

**From:** Gary Demoss *GD*  
**To:** Patrick Baranowsky  
**Date:** 9/13/02 10:27AM  
**Subject:** Davis Besse ASP

Pat,

Attached is a first cut at an Action Plan for the Davis Besse analysis. I liked your idea about including Bennett for her mathematical / statistical background, but I haven't gotten a chance to speak to her about the analysis.

Gary

**CC:** Bennett Brady; Michael Cheok

H-109

## ACTION PLAN TO COMPLETE THE ASP ANALYSIS OF DAVIS BESSE REACTOR HEAD ISSUES

### Purpose

Congress and the public need to be provided with quantitative measures of the risk significance of this highly publicized condition. The outcome of this work is a defensible risk analysis of the degraded condition of the Davis Besse reactor vessel head.

### Characteristics/Attributes:

**Methods and standards for conducting work** - Analysis will be done consistent with the procedures and precedents of the ASP program. Analysis will emphasize quantitative measurement of uncertainties.

**End product specification** - The final report will be completed, reviewed and published in accordance with established ASP procedures.

**Procedures for issuing the final product or intermediate activities** - The ASP analysis will be released under a Branch Chief letter in the normal fashion - Transmittal of Preliminary ASP Analysis to the licensee and NRR distribution. However, NRC management needs to know OERAB's preliminary results and whether or not we have a significant precursor before the report goes to Congress.

**Nature of peer review required** - The overall structure of the problem and the construction and convolution of probability distributions should be reviewed at the time that initial analytic results are being produced (early November) and at the point in which the OERAB position for the Congressional report (i.e., greater than or less than  $1 \times 10^{-9}$ ) is announced (early December).

**Nature of coordination among offices** - OERAB needs to structure the problem in a manner that DET can provide meaningful and defensible probabilistic fracture mechanics input. This will be documented early in the analysis, and follow-up provided as necessary to ensure that RES management is aware of and involved in issues as they arise.

**Type of Output needed** - The final output will be a completed and reviewed ASP analysis package.

### Tasks:

**Development and approval of the technical analysis plan** - Technical analysis plan will be drafted by OERAB, and presented to DET during the week of September 16. The emphasis will be on defining the analysis products that DET can provide to support the probabilistic analysis. There will be give and take, possibly requiring OERAB to modify the structure of the probabilistic analysis to fit achievable DET products. The analysis plan will be agreed upon by DET and OERAB and delivered to RES management by September 27. Analysis by DET and OERAB is ongoing, and will continue in parallel.

**Model preparation and data gathering** - SPAR model review and preparation will be complete by October 4. Issues that may require adjustment in the 3<sup>rd</sup> SPAR model include data review and sump plugging.

**Analysis and evaluation of experience** - ASP analysis of SGTR and LOCA precursors will be collected and reviewed to ensure that this analysis is consistent with previous ASP approaches and to survey for previously successful analytic techniques.

**Internal review by OERAB technical staff** - Analysis ready for OERAB staff comment in early to mid-November. Since this will involve several branch members, anticipate providing a technical update at each weekly branch meeting.

**Coordination with NRR** - OERAB will continue to track and consult with NRR on arising technical issues. NRR expects to have a TIA issued by the end of September, and the region will have an SDP issued shortly thereafter. OERAB will review this analysis, and inform NRR of any areas that are inconsistent with the projected ASP approach.

The ASP analysis will be independent from NRR. Technical experts from NRR and RES will meet and consult throughout the process on specific issues.

***Review by appropriate management***

Management will have three major products to review, however due to the visibility of this issue, staff time is allocated for occasional briefings. The three products for review are 1.) The analysis plan that incorporates the OERAB and DET analytic approaches, 2.) A letter, with attached technical justification providing a firm statement of whether there is a significant precursor or not, and 3.) The preliminary ASP analysis.

**OERAB Resources** (and percentage of time committed between now and Christmas)

Gary DeMoss - 50-75% - Primary risk analyst

Chris Hunter - 50% - Supporting risk analyst

Bennett Brady - 25% - Statistical analyst

Eli Goldfeiz - 10% - Direction and assistance in manipulating SPAR models

Dale Rasmussen - 5% - Direction and review with emphasis on convolution of PFM and PRA distribution

Don Marksberry - 5% - Direction and review with emphasis on reactor systems, initiating event and ASP issues

**Summary of Schedule for Davis Besse ASP Analysis**

<b>Week of:</b>	<b>Activities</b>	<b>Products</b>
Sept. 16	Coordinate with DET. Plan analysis	
Sept. 23	Document ASP analysis plan	Letter plan to RES Management
Sept. 30	Collecting and reviewing PFM and ASP model information	
Oct. 7	Review NRR (Steve Long) analysis	
Oct. 14	Review and update Davis Besse SPAR data and approach (sump plugging, etc.)	Letter reviewing NRR approach
Oct. 21		
Oct. 28	Receive final DET input - Working on initiating event frequency distributions	
Nov. 4	Finalize initiating event frequency distribution calculations	
Nov. 11	Circulate calculation package to OERAB reviewers	
Nov. 18	Incorporate OERAB comments	
Nov. 25	Thanksgiving	
Dec. 2		BC letter and supporting document - < or > 1E-3
Dec. 9	Preliminary ASP analysis for final OERAB review chain	
Dec. 16		Transmittal of Preliminary ASP by BC letter
Dec. 23		