OCT - 5 1989

MEMORANDUM FOR: Richard J. Barrett, Chief
Risk Applications Branch
Division of Radiation Protection
and Emergency Preparedness

FROM: Gary R. Burdick, Special Assistant
Division of Systems Research
Office of Nuclear Regulatory Research

SUBJECT: IS LOCA RESEARCH PROGRAM INFORMATION NEEDS

The enclosed delineates documentary information needs and the plants involved. These needs will soon be satisfied for Davis-Besse, for Palo Verde in preparation for the audit which I understand will now take place sometime in February, and for another plant to be determined. Your assistance is requested in identifying and implementing appropriate mechanisms for obtaining the required information on the other plants in the enclosure on a schedule to assure completion of the IS LOCA Research Program during FY 1990 as planned or during an alternate agreed upon period. At the rate of the Davis-Besse, Palo Verde audits, the six plants would be analyzed sequentially with the result being IS LOCA Research Program completion in mid-FY 1991. I believe it desireable to obtain the needed information at a rate allowing parallel analyses of plants for program completion at the end of FY 1990.

The research program has a mid-January 1990 decision point built in with respect to future HRA audits for gathering performance shaping factor data. A comparative analysis will be done on Davis-Besse to help determine whether and at what level HRA audits should be done on successive plants. However, the information needs of the enclosure are mainly for engineering and PRA analyses which must go forward regardless of the HRA decisions.

The contractor has indicated verbally that the "bag visit" to Davis-Besse was very successful for information listed on the enclosure for that plant. As with Davis-Besse, a follow-up two or three person-day visit for additional PRA purposes would be needed also on successive plants. I suggest this same approach for the other plants for that type information; thus, I need your assistance in arranging bag visits, a brief PRA visit, and some level of HRA data gathering (determined by the Davis-Besse comparative analysis) for the three plants not now scheduled for formal NRR audits. For purposes of examining options, I suggest we for the present assume the plant time for all the PRA/HRA purposes (exclusive of the bag visit) would be no more than for Davis-Besse; i.e., twenty person days at each plant. The contractor could assemble HRA audit teams to work plants in parallel to meet the FY 1990 schedule; although, I would prefer back-to-back visits to preserve team

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composition and uniformity of the data base. Please give me your thoughts on how we can proceed and still meet the FY 1990 IS LOCA Research Program completion schedule. To accomplish this, the contractor has indicated that all plant visits must be completed by June 1, 1990.

/s/

Gary R. Burdick, Special Assistant
Division of Systems Research
Office of Nuclear Regulatory Research

Enclosure:
As stated

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OFFICE	:SA:DSR	:DD:DSR	:D:DSR	:	:
ORIGINATOR	:GBurdick/as	:JMurphy	:BSheron	:	:
DATE	:10/23/89	:11/24/89	:10/24/89	:	:

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1) Duane Arnold (BWR/4)
   - Core Spray (CS)
   - High Pressure Coolant Injection (HPCI)
   - Reactor Core Isolation Cooling (RCIC)
   - Residual Heat Removal (RHR)
2) Washington Nuclear 2 (BWR/5)
   - High Pressure Core Spray (HPCS)
   - Low Pressure Core Spray (LPCS)
   - Reactor Core Isolation Cooling (RCIC)
   - Residual Heat Removal (RHR)
3) Davis Besse 1 (or Crystal River-3) (B&W)
   - Core Flood
   - Decay Heat Removal
   - High Pressure Injection
   - Reactor Coolant
4) Palo Verde 1 (CE)
   - High Pressure Safety Injection (HPSI)
   - Low Pressure Safety Injection (LPSI)
   - Reactor Coolant
   - Safety Injection
5) Beaver Valley 1 (W, 3-loop)
   - Residual Heat Removal (RHR)
   - Safety Injection (SI, both high-head and low-head)
6) Wolf Creek 1 (W, 4-loop)
   - Residual Heat Removal (RHR)
   - Safety Injection (SI, both high-head and low-head)

To facilitate our analyses, we would like to obtain the following information and documentation on the above listed plants and systems:

- Piping isometric drawings (and stress analysis, if available),
- Details of valves (vendor drawings and design analysis)
- Details of pumps (vendor drawings and design analysis)
- Details of flange connections
- Details of heat exchangers (vendor drawings and design analysis)
- Piping/vessel material test data (if available)
- Gasket seal data
- fatigue analysis results of piping systems
- Any existing HRA for ISLOCA sequences
- Any write-ups of ISLOCA events that have occurred
- Any training material/approach related to ISLOCA
- Any ISLOCA or ISLOCA related procedures
- System descriptions for the above listed systems
- Maintenance and testing procedures affecting pressure isolation components and the above listed systems
- Any task analysis available related to ISLOCA

Lastly, we would like to obtain an updated Final Safety Analysis Report for Duane Arnold, Washington Nuclear-2, and Davis Besse-1 (or Crystal River-3).