

(LPRK WM-1002)

WM Record File

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WM Project 10

Docket No. _____

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OCT 02 1987

(Return to WM, 623-SS)

MEMORANDUM FOR: B. Joe Youngblood, Chief
Operations Branch, DHLWM

THRU: James E. Kennedy, Section Leader
Operations Branch, DHLWM

FROM: James Donnelly
Operations Branch, DHLWM

SUBJECT: REPORT OF OBSERVATIONS MADE DURING THE BWIP AUDIT OF
WESTINGHOUSE HANFORD COMPANY

From August 31, 1987 thru September 4, 1987 I observed the Basalt Waste Isolation Project (BWIP) audit (No. 8704) of Westinghouse Hanford Company (WHC) in Richland, Washington. The audit was conducted from August 31, 1987 thru September 11, 1987. Thus, I participated as an observer for one week of the two week audit.

The scope of the audit covered quality assurance (QA) program elements applicable to the BWIP activities currently being performed by WHC, with considerable emphasis on current activities related to the drilling of boreholes DC-24, DC-25, and their related Study Plans. Enclosure 1 is the final BWIP audit plan for the subject audit and provides further details on the audit (i.e., audit team, background, objective, schedule, etc.).

The purpose of observing the audit was twofold (1) to gather information to assist the NRC staff in preparing for a possible audit of the large scale pump test at BWIP, and (2) to observe the conduct of the audit of WHC by BWIP. The remainder of this report will only comment on the conduct of the audit and, to a lesser degree, the WHC QA program.

On Monday, August 31, 1987 the entrance meeting was held. Representatives from the State of Washington, the affected Tribes, industry, GAO, DOE, DOE contractors, and WHC were in attendance. The audit scope, schedule, and other basic information was presented by the audit team. The actual auditing commenced the following day.

The audit team was broken up into three Subteams A, B, and C. On September 1-2, 1987, I accompanied Subteam B to look at Criterion III, Design Control for the upcoming drilling activities for DC-24 and DC-25. Subteam B consisted of two auditors -- a Subteam lead and a technical advisor, both from MACTECH. The Subteam lead appeared knowledgeable and experienced in QA, reactor licensing, and the design control process. He had over 18 years of nuclear QA/QC and NDE experience. He appeared well prepared and knowledgeable about the WHC QA program and related documents. He conveyed the philosophy to the WHC staff that a technically sound and auditable trail of the design process is essential during the NRC's rigorous licensing process.

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The technical advisor for Subteam B was an engineering geologist. He had a B.S. and M.S. degree in geology and over 14 years of experience in geotechnical engineering and project management. Although his technical expertise was not called upon to a great extent, he did provide input when needed.

There were two issues identified by Subteam B, with respect to the WHC QA program, which caused some concern. One was the fact that two Study Plans had evolved from draft A to draft D, with no record of some of the interim drafts or technical review records of these interim drafts. The authors of these plans indicated that these interim drafts only contained minor editorial changes and that a technical review was not needed. I was unable to observe the final resolution of this concern.

The other concern dealt with the use of Project Directives (PDs) by the WHC staff. The PDs appear to be the principal, driving documents for the DC-24, DC-25 activity; yet, it appeared that no training of the WHC staff in the PDs had occurred. This item remained open and under investigation by the audit team.

During my period of observation, Subteam B conducted, what I believe was, a thorough audit. My basis for this determination was based on several observations such as (1) the qualifications, experience, and demonstrated knowledge of the auditors (2) the preparedness and knowledge of the audit team in the WHC QA program, (3) the diligence of the audit team in pursuing concerns until they were satisfactorily addressed. However, I must restate the fact that I only observed a small portion of Subteam B's audit activities and further observation would be necessary to evaluate their overall performance.

On September 3-4, 1987 I accompanied Subteam C to look at Criterion XI, Test Control. Once again, the Subteam consisted of a Subteam lead and a technical advisor -- both from MACTECH. Subteam C based their audit questioning against the detailed test procedures which are to be used for the DC-24, DC-25 drilling activities. The emphasis was placed on the test and operating procedures for water sampling, equipment calibration status, and drilling operations. The technical advisor questioned the WHC staff extensively in the details of their technical procedures. He appeared knowledgeable and experienced in the subject matter. He had a B.S. and M.S. degree in geology and over 20 years work experience in geohydrology, and low level and hazardous waste monitoring and disposal. The technical specialist appeared to be effective in reviewing areas within the scope definal for the audit.

I would recommend that when an audit of detailed technical procedures is conducted that the technical advisors have greater input, as I observed here, in the auditing process. The ability of a technical auditor to "speak the language" of the auditee's technical staff and to investigate the technical quality of the procedures, was advantageous. In my opinion, the presence of the technical advisor enhanced this portion of the audit.

During my period of observation, Subteam C identified one issue, with respect to the WHC QA program, concerning the applicability of precision and accuracy statements for certain test procedures. This issue was discussed at length with the WHC staff and was tentatively classified as a concern.

Overall, the entire audit team (Subteams A, B, and C) had numerous years of experience, appeared well prepared, and utilized technical specialists who appeared knowledgeable in the technical areas audited. The audit team leader was experienced (over 28 years in nuclear R&D and QA), well organized, and conducted himself in a highly professional manner. Comments, criticisms, and recommendations were frequently solicited from the observers. This concept for self-improvement should be continued.

Nonetheless, I do have some recommendations that I believe would have improved both the audit and my observation of the audit. I do not believe that any of these are deviations from NRC QA requirements. They are as follows:

Recommendations

1. When technical specialists are utilized during the audit, it might be helpful if they prepared their own checklists. If other questions arise (as was observed with Subteam C) it would be helpful if they documented these questions, to the extent practical. This would leave a written record that audits of a technical nature have in fact been conducted.
2. When auditing detailed technical procedures, it may be appropriate to use technical specialists as Subteam leads. Their ability to communicate with the auditee's technical staff may improve as the subteam leader.
3. When interviewing certain individuals, it may be appropriate to do this without the presence of the immediate supervisor. Supervisors may impede frank and open discussions between the auditor and the auditee.
4. Observers, if found to be unobtrusive, should be allowed to speak or question the auditee during the audit. Although the observers were instructed that they are encouraged to ask questions, the questions were to be written and passed on to the Subteam lead during the audit. This is not always feasible during the audit.
5. With the large number of auditee documents, more preparation time is needed for NRC observers. This would allow more time during the audit for evaluating rather than "getting up to speed" with the auditee's program.
6. Representatives from the NRC's technical branch should participate in future audit observations. For example, this audit had a great deal of emphasis on hydrology and drilling; consequently, our technical experts in

these areas could have made an objective evaluation on the technical quality of the work.

Lastly, I would like to express my opinion that my overall knowledge of the program and my ability to evaluate its adequacy increases dramatically as a result of observing audits. I urge their increased and continued use.

/s/

James Donnelly
Operations Branch, DHLWM

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CONCURRENCES

ORGANIZATION/CONCUREE	INITIALS	DATE CONCURRED
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HLOB/ JKennedy		87/10/3