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Meeting Minutes
Special Topic: Drilling at Hanford
June 1, 1989, Room B-103, 2750E Building, Hanford Site, Washington

From: K. Michael Thompson (Initial Draft by William H. Price, WHC) June 30, 1989

To: Meeting Attendees

B. D. Bowen, Ecology
L. C. Brown, WHC
J. A. Bultena, WHC
C. S. Cline, Ecology
P. T. Day, EPA
H. D. Downey, WHC
K. R. Fecht, WHC
L. Goldstein, Ecology
C. E. Hodge, WHC
R. L. Jones, WHC
G. L. Kasza, WHC
J. W. Lindberg, WHC
J. V. Mohatt, WHC
R. G. McCain, WHC
G. W. McLellan, WHC
D. A. Myers, IT
D. R. Myers, WHC
S. A. Perry, WHC
W. H. Price, WHc
W. Staubnitz, USGS
K. M. Thompson, DOE-RL
A. G. Lassila, DOE-RL
T. L. Walton, KEH
D. E. Webb, WHC
T. M. Wintczak, WHC
T. J. Wood, WHC

cc: R. D. Izatt, Director, DOE-RL, ERD

E. A. Bracken, Chief, Policy & Permits BR, DOE-RL/ERD

R. D. Freeberg, Chief, RSTR.BR, DOE-RL/ERD

H. E. McGuire, Manager Environmental Programs, WHC

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The subject meeting was held as a result of an Action Item from the March 24, 1989, 1100-EM-1 Unit Manager's Meeting (see meeting Minutes of April 17, 1989). However, the subject of the meeting is pertinent to all operable units and all groundwater drilling activities at the Hanford Site. Because the subject is generic, conduct of the meeting was made the responsibility of the Groundwater Programs.

The purpose of the meeting was to address Environmental Protection Agency (EPA) comments regarding expediting drilling activities on the Hanford Site. Responses to specific EPA comments from the letter, P. T. Day and L. Goldstein, "Meeting on Well Drilling Techniques," dated May 22, 1989, were addressed (Attachment 1). Specific items discussed are found in Attachment 2. A summary of Actions and Agreements is found in Attachment 3. Meeting Attendance based on the "sign-in" list routed at the meeting is found in Attachment 4.

U.S. ENVIRONMENTAL PROTECTION AGENCY
REGION 10

Hanford Project Office
Federal Building, Rm. 178
P.O. Box 550, A7-70
Richland, Washington 99352

RECEIVED DOE-RL
MAY 2 1989
PGM BRANCH

REPLY TO
ATTN OF: A7-70

May 22, 1989

Kenneth M. Thompson
Acting Project Manager
U.S. Department of Energy
P.O. Box 550 (A6-50)
Richland, Washington 99352

Re: Meeting on well drilling techniques -- June 1, 1989

Dear Mr. Thompson:

We have reviewed your draft agenda for the June 1, 1989 meeting on well drilling and have the following comments. As you know, the request for this meeting is based on the primary concern from the Environmental Protection Agency (EPA) and the Washington State Department of Ecology (Ecology) about the speed at which groundwater monitoring wells and vadose zone wells can be drilled at the Hanford Site. In order to make the most efficient use of time during this meeting, it is important that we cover topics specifically related to methods that can be employed to speed up the drilling process. We are questioning the need to spend half the day on vadose zone drilling issues.

During the meeting, we would ask that time be allowed for the following topics to be covered:

1. Discussion of best available technologies for drilling at sites which are contaminated with hazardous and radioactive wastes. One specific topic we are interested in is the air rotary containment device that has been evaluated over the past several months.

2. Status report on the quality assurance study being done to assess which existing wells may be appropriate to use as RCRA monitoring wells. We are also interested to hear of DOE's plans to extend this study to evaluate existing wells for use as CERCLA wells.

3. Assuming the 1100-EM-1 operable unit work plan will be approved by mid-August, what plans are being made to expedite the drilling process at that site?

4. Implementation of an efficient, open contracting mechanism for drilling by off-site vendors, wherever appropriate.

We would ask that efficient drilling techniques be the focal point of the meeting and that we concentrate on coming up with innovative solutions to the problem, rather than devoting significant time to the problem itself. In the interest of accelerating proposed RI/FS work plan drilling schedules and improving the efficiency, accuracy, and cost effectiveness of data collection activities, we recommend that alternate drilling techniques to the cable tool method be considered for the collection of vadose zone soil samples and installation of groundwater monitoring wells. Although the cable tool method has been used extensively at Hanford and has proven effective in installing wells in the Hanford and Ringold Formations, we believe that it is not the best technique to use under all circumstances. The cable tool method is much more time consuming than other available drilling methods and requires addition of water to the bore hole when drilling through the vadose zone, thereby compromising samples collected for measurement of the soil moisture content.

Wells are likely to be more efficiently installed using a hollow stem auger rig, an air rotary rig with a drill-through casing driver, or a dual-wall reverse-circulation method. The auger rig should be considered in collecting vadose zone samples and in installing relatively shallow (i.e., less than 100 feet) monitoring wells. Auger wells should be particularly useful for the collection of background samples and for use in areas where surface contamination is considered unlikely. The potential for cross contamination of different strata should be considered when using an auger rig. The air rotary rig should be useful for nearly all conditions encountered at Hanford and should provide a fast and efficient method for collecting soil and geologic samples. Care will need to be taken in controlling the discharge of cuttings and dust, and we recommend considering the use of both foam additives and a containment device with an air filtration outlet for this purpose.

The installation of wells in the 1100-EM-1 operable unit is of particular concern due to the large number of wells to be installed and the long period of time this will take if cable tool rigs are used exclusively. We recommend trying the alternate drilling techniques described above to accelerate the installation of wells at the 1100-EM-1 operable unit. The 1100-EM-1 area will provide an excellent opportunity for comparison of drilling techniques due to the relative ease of access and expected lack of radionuclide contamination. Once experience is gained using a variety of drilling techniques at Hanford, the best method or combination of methods can be applied under appropriate circumstances at other operable units to provide the most efficient and cost-effective data collection effort.

Based on the above discussion, we are asking that you revise the agenda and redistribute it at your earliest convenience. Also, it would be helpful for all parties if we could spend a couple of days previewing any presentation materials that you plan to use during the June 1 meeting. We would need to receive these materials no later than May 30. We are looking forward to a productive meeting. To facilitate travel schedules, we are asking that we meet in the lobby of the Federal Building at 8:45 A.M.

Sincerely,

Paul T. Day
Hanford Project Manager
EPA Region 10

Sincerely,

Larry Goldstein
Hanford CERCLA Coordinator
Washington State Department
of Ecology

cc: J. Waite, WHC
W. Staubitz, USGS
R. Farrell

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"DRILLING AT HANFORD" ATTACHMENT 2
June 1, 1989

Participants: Environmental Protection Agency, State of Washington Department of Ecology, Department of Energy-Richland Operations Office, and Westinghouse Hanford Company.

Time	Topic	Presenter
8:45 - 9:45	Travel from Federal Building to 200 East Area, Conference Room. (Badges will be required and a bus will be scheduled)	
9:45 - 10:00	Introduction/Hanford Drilling History	Mike Thompson Bill Price Greg McLellan
10:00 - 10:15	Borehole Sampling and Data Requirements	John Lindberg
10:15 - 10:45	Consideration/Restrictions for Drilling at Hanford Mixed Waste Sites	Hal Downey Jim Mohatt
10:45 - 11:00	Break	
11:00 - 11:30	Drilling Method Selection at Hanford Mixed Waste Sites	Hal Downey
11:30 - 12:00	Lunch (Please bring a sack lunch)	
12:00 - 1:00	Becker Drilling with Containment System	Denny Myers
1:00 - 1:15	Future use of Becker Method at Hanford	John Lindberg
1:15 - 1:45	1100 Area Drilling	Hal Downey John Lindberg
1:45 - 2:00	Procurement of Off-Site Drilling Contractors	Terry Walton
2:00 - 2:15	Break	
2:15 - 2:30	Phase-in Of Existing Wells for Use in RCRA/CERCLA Monitoring Programs	Karl Fecht
2:30 - 3:30	Return to the Federal Building	

ATTACHMENT 3

Meeting Minutes - Summary of Actions and Agreements
1100-EM-1 Operable Unit Manager's Meeting
June 1, 1989, Room B-103, 2750E Building, Hanford Site, Washington

ST1.1 Environmental Protection Agency (EPA) and Washington Department of Ecology (Ecology) requested that they be supplied with the proposed criteria and evaluation for accepting existing wells to meet CERCLA and RCRA groundwater monitoring requirements.

ACTION: K. R. Fecht, (WHC), will supply criteria to K. M. Thompson for submittal by July 21, 1989

K. M. Thompson (DOE) will supply criteria to EPA and Ecology by July 31, 1989

K. R. Fecht, (WHC) will provide an evaluation to K. M. Thompson by December 29, 1989

K. M. Thompson (DOE) will provide the evaluation to EPA and Ecology by January 12, 1989

ST1.2 Environmental Protection Agency and Washington Department of Ecology requested copies of applicable Department of Energy (DOE) Orders which control drilling activities at Hanford.

ACTION: K. M. Thompson, Department of Energy-Richland Operations Office (DOE-RL), will supply copies of the applicable Orders by June 30, 1989.

ST1.3 Environmental Protection Agency and Washington Department of Ecology requested copies of the article rating various drilling methods at hazardous waste sites.

ACTION: H. D. Downey, Westinghouse Hanford Company, provided copies of the articles during the meeting.

ST1.4 Environmental Protection Agency and Washington Department of Ecology requested notification prior to initiation of the Becker Drilling and Containment System test.

ACTION: K. M.Thompson will notify.

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Meeting Minutes - Summary of Actions and Agreements
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ST1.5 Washington Department of Ecology requested copies of two recent articles regarding the Becker Drilling method.

ACTION: D. R. Myers, Westinghouse Hanford Company, transmitted the articles on June 5, 1989.

ST1.6 Environmental Protection Agency and Washington Department of Ecology requested that they be supplied with the report documenting the results of the Becker drilling and containment system test.

ACTION: W. H. Price, Westinghouse Hanford Company, will supply a copy of the report for EPA's/Ecology's on-site review. After clearance, copies of the report will be provided.

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ATTENDEES LIST
DRILLING AT HANFORD
JUNE 1, 1989

NAME	ORG. (Co./Agency)	RESPONSIBILITY	PHONE
W. H. Price	WHC	Drilling	(509) 373-5723
H. D. Downey	WHC	Drilling	(509) 373-3951
J. A. Bultena	WHC	Drilling	(509) 373-5823
R. L. Jones	WHC	Drilling	(509) 373-5586
T. J. Wood	WHC	Drilling	(509) 373-1047
R. G. McCain	WHC	Engineering	(509) 376-0777
J. W. Lindberg	WHC	Geosciences	(509) 376-5005
D. A. Myers	SWEC/IT	Geosciences	(509) 376-0969
D. R. Myers	WHC	Engineering	(509) 376-9935
T. L. Walton	KEH	Drilling	(509) 373-5526
G. L. Kasza	WHC	Geosciences	(509) 376-0763
K. R. Fecht	WHC	Geosciences	(509) 376-0940
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C. S. Cline	Ecology	Hydrology	(206) 438-7556
B. D. Bowen	Ecology	Licensing	(206) 438-7038
P. T. Day	EPA	Project/ Unit Manager	(509) 376-6623

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ATTENDEES LIST
DRILLING AT HANFORD
JUNE 9, 1989

NAME	ORG. (Co./Agency)	RESPONSIBILITY	PHONE
L. Goldstein	Ecology	1100-EM-1 Unit Manager	(206) 438-7018
B. Stewart	DOE-RL	1100-EM-1 Unit Manager	(509) 376-6192
K. M. Thompson	DOE-RL	Geosciences	(509) 376-6421
W. Staubitz	USGS	Geosciences	(206) 593-6510
A. G. Lassila	DOE-RL	Drilling	(509) 376-6158

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