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10/27/86  
ok'd to NRC Rep  
JEM

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PDR   
LPDR

General Manager  
Rockwell Hanford Operations  
Richland, Washington

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(Return to WM, 623-SS)  
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Dear Sir;

EXPEDITED SPECIAL CASE BOREHOLES DC-24 AND DC-25

The DOE/RL Readiness Review Team (RRT) has performed an overview of the restart package submitted September 13, 1986, for the "Expedited Special Case Boreholes DC-24 and DC-25." Our overview has identified a number of deficiencies which must be corrected before a complete review can be reasonably achieved.

In order to better understand DOE's comments which follow, Rockwell needs to be cognizant of BWI's expectations for the DC-24/25 Restart Package. The package will be approved only if it reflects the philosophy and level of concern BWI Management applies to quality assurance. Also, all restart packages approved by BWI will be used by the regulatory and technical community to judge DOE/RL commitment to a quality program. It is imperative that the logic and decision processes in the submittal be clear, concise and auditable. The restart process and the restart package itself must be clear. However, a certain level of management risk is acceptable (e.g., not all cost and schedule control systems will be in place at the time of restart) provided that areas open to risk are identified, quantified wherever possible and addressed by mitigating measures.

The subject submittal is rejected because of the following deficiencies (other deficiencies also may exist):

- The DC-24/25 Restart Package relies too heavily on justifying many elements on the need for expeditious restart. The time of restart is dependent on the availability of documented control activities, necessary management and technical requisites, and an acceptable level of risk for open items. The rationale for not having certain management and technical prerequisites in place is obviously too schedule driven rather than being counterbalanced with the need for judicious mitigation of risk.

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- The format presented in the submittal is very difficult to follow. See DOE Letter, O. L. Olson, to General Manager, Rockwell, dated October 16, 1986, "Generic Problems/Concerns with the Expedited Special Cases Submitted to DOE/RL for Approval" for further details.
- The activity to be expedited cannot be evaluated against the overall hydrology characterization effort as documented in the package. Elements of the site characterization strategy have not been provided.
- The submittal does not focus on an appropriate justification for the activity. The submittal justifies the activity by a nebulous tie to the Licensing Issues, and specifically Travel Time. It is our understanding that the activity's primary purpose is to establish pre-placement potentiometric surfaces to support conceptual model development, specifically, the direction of flow and the influences of boundaries. It is also our understanding that the activity is not required for Travel Time calculations. The Restart Package must contain a clear, concise and complete justification for the activity, written so that any technical reviewer new to the program can understand the justification.
- A major decision in the activity involves the need for the Drill-Test-Sample (DTS) data. Rockwell has recommended that the DTS technique not be used, based on cost and schedule impacts, yet a thorough analysis of the decision process is not provided.
- The submittal does not document who made the decisions provided therein and the decision process, including alternatives considered.
- Configuration (how the well is packed-off or completed) and monitoring frequency of boreholes potentially impacted by the action are not addressed. Procedures to change the configuration also are not addressed. It may be necessary to change borehole configurations and monitoring frequencies if anomalous conditions are encountered during drilling.
- The submittal cannot be fully evaluated without evidence that Rockwell has completed their own preparedness review. It is not evident that such a review has occurred as no checklist was provided. Previous direction, O. L. Olson to General Manager, Rockwell, July 1, 1986, subject: Stop Work Order BSWO-86-004-Conditions for Lifting Suspension, states, "Rockwell shall conduct an independent Preparedness Review of BWIP activities to assess the adequacy of the management and technical controls for restarting work. Upon satisfactory completion of the Preparedness Review, Rockwell shall provide DOE/RL with a formal request to lift the work suspension. Copies of the Preparedness Review Package shall be transmitted to DOE/RL to justify/support the request. The package should include, as a minimum, the detailed checklists used for defining the scope of the review, and the bases used for accepting the checklist actions."

- The subject expedited special case restart package identifies the restart prerequisites as a list of procedures. This list identifies the status of the procedures but does not identify the status of their implementation. Also prerequisites should include items other than merely procedures; e.g., training required, audits or surveillances performed etc. There is no evidence within this package that Rockwell has done an assessment to assure the adequacy of the controls and that the procedures/requirements are or will be implemented in a timely manner. The Rockwell preparedness review checklist should include this item.
- The logic used in assigning quality levels is not readily apparent, resulting in some cases in questionable assignments. Section 3.2.1 of MA-3 and OGR Supplemental QA Requirements, No. 8, "Application of Graded Quality Assurance," Revision 0, June 10, 1986, Paragraph 5.1, requires that, "The actual decision criteria be used to determine Quality Levels and documented by each project. The basis for the selection of the Quality Level and assigned QA requirements shall also be documented." These criteria/bases have not been adequately provided. An analogy that might be useful for Rockwell to use in evaluating the adequacy of this product is that the decision on any quality level assignment must be supported by a documented rationale that is as organized, logical, progressive and rigorous as a geometric proof. Further, examples of questions that must be addressed in this section are the following:
  - Section 2.1.2 of MA-3 states that, "Structures, systems, components, and activities necessary to comply or demonstrate compliance with these performance objectives will be placed on the Q-List." Performance objectives were previously defined in this section to include, "Pre-emplacment groundwater travel time." If DC-24/25 is being used to determine pre-emplacment groundwater travel time, why would DC-24/25 activities not be placed on the Q-List.
  - Section 5.3.1.2 of the OGR QA Plan Supplement 8 states, "Quality Level 1 shall be applied to all items which have been identified as important to safety or waste isolation (Q-List items). Activities covered under Quality Level 1 include: site selecting, . . . modifying, . . . and site characterization."

Drilling of DC-24/25 may be considered as effecting the Controlled Area Study Zone (CASZ) integrity and certainly represents activities pertaining to site characterization. Rockwell's Graded quality assessment of the DC-24/25 activities may need to be reevaluated in light of this guidance. DOE/RL is pursuing additional clarification from DOE/HQ on this item.

- The following comments relate to Attachment E, Table 4-1, "DC-24/25 Activity Descriptions":
  - Activities 19.1 and 19.3 describe the conduct of drilling as a "special process," yet the assigned QA level is 3, which requires only good management, engineering or laboratory for compliance with QA requirements. Conversely, NQA-1-1983, Section 9, "Control of Processes," indicates that special processes shall be controlled and, "Shall be performed by qualified personnel using qualified procedures in accordance with specified requirements." The NRC has interpreted use of Section 9 as the use of qualified personnel, qualified procedures, and qualified equipment for a process that is not directly measurable without destruction of the item but where the control of the three elements will give confidence that quality is achieved. Either the term "special process" must be deleted or the Q Level upgraded.
  - Activity 19.1 and 19.3 appear to indicate that standard industry practice would be used in lieu of detailed procedures. This should be reconsidered because most drillers have never worked in a regulated QA program arena or a situation where each action must be logically and legally explainable to the public. Therefore, the thought process applied must be extended to include the consequences of each activity and consideration that step-by-step procedures and data recording result in credibility of the activity.
  - The specific and/or potential uses of drill cuttings should be identified in Activity 20.1 and the quality level evaluated accordingly.
  - Geophysical logging performed during the drilling phase (Activity 21) should have the same controls as logging performed when drilling is complete, or provide justification.
  - If the data collected or the records generated while performing Activities 20.3, 22, 23, 24, & 28 were lost, discarded, or of indeterminate quality, would repetition or scheduler delay occur? If there is a possibility of occurrence, the impacts of such should be evaluated for affect on the Quality Level assignment.
  - Is a procedure to govern the mobilization of the work over rig (Activity 30) prudent?
  - Is there an acceptance criteria for cleaning the hole (Activity 31) which must be satisfied and the results documented? If so, Quality Level 2 should be considered.

- The TV Log (Activity 32) will provide information on the "As Built" borehole condition and should be considered Quality Level 1 or 2. Will this video record of borehole wall conditions meet the decision criteria established in QGR Supplement No. 8, Attachment B, Paragraph B.5? If yes, then Quality Level should be reevaluated.
- Activities 36 through 39 are not shown on Figure 4.4, Piezometer Installation Detail. How do they fit into the overall picture?
- An activity for instrument logging of the completed borehole, electronically and with a caliper device, to verify the shape and orientation of the hole should be included. These should be considered Quality Level 1 or 2 activities.
- The Q-List section discussion indicates that drilling activities have not been Q-Listed, but indicates that there is a management risk that such activities may later be Q-Listed and that this would be evaluated as part of the restart package. It is not evident that this evaluation was performed. Failure to perform this evaluation prior to the award of the drilling services contract DC-25 violates Supplement No 8, Attachment A, Activity Planning and Management Assessment requirements as established in the NRC Review Plans, Paragraphs 2.5 and 2.7, respectively.

I understand that the submittal is presently being upgraded. I look forward to receiving it. Please work closely with my staff throughout the development of the package.

Sincerely,

ORIGINAL SIGNED BY:

J. J. Keating, Director  
Basalt Waste Isolation Division

BWI:KMT

cc: D. C. Gibbs, Rockwell

bcc: BWI Record Copy  
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