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THE RADCOCK & WILCOX COMPANY  
POWER GENERATION GROUP

To	E. A. Wonnack, Manager, Plant Design	805 002.3
From	B. A. Karrasch, Manager, Plant Integration	
Cust.		File No. or Ref.
Subj.	August Activities Report	Date September 1, 1978

I. ACCOMPLISHMENTS

- A. A program has been established to perform a mechanical interface review of major RCS Components on the Mulheim-Kierlich A plant. The purpose of this study is to provide high assurance that the designed and manufactured components will properly fit during the field installation, and function during power operation. The first phase of the program will address only Reactor Vessel/CSA/Core interfaces as described in the program plan recently submitted to LPI.
- B. A meeting was held to review the status of the Fission Gas Release Program and determine a strategy on the use of TACO in the ECCS Evaluation Model. The current approach is to obtain clarification from NRC on ECCS model change criteria (TAFY to TACO input) and the need for consistent fuel pin models in both the Fuel Pin Performance Codes and ECCS Analysis Codes. This information will be used to establish a strategy on the Fission Gas Release Program by mid-September.
- C. The System Requirement Specification for Service Conditions on BW Safety Related Equipment was issued this month to support the Reg Guide 1.89 product upgrade program. This document includes design range and accident environments, required equipment operability times, and radiation levels for all safety related equipment in the C&I and Fluid Systems area. The document has been released for use by C&I and Fluid System Engineering in obtaining vendor quotes for meeting the new requirements imposed by the Reg Guide.
- D. A Generic Position Statement on Reg Guide 1.97, "Instrumentation to Assess Plant Conditions During and Following an Accident," was forwarded to Licensing for approval. A contingency on Reg Guide 1.97 is currently being developed jointly with C&I Engineering to assure that implementation of this Reg Guide is correctly factored into the Standard Costs.

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E. A presentation on Safety Grade Cold Shutdown (Reg Guide 1.139) was made to the NRC and feedback on our proposed resolution was obtained. As a result of the meeting, a proposal has been developed and provided to Project Management to outline recommended equipment changes to comply with the NRC requirement. The proposal is a combination feasibility study and equipment sizing analysis to:

1. Define the capability of the NSS to cooldown under natural circulation within the NRC required 36 hours. A change to the Atmospheric Dump Valve design is recommended to comply with NRC directive.
2. Evaluate the capability of the boron addition system to achieve subcriticality at cold shutdown conditions without major system modifications.
3. Define the depressurization capability of the RCS using current equipment; or if current equipment is not satisfactory, show what is required for depressurization.

The proposal will provide information to allow the utilities to address the requirements of the NRC. Follow-on studies will be required at a later date to set criteria and overall system requirements for meeting this Reg Guide.

## II. DISPOSITION OF PREVIOUS PROBLEMS

- A. The Mark C Gamma Heating Risk Program funding was approved and the program is underway. The delay in approval of this funding may result in some slippage of the original commitments which were based on a start date of June 1, 1978 leading to a December 31, 1978 completion. Tech Staff has completed their investigation into the need for a correction factor for the axial power shapes generated by FLAME. The results indicate that a factor is not needed since the DOT code inherently accounts for this effect. This may help ease the slipped commitment, somewhat. The next action is to revise the Key Need Date for completion of the program and continue the Safety Analysis Calculations.
- B. A management review of the ECCS Small Break Problem on 205 plants was held this month to review the direction of the program and determine specific action items to evaluate the use of a 40' OTSG level for AFW Initiation. After much discussion, the following action items were established:
1. Assess the impact of a 40' level on all Chapter 15 safety analysis events and identify potential problems with currently submitted analyses. D.W.LaBelle - 9/15/78.
  2. Assess the impact of instrumentation error on normal operating limits in the ICS and the SRGT based upon using full range taps on the steam generator. R.B.Davis-9/15/78.
  3. Prepare and issue a revision to curves in the 1072 Spec to reflect the use of a 40' steam generator level upon initiation of emergency feedwater. R.B.Davis-9/15/78.

4. Prepare an evaluation of the stresses in the steam generator based upon utilizing a 40' steam generator level. L.H.Bohn-10/15/78.

In addition to the above commitments, the C&I Integration Group is evaluating several alternative designs for obtaining a 40' level using the current ESFAS and SSCI systems. This evaluation will be completed 10/01/78 to help in the decision-making process on future direction for the resolution of this problem.

- C. As reported last month, the TVA Spectrum Analysis of Steam Line Breaks indicated that the envelope for qualification of LE equipment was exceeded. This problem can be resolved by changing the reactor building spray setpoint from 25 psig to 10 psig and using the resultant steam line break analysis to determine the building conditions for equipment qualification. Two CI/A's have been initiated by Plant Integration to resolve this problem:

1. Change the TVA Building Spray setpoint from 25 psig to 10 psig.
2. Invoke the TVA Building temperature versus time for the small steam line break on affected safety related equipment.

The CI/A has received expedited approval for the C&I task to allow us to obtain cost quotes from Bailey Meter Company leading to customer cost recovery.

### III. NEW PROBLEMS

- A. A discrepancy has been identified between the incore monitoring system requirements and the installed equipment capability on our operating 177FA plants. The Fuel Engineering accuracy requirements for the Incore Monitoring System to determine Tech Spec limits and fuel management information are not confirmed by operating data. Several meetings have been held to evaluate alternate solutions to the problem, and we are currently pursuing a combination of reducing the accuracy requirements and modifying the detector design to achieve consistency. Next action will be to summarize the action and obtain Section Manager review.

BAK:dh  
Attach

*P. Karrasch*

COMMITMENT STATUS REPORT - AUGUST

<u>A. COMMITMENT COMPLETE</u>	<u>Completion Date</u>
Prepare and Issue CRDL System Requirement Spec Drawing.	8/18/78
Prepare and Issue Revision to Standard Plant AIRS for RCSSA of Jet Impingement	7/31/78
 <u>B. COMMITMENTS MISSED</u>	
None	
 <u>C. REVISED COMMITMENTS</u>	
Revise Standard System Requirements for Decay Heat Removal System	12/31/78
 <u>D. NEW COMMITMENTS</u>	
Define Impact of Maintaining 40° OTSG Level for Initiation of Auxiliary Feedwater on 205FA Plants	11/15/78
Support Product Standardization Program and Release PI Documentation per Product Configuration Schedule for Product Standardization Program	12/31/78
Prepare and Issue Preliminary Asymmetric Cavity Loading Analysis for 177FA Plant Loading Syndrome	11/01/78
Prepare Strategy and Recommendation for Addressing NRC Concern on OTSG Overfill	9/08/78
Prepare Recommendation for Selected Items of Study in OTSG Secondary System Review	11/15/78
Prepare and Issue Environmental Service Conditions Specifications for all C&I and Fluid Systems Equipment in B&W Scope of Supply	9/01/78
Develop List of Plant Design Documents to be Included in Standard Freeze Program for Basis for the Plant Design	12/31/78
Obtain 95% of Allocated Staffing by Mid-1978 and Maintain for Remainder of Year	12/31/78
 <u>E. DELETIONS</u>	
None	