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WM Record File 101

WM Project 10
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MEMORANDUM FOR: Paul Hildenbrand, BWIP Project Manager
WMRP, Division of Waste Management

FROM: Michael F. Weber, WMGT
Division of Waste Management

SUBJECT: PREPARATION PACKAGE FOR BWIP HYDROLOGY DATA REVIEW, DECEMBER 2-5, 1986

In accordance with guidance provided by WMRP on the preparation for NRC-DOE HLW Data Reviews, this memorandum provides the products required by items 1-8 of the guidance [cf. memorandum dated March 28, 1985, from Miller to Barrett and others]. I am submitting this to you in preparation for a BWIP Hydrology Data Review at Richland, Washington from December 2-5, 1986. Please note that we plan to visit outcrops of the Columbia River Basalts at Creston, Washington, on Monday before the data review. This site is being investigated by In-Situ Incorporated under contract to NRC(RES) to study groundwater flow and contaminant transport in saturated fractured geologic media. The visit and the data review have been coordinated with Don Chery (RES), NRC project officer for the In-Situ contract. We endorse Dr. Chery's consideration of RES contractor (In-Situ) participation in the data review. The data review pre-meeting is being planned with SNL, NWC, Williams and Associates, and RES staff and contractors for the middle of October (October 16-17, 1986). Please contact me if you have any questions or comments about this memorandum or the enclosed documents.

Item 1: Establish Need for Data Review

WM needs to perform this data review to assess the scope and reliability of hydrologic characterization data for the Hanford site to prepare for review of the SCP and the BWIP Hydrologic Testing Strategy. Subordinate objectives include:

A. To obtain recent hydrologic characterization information [no Data Reviews have been performed since December 1984; information available to NRC staff is, in general, more than one year old (i.e., the lag time between data collection and release to NRC is greater than one year)].

B. To initiate technical assessment of recent hydrologic characterization information.

C. To identify types of hydrologic characterization information that are currently available to BWIP and will likely be considered in the SCP.

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D. To continue assessment of hydrologic characterization techniques already implemented by BWIP.

E. To continue assessment of past QA procedures and practices used for hydrologic characterization.

Travel funds have been budgeted within WMGT for M. Weber and N. Coleman to attend a Data Review/Meeting during the month of December.

Item 2: Letter of Request

A letter to DOE requesting the data review is provided as Enclosure 1. The letter identifies the specific types of data that NRC wants to review and requests a catalog of data that DOE wishes to bring to NRC's attention. The letter also invites DOE to attend the visit to the Creston site on the day before the data review.

Item 3: Inform On-Site Representative

I notified F. Robert Cook about the tentative dates for the data review during the week of September 29, 1986.

Item 4: Coordinate Participants

NRC staff participants in the data review include M. Weber and N. Coleman from WMGT, P. Hildenbrand from WMRP, Don Chery from RES. Contractor participants include Williams and Associates--Gerry Winters, Roy Williams, and Dale Ralston; Nuclear Waste Consultants--Mike Galloway, Fred Marinelli, and Adrian Brown; Sandia National Laboratory--Paul Davis; and a representative from In-Situ Incorporated (RES contractor). The schedule for the data review and a sample data review checklist are included as enclosures to a draft letter to DOE that transmits security information for data review participants (Enclosure 2). The review checklists may be modified, as appropriate, by individual reviewers based on the type of information under review.

Item 5: Logistics

Time and place for the data review have not been established as of this date. They should be identified by DOE-RL once the data review is firmly established and endorsed by NRC and DOE. Once the data review is confirmed with DOE-RL, we should hold a conference call with DOE-RL to confirm the availability of data and finalize the logistics for the data

OFC	WMGT	WMGT					
NAME	MWeber	MFliegel					
DATE	86/10/	86/10/					

review. There are no special requirements or materials requested from DOE for the data review. We plan to use F. Robert Cook's Personal Computer during the data review for tracking data review checklists and comment preparation.

Item 6: Specific Data Needs

Specific data needs have been identified in the letter to DOE requesting the data review (see Enclosure 1).

Item 7: Transmittal of Schedule, Checklist, and Security Information

Enclosure 2 is a letter to DOE that transmits the schedule, checklist, and security information for NRC participants in the data review. This letter can be transmitted once NRC staff (WMGT, WMRP, and OR) reaches agreement on the schedule and checklist for the data review. We are awaiting additional security information from RES.

Item 8: Travel Authorizations

Travel authorizations for M. Weber and N. Coleman are in preparation.

I will brief NRC staff and contractor participants about conduct of NRC-DOE data reviews at the pre-meeting to ensure that all team members understand and accept their responsibilities and the ground rules for data reviews. Specific review responsibilities will also be assigned. Several contractors participated in the last BWIP hydrology data review, so they should already be familiar with the scope and conduct of HLW data reviews. Please contact me if you wish to discuss the scope, objectives, and content of the pre-meeting.

/S/

Michael F. Weber
Geotechnical Branch
Division of Waste Management

Enclosures:
As Stated

Record note: Coordinated development of package with N. Coleman (WMGT) and P. Hildenbrand (WMRP) prior to transmittal. (MFW) 10/3/86

OFC	:WMGT MW	:WMGT MF	:	:	:	:	:
NAME	:MWeber	:MFliegel	:	:	:	:	:
DATE	:86/10/3	:86/10/6	:	:	:	:	:

Mr. O. L. Olson
Director
Basalt Waste Isolation Division
U. S. Department of Energy
Richland Operations Office
P. O. Box 550
Richland, WA 99352

Dear Mr. Olson:

In response to telephone conversations between our staffs, NRC is proposing a Data Review for hydrologic characterization information from the Hanford site during December 2 through 5, 1986. We propose that the data review start on Tuesday morning at 8:00 and terminate on Friday afternoon at 3:00. The data review should be conducted on the Hanford Site, where relevant data are easily accessible. The purpose of the data review is to assess the scope and reliability of hydrologic characterization information to help prepare NRC for review of the Hanford Site Characterization Plan and BWIP's hydrologic testing strategy.

The enclosed list identifies the specific types of data that we would like to evaluate during the data review. The list distinguishes between data that NRC wants to review and data that NRC may review if time permits. If there is additional hydrologic information that you wish to call to our attention, please provide us with a "data catalog" of this information by November 30, 1986. This catalog should describe the type, amount, and availability of relevant data.

We also invite your staff to participate in a pre-review visit on December 1 to Creston, Washington, where In-Situ Incorporated is performing hydrologic stress and tracer tests under contract to NRC. The purpose of the testing is to evaluate groundwater flow and contaminant transport in saturated fractured media, which is of significant interest to BWIP because the testing will be conducted in the Columbia River Basalts. NRC staff and contractors will drive to the site from Spokane, Washington, and will conclude the trip by driving to Richland along the Columbia River north of the Hanford site.

OFC	WMGT	WMGT	WMGT	WMGT	WMRP	WMRP	WMRP
NAME	MWeber	NColeman	MFliegel	PJustus	PHildenbrand	RJohnson	JLinehan
DATE	86/10/	86/10/	86/10/	86/10/	86/10/	86/10/	86/10/

Please contact Paul Hildenbrand (427-4672) of my staff to arrange the logistics of the Data Review or Michael Weber (427-4746) to discuss the technical information to be reviewed or the pre-review visit to Creston.

John J. Linehan, Section Leader
Repository Projects Branch
Division of Waste Management
Office of Nuclear Material
Safety and Safeguards

Enclosure:
As Stated

cc: JKnight, DOE-HQ

OFC	WMGT	WMGT	WMGT	WMGT	WMRP	WMRP	WMRP
NAME	MWeber	NColeman	MFliegel	PJustus	PHildenbrand	RJohnson	JLinehan
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LIST OF INFORMATION FOR REVIEW AT THE
BWIP HYDROLOGIC DATA REVIEW, DECEMBER 2-5, 1986

I. Information to be Reviewed

*A. Water level data collected at primary monitoring facilities (e.g., DC-19/20/22 and the RRL-2 clusters; RRL-14; DC-4; DC-23; McGee Well) since May 1985.

B. Reduction of water level data to filter out external influences such as barometric and earth tidal effects (e.g., use of HEADCO or similar procedures to process water level and pressure data).

*C. Documentation of pressure responses of piezometers during packer inflation (e.g., packer inflation in RRL-2C flow interior piezometers).

D. Results of recent (since 6/85) laboratory calibration tests on downhole pressure transducers.

*E. Results of recent (since 12/84) hydraulic testing conducted in conjunction with drill and test programs (e.g., DC-18) and well construction and development programs (e.g., DC-23 and RRL-2B/C).

*F. Records pertaining to drilling fluid losses that occurred during drilling of DC-23, DC-18, and RRL-17.

*G. Hydrochemistry data from the site collected since 1/85, especially data from DC-23W/GR, RRL-2, DC-18, and the Westbay Installation in RRL-14.

H. Current operational status of the Westbay Installation at RRL-14.

I. Analysis and control of the composition of water actually used to fill piezometer tubes in DC-19/20/22/23, RRL-2C, and other monitoring facilities.

II. Information that may be Reviewed

A. Interval testing reports that have not yet been formally documented and/or released.

B. Results and procedures used to test the permeability of grout used in the nested piezometers installations (e.g., RRL-2C).

*C. Stratigraphic, geophysical, and completion data for DC-23W/GR.

D. Geophysical and water level information relevant to characterization of the "Yakima Barricade" structure (i.e., Cold Creek "Barrier").

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* NRC may request this information in releasable hard copy.

101/MFW/86/10/02/LTTR2

Mr. O. L. Olson
Director
Basalt Waste Isolation Division
U. S. Department of Energy
Richland Operations Office
P. O. Box 550
Richland, WA 99352

Dear Mr. Olson:

In preparation for our upcoming BWIP Hydrology Data Review on December 2-5, 1986, please find enclosed our proposed schedule and review checklists for the data review. The purpose of the data review is to assess the scope and reliability of hydrologic characterization information to help prepare NRC for review of the Hanford Site Characterization Plan and BWIP's hydrologic testing strategy. We are also transmitting security information for NRC staff and contractors who will participate in the data review. We request that you provide security clearances for these individuals prior to December 1, so that the data review will not be delayed.

Please contact Paul Hildenbrand (427-4672) of my staff to discuss the logistics of the data review or Michael Weber (427-4746) to discuss the scope of technical information to be reviewed.

John J. Linehan, Section Leader
Repository Projects Branch
Division of Waste Management
Office of Nuclear Material
Safety and Safeguards

Enclosure:
As Stated

cc: JKnight, DOE-HQ

OFC	WMGT	WMGT	WMGT	WMGT	WMRP	WMRP	WMRP
NAME	MWeber	NColeman	MFliegel	PJustus	PHildenbrand	RJohnson	JLinehan
DATE	86/ /	86/ /	86/ /	86/ /	86/ /	86/ /	86/ /

DATA REVIEW SCHEDULE

DOE-NRC HYDROLOGY DATA REVIEW FOR
THE HANFORD SITE, DECEMBER 2-5, 1986

Tuesday, December 2

8:00	Introduction and Objectives	Hildenbrand/NRC Mecca/DOE
8:15	Initiate Review	NRC
	Water level data Filtering for External Influences Packer pressure responses Calibration lab tests	
11:30	Information Requests/Clarifications	NRC DOE
12:00	Lunch	
1:00	Resume Review	NRC
	Water level data (continued)	
4:00	Information Requests/Clarifications	NRC DOE
4:30	Summary (if appropriate)	NRC/DOE
4:45	Break	

Wednesday, December 3

8:00	Resume Review	NRC
	Hydraulic testing results	
11:30	Information Requests/Clarification	NRC DOE
12:00	Lunch	
1:00	Resume Review	NRC
	Hydraulic testing (continued)	
4:00	Information Requests/Clarification	NRC DOE

4:30	Summary (if appropriate)	NRC/DOE
4:45	Break	

Thursday, December 4

8:00	Resume Review	NRC
	Hydrochemistry data Westbay operation Piezometer tubes	
	Carry-over information	
11:30	Information Requests/Clarification	NRC DOE
12:00	Lunch	
1:00	Resume Review	NRC
	Hydrochemistry data (continued) Carry-over (continued)	
4:00	Information Requests/Clarification	NRC DOE
4:30	Summary (if appropriate)	NRC/DOE
5:00	Break	

Friday, December 5

8:00	Resume Review	NRC
	Carry-over information Category II information	
11:30	Information Requests/Clarification	NRC DOE
11:45	Lunch	
12:45	NRC Caucus	NRC
1:30	Summary of Immediate Observations and Data Review Wrap-Up	NRC/DOE
2:30	Adjourn	

Record Number BH86-_____

Reviewer _____
Affiliation _____
Date _____

HYDROLOGY DATA REVIEW CHECKLIST

TOPIC: _____

TYPE OF DATA (circle one):

a. hydraulic head b. hydraulic characteristic c. structural/stratigraphic
d. ext. boundary e. hydrochemistry f. geophysical
g. QA Record h. other _____

TESTING INFORMATION (applicable) (not applicable)

Identifier _____ Depth Interval _____ (ft) (m)

Unit _____ Effective Depth Interval _____ (ft) (m)

Test Type _____ Reference _____

REFERENCED PROCEDURE _____

_____

COMMENTS:

Borehole _____ Unit _____ Depth Interval _____

Record Number BH86-_____

Reviewer _____
Affiliation _____
Date _____

HYDROLOGY DATA REVIEW CHECKLIST
CONTINUATION SHEET

Page ___ of ___

COMMENTS:

Borehole _____ Unit _____ Depth Interval _____

PERSONNEL INFORMATION FOR NRC STAFF/CONTRACTORS
ATTENDING HYDROLOGY DATA REVIEW (DECEMBER 2-5, 1986)

Name	Social Security Number	Birthdate	Affiliation[1]
Michael F. Weber	[redacted]	[redacted]	NRC
Neil M. Coleman	[redacted]	[redacted]	NRC
Paul Hildenbrand	[redacted]	[redacted]	NRC
James E. Kennedy	[redacted]	[redacted]	NRC
Gerry Winter	[redacted]	[redacted]	WA
Roy Williams	[redacted]	[redacted]	WA
Dale Ralston	[redacted]	[redacted]	WA
Michael Galloway	[redacted]	[redacted]	NWC
Fred Marinelli	[redacted]	[redacted]	NWC
Adrian Brown[2]	[redacted]	[redacted]	NWC
Paul Davis	[redacted]	[redacted]	SNL

[1]NRC= U.S. Nuclear Regulatory Commission; WA= Williams and Associates Inc.; NWC= Nuclear Waste Consultants, Inc.; SNL= Sandia National Laboratory

[2]Adrian Brown
[redacted]