for Comprehensive Section

Robert K (Bob) Stewart

Author: Amoret L Bunn at ~MTC4

Date: 6/28/96 2:42 PM

Priority: Urgent

TO: Robert K (Bob) Stewart at ~DOE6

Subject: Preliminary Response to CRCIA TPR

----- Message Contents -----

Preliminary Response to CRCIA Technical Peer Reviewer

After consultation with the CRCIA Project Management Team and the directors of the CRCIA Technical Peer Reviewers, an alternative plan was agreed upon for comment resolution for the final document, "Screening Assessment and Requirements for a Comprehensive Assessment: Columbia River Comprehensive Impact Assessment":

- 1) preliminary responses to the comments will be sent to the reviewers;
 - 2) reviewers may comment on the preliminary responses;
 - 3) if the authors, CRCIA Project Management Team, and TPA project managers can not resolve the comment, then a conference call will be used to resolve the comment and/or the dissenting views will be incorporated into the final document.
- to the degree possible, based on schedule*

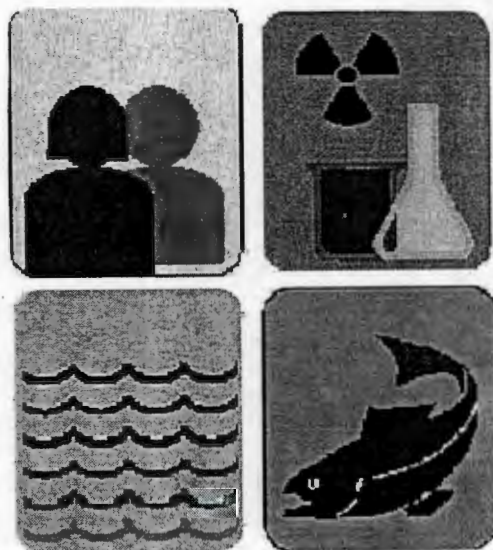
Some of the issues brought up by the CRCIA Project Management Team and the directors of the CRCIA Technical Peer Reviewers include:

- the time for resolving all comments would involve several days
- problems associated with resolution in an open meeting
- constraints of the schedule (re: authors need time to make changes to the document after the comment resolution meeting)
- budget constraints (re: compensation for Technical Peer Reviewers)

Screening Assessment and Requirements for a Comprehensive Assessment

Columbia River Comprehensive Impact Assessment

December 1996



Prepared by the Pacific Northwest National Laboratory
and CRCIA Management Team Representatives of

U.S. Department of Energy
U.S. Environmental Protection Agency
Washington State Department of Ecology
Bechtel Hanford, Inc.
Dames & Moore

Confederated Tribes of the Umatilla Indian Reservation
Nez Perce Tribe ERWM
Yakama Indian Nation
Hanford Advisory Board
Oregon State Department of Energy

Published by the U.S. Department of Energy

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Contents

Preface

Executive Summary

Glossary



Part I: Screening Assessment

- 1.0 Introduction
- 2.0 Site Characterization
- 3.0 Selection of Contaminants for the Screening Assessment
- 4.0 Data for the Screening Assessment
- 5.0 Ecological Risk
 - 5.1 Species for the Screening Assessment
 - 5.2 Ecological Risk Assessment
- 6.0 Human Risk
 - 6.1 Scenarios
 - 6.2 Human Risk Assessment

References

Appendices



Part II: Requirements for a Comprehensive Assessment

- 1.0 Introduction
- 2.0 What Is to Be Included in a Comprehensive Assessment
- 3.0 How a Comprehensive Assessment Is to Be Performed
- 4.0 How a Comprehensive Assessment Is to Be Managed

References

Appendices

- II-A. Specifications for What Is to Be Included in a Comprehensive Assessment
- II-B. Specifications for How a Comprehensive Assessment Is to Be Performed
- II-C. Specifications for How a Comprehensive Assessment Is to Be Managed



Part I

Screening Assessment



Part II

Requirements for a Comprehensive Assessment

Preface

The Columbia River is a critical resource for residents of the Pacific Northwest. It provides for basic needs and is interrelated with the life style and quality of life for Columbia Basin's many human and non-human residents. This resource drew the Manhattan Project's planners to the site now called Hanford to produce nuclear weapon materials (see Figure P.1 [figure showing topography and sources of contaminants]). Production of those materials has left behind a legacy of chemical and radioactive contamination and materials that have, are, and will continue to pose a threat to the Columbia River for the foreseeable future.

To evaluate the impact to the river from this Hanford-derived contamination, the U.S. Department of Energy, U.S. Environmental Protection Agency, and State of Washington Department of Ecology (the Tri-Party agencies) initiated a study referred to as the Columbia River Comprehensive Impact Assessment (CRCIA). To address concerns about the scope and direction of CRCIA as well as enhance regulator, tribal, stakeholder, and public involvement, the CRCIA Management Team was formed in August 1995. The CRCIA Team meets weekly to share information and provide input to decisions made by the Tri-Party agencies concerning CRCIA. Representatives from the Confederated Tribes of the Umatilla Indian Reservation, Nez Perce Tribe, Yakama Indian Nation, Hanford Advisory Board, Oregon State Department of Energy, Tri-Party agencies, and contractors are active participants on the team.

Purpose and Objectives

The purpose of the Columbia River Comprehensive Impact Assessment (CRCIA) is to assess the effects of Hanford-derived materials and contaminants on the Columbia River environment, river-dependent life, and users of river resources.

For CRCIA to be comprehensive, representatives of the major community groups (non-DOE) on the CRCIA Team have agreed that the following objectives must be achieved if the results and conclusions are to be acceptable by all concerned:

- estimate, with useful certainty, river-related human health and ecological risks for the time period that Hanford materials and contaminants remain intrinsically hazardous
- evaluate the sustainability of the river ecosystem, the interrelated cultural quality of life, and the viability of socio-economic entities for the time period that Hanford materials and contaminants remain intrinsically hazardous
- provide results that are useful for decision making on Hanford waste management, environmental restoration, and remediation

Project Approach

To address CRCIA objectives, the CRCIA Team has agreed to conduct CRCIA using a phased approach. The initial phase, which is required and described in Tri-Party Agreement milestones M-15-80 and M-15-80C-T01 includes two components: 1) a screening assessment to evaluate the current impact to the river resulting from Hanford-derived contamination, and 2) a definition of the essential work remaining to provide an acceptable comprehensive river impact assessment.

Additional phases of CRCIA will be identified and decisions made regarding the conduct of this additional work based on submittal of information as required by Tri-Party Agreement milestones M-15-80A, M-15-80B, and M-15-80B-T01.

The primary contractor conducting the screening assessment is the Pacific Northwest National Laboratory. Bechtel Hanford, Inc. provides technical and public involvement coordination with environmental restoration

activities. Independent technical peer reviewers are evaluating the work under the guidance of the Directors of the Oregon Water Resources Research Institute and State of Washington Water Research Center.

Background

The Hanford Site occupies 1456 square kilometers (560 square miles) in the south central portion of the State of Washington. It is located northwest of the Tri-Cities of Richland, Kennewick, and Pasco. The site is partially bordered on the north and east by the Columbia River and includes a relatively narrow buffer zone north of the river referred to as the Wahluke or North Slope. The Hanford Site is located on land ceded in 1855 by treaties with the Confederated Tribes of the Umatilla Indian Reservation and the Yakama Indian Nation. The Nez Perce Tribe has treaty rights on the Columbia River. The tribes were guaranteed the right to fish at all usual and accustomed places and the privilege to hunt, gather roots and berries, and pasture horses and cattle on open and unclaimed land.

From 1944-1987, the U.S. Department of Energy (DOE) conducted nuclear production operations at the Hanford Site along the Hanford Reach of the Columbia River. The Hanford Reach extends 85 kilometers (51 miles) downstream from Priest Rapids Dam to the head of the McNary Pool near the city of Richland, Washington. These past nuclear operations resulted in the release of hazardous chemicals and radionuclides to the Columbia River and into the soil. These operations also resulted in the storage of wastes and nuclear materials, some of which have escaped containment or have the potential for doing so. Current conditions of the Columbia River reflect that contamination is reaching the river primarily via the groundwater pathway.

In addition to contamination resulting from past and present Hanford operations, there is the potential for more contamination because the Hanford Site is being used for storage and disposal of nuclear materials, radioactive waste, chemically hazardous waste, and mixed waste (nuclear materials mixed with hazardous chemicals). For example, presently two-thirds of the nation's high-level defense nuclear waste is being stored at the Hanford Site with continuing shipments of nuclear waste being received (DOE 1993). Much of this nuclear waste may remain at the Hanford Site. The storage of these nuclear wastes could potentially contribute to the contamination of the Columbia River (depending on the performance of the chosen isolation solution) for thousands of years.

As a result of the known contamination, four areas of the Hanford Site (the 100, 200, 300, and 1100 Areas) have been placed by the U.S. Environmental Protection Agency (EPA) on the national priorities list for cleanup. The national priorities list is a component of the *Comprehensive Environmental Response, Compensation, and Liability Act of 1980* (CERCLA) (42 USC 9601) enacted by the U.S. Congress.

To address the cleanup needs mandated by CERCLA and to address the requirements for handling currently stored/generated wastes as mandated by the Resource Conservation and Recovery Act (RCRA) (42 USC 6901), DOE entered into a *Federal Facility Agreement and Compliance Order* (unofficially known as the Tri-Party Agreement) (Ecology et al. 1994) in 1989 with EPA and the State of Washington. Milestones have been adopted for the Tri-Party Agreement that identify actions needed to ensure acceptable progress toward Hanford Site compliance with CERCLA, RCRA, and the *Washington State Hazardous Waste Management Act* (RCW 1985).

During 1993, the Tri-Party agencies began work toward a comprehensive assessment of the impact of Hanford operations (past and present) on the current conditions of the Columbia River (DOE 1994). In January 1994, the Tri-Party Agreement was revised to reflect this project. This revision included a new Milestone, M-13-80B (later changed to M-15-80), that established CRCIA. In December 1995, the CRCIA milestone was revised, enhancing the review process and specifying target dates. In April 1996, another change to the Tri-Party Agreement provided additional time to perform the work in the initial phase.

This report fulfills Tri-Party Agreement milestones M-15-80 and M-15-80C-T01. This draft report on the screening assessment and requirements for a comprehensive assessment describes the results of the screening assessment and defines the essential work remaining to provide an acceptable comprehensive assessment of impact to the Columbia River. The comments on the draft will be incorporated and the screening assessment and requirements for a comprehensive assessment will be published as a final report.