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Date: 8/29/02 4:25PM
Subject: APPENDIX A

This is the table of recommendations based on today's draft of the report. It is on the shared drive.

There are only 97 items !!! We have OBVIOUSLY FALLEN SHORT! (Art, we'll work all weekend to come up with 3 more!!!!)

I'll revise it as needed so we'll have an up to date version for the meetings next week.

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Appendix A: Consolidated Recommendations

No.	Recommendation	Report Reference (Section)	Action Org.	
1	Consider providing an integrated listing of studies or major documents containing significant operating experience to ensure that this body of knowledge and experience isn't lost	3.1.1	NRC	
2	Consider providing an integrated listing and assessment of issued generic communications including an assessment of their effectiveness	3.1.1	NRC	
3	Consider studying the unique vulnerabilities of B&W plants with respect to nozzle cracking and boric acid corrosion	3.1.1	NRC	
4	Consider performing a study to analyze boric acid corrosion of different materials under varying temperatures and conditions.	3.1.1	NRC	
5	Consider the need for long-term analysis of operational experience by a single group.	3.1.1	NRC	
6	Consider the need for the NRC to review industry guidance documents	3.1.2	NRC	
7	Consider a periodic review of the status of generic communications	3.1.2	NRC	
8	Consider changes to MD 6.4, MD 8.5, and LIC-503 to coordinate office functions and provide appropriate training	3.1.2	NRC	
9	Consider providing training on significant operational experience.	3.1.2	NRC	
10	Assess the need to enhance the use of foreign operating experience.	3.1.2	NRC	
11	Enhance the dissemination of foreign experience	3.1.2	NRC	
12	Update the international experience database originally kept by AEOD	3.1.2	NRC	
13	Assess whether or not lessons learned have been learned or not	3.1.2	NRC	
14	Consider the need to verify that corrective actions have been implemented to address past significant generic communications and generic issues	3.1.3	NRC	
15	Consider establishing a process for verification of licensee and agency actions to address generic communications. Consider also the need to verify the effectiveness of licensee and agency corrective actions to address generic communication	3.1.3	NRC	
16	Assess the overall scope and process for reviewing operational experience	3.1.3	NRC	
17	Consider the need to consolidate the generic communication program (LIC-503) and the generic issues program (MD 6.4)	3.1.3	NRC	
18	Consider establishing criteria for accepting "industry" resolutions for generic communications and generic issues	3.1.3	NRC	

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19	Establish a central operating experience screening group to identify issues for Generic Issues Program based on US and foreign experience	3 1.4	NRC	
20	Evaluate/revise guidance for proposed generic communications	3 1.4	NRC	
21	Determine if screening criteria for candidate generic issues are acceptable	3 1.4	NRC	
22	Assess consolidation of generic communications process and the Generic Issue Program (GIP)	3.1.4	NRC	
23	Ensure that generic requirements or guidance are not eliminated or undermined when making changes to regulatory processes (e.g., deleting inspection procedures)	3 1.4	NRC	
24	Update MD 8 5, MD 6 4, and NRR Office Instruction LIC 503, "Generic Communications Affecting Nuclear Reactor Licensees "	3.1.4	NRC	
25	Enhance criteria for Boric Acid Corrosion Control (BACC) programs	3.1.4	NRC	
xx		3.2.1		
xx		3.2.2		
26	Assess the practice of resolving safety issues via communications with industry owners groups to determine if this practice is appropriate rather than direct communications with individual licensees	3.2.3	NRC	
27	Review the legal status of owners group communications with the NRC to determine if actions or commitments identified by the owners groups on behalf of their member utilities are enforceable upon individual licensees	3 2 3	NRC	
28	Perform a review of NRC safety evaluations of owners group submittals to identify what actions were assumed by the staff to be implemented by individual licensees to support the NRC staff's conclusions	3 2 3	NRC	
29	Develop a process for the communication of NRC safety evaluations of owners group submittals to the affected licensees and the NRC regional offices.	3 2 3	NRC	
30	Develop an inspection procedure for regional office inspector verification of implementation of owners group commitments made on behalf of their member utilities at the affected plants and provide inspection resources to implement this verification.	3 2 3	NRC	
31	Perform an audit of implementation of past owners group commitments for individual licensees to ensure the bases of the NRC's safety evaluation conclusions remain valid	3 2 3	NRC	
32	Implement periodic inspections of licensee operating experience programs	3 2.3	NRC	
33	Audit owners group submittals made to the NRC on their behalf to ensure commitments, explicit or implied, are incorporated into the commitment tracking system. Ensure that required actions have been implemented	3 2 3	Ind	
34	Ensure that feedback mechanisms exist and are implemented to perform adequate review of owners group reports to ensure that site-specific actions are taken as required	3 2 3	Ind	

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35	Review the range of NRC baseline inspections and assessment capabilities to determine if sufficient activities are in place to detect the types of problems experienced at DBNPS or if additional oversight activities are needed	3 2 4	NRC	
36	Each commercial nuclear power plant should perform in-depth case study review of the Davis-Besse head degradation event to ensure they do not have similar problems and weaknesses	3 2 4	Ind	
37	Re-emphasize questioning attitude among NRC staff/management. Consider this attribute in individual and organizational performance measures	3 3.1	NRC	
38	In refresher training discuss the Davis-Besse head degradation event and highlight symptoms that were available to the NRC staff during inspection activities	3 3.1	NRC	
39	Establish structure and expectations for management interaction with staff to followup on the types of problems that occurred at Davis-Besse	3.3 1	NRC	
40	Review inspection procedure Attachment 71111. 20, Refueling and Outage Activities, to determine if adequate instructions and expectations for outage reviews are specified. MAYBE MOVE	3 3 1	NRC	
41	Emphasize to inspectors the need remain aware of their surroundings when inspecting in a particular area, such as radiation protection, and the need to pass on observations to applicable personnel	3 3 1	NRC	
42	Assess the overall PI&R guidance such that issues similar to those experienced at Davis-Besse are reviewed (possible emphasis on the 3-6 issues /years PI&R inspections and the biannual inspections) Determine if guidance is needed on the format of issues that are screened when determining which specific problems will be reviewed	3 3 2	NRC	
43	Review ROP guidance to determine if changes are needed to allow longer term followup on issues that haven't progressed to a finding Should IFIs be allowed that would direct future inspections in areas of concern	3 3.2	NRC	
44	Emphasize through a "case study" training that inspection must probe into issues or potential problems versus reviewing licensee action and providing a status of these action in an inspection report	3.3 2	NRC	
45	Assess the need for inspection of licensees bonc acid corrosion programs, similar to the actions directed by IP62001.	3.3 2	NRC	
46	Consider various method to independently assess plant performance, then compare and contrast the results with existing plant performance assessment performed by the region	3 3 2	NRC	

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47	Determine if additional guidance is needed to pursue issues and problems identified during plant status reviews and if other improvement to plant status guidance is needed. Of particular important is management's engagement/ recognition of issues and the guidance that is given to the inspection staff	3 3 3	NRC	
48	Re-emphasize questioning attitude among NRC staff/management Consider this attribute in individual and organizational performance measures.	3 3 3	NRC	
49	Review ROP assessment process to determine if changes are needed to identify plants that may have similar problems as Davis-Besse, however, the inspections results has only Green findings and Green PIs	3 3 3	NRC	
50	Determine if other plants, which were only assessed by PPRs for a similar length of time as Davis-Besse, have problems that need to be addressed	3 3 3	NRC	
51	Improvement to the Barrier PIs should be considered	3 3 3	NRC	
52	Management Directive 8.3 should be reviewed for possible over-reliance on risk determination that have too much uncertainty	3 3 3	NRC	
53	Develop and implement guidance for conduct and content of daily plant status calls between the resident inspector office staff, NRR project manager, and regional office supervisor	3 3 4	NRC	
54	Review and implement guidance for NRR project managers to maintain cognizance of plant operational issues and provide feedback to regional office staff of licensing issues that have licensee performance insights	3 3 4	NRC	
55	Revise regional procedures for conduct and content of daily staff meetings Guidance should include provision for senior manager acknowledgment of issues presented and assignment of action items as necessary	3 3 4	NRC	
56	Develop uniform guidance for inspection debriefings with regional management Guidance should include provision for discussion of plant performance observations that may be indicative of licensee problem identification and resolution deficiencies and declining plant performance	3 3 4	NRC	
57	Review guidance for the conduct of counterpart meetings between NRC headquarters and regional office staff to determine if additional forums for communication are required of plant performance issues	3 3 4	NRC	
58	Enhancements to the NRC inspector training should include 1) provide training on bonc acid corrosion; 2) increasing knowledge level on selected industry operational experience, 3) utilized Davis-Besse reactor head degradation as a case study for inspector initial certification and requalification, and 4) update training at TTC to include event lessons learned	3 3 5	NRC	

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59	Re-enforce expectation of IMC 0102 regarding regional management visits to reactor sites	3 3 5	NRC	
60	Conduct an assessment of staff needs in the materials area	3 3 5	NRC	
61	Establish measurements for resident inspector staffing and consider establishing nationwide expectations to satisfy minimum staffing	3 3 5	NRC	
62	Consider 0350 impact on regional branch assignment of facilities and the need for program guidance on distribution of oversight function for branch with 0350 plants	3 3 5	NRC	
63	Assessment of maximum turnover rate for NRR project managers (i e assignment/reassignment) and update the Project Manager Handbook to be consistent with current management expectation regarding project manager site visits and interaction with regional staff	3 3 5	NRC	
64	Reassess policy for selecting uncertified staff for resident positions	3 3 5	NRC	
65	The NRC should take steps (i e , establish processes and provide resources) to verify information provided by licensees in response to safety-significant generic communications and in support of other safety-related information submitted by licensees	3 3 6	NRC	
66	The DBNPS event should be used as an example to strongly encourage licensees to provide to the NRC complete and accurate information on plant operations and system conditions.	3.3.6	IND	
67	The DBNPS licensee should take steps to improve its internal communications to ensure that accurate information on plant operations and system conditions is available throughout the organization This should include processes to ensure that written records include information consistent with actual system conditions, and that internal audits include steps to verify information about system conditions	3.3.6	IND	
68	Implement guidance in the PM handbook for project manager site visits and coordination between project managers and resident inspectors NRR should take steps to foster working relationships between project managers and site resident inspectors One step is for NRR to better manage project manager assignments to avoid the type of high turnover associated with DBNPS. NRR should consider holding periodic NRR/Regional Office counterpart meetings (including the resident inspectors) to maintain working relationships among staff and managers in the organizations and to allow exchanges on significant topics	3.3.7	NRC	

69	Licensing project managers and their supervisors should be encouraged to question information regarding plant operation and conditions. NRR should consider strengthening the guidance related to the license amendment review process to emphasize the need to consider actual system conditions in the safety evaluation. Further, further clear guidance is needed to ensure independent verification of information provided by licensees related to significant licensing decisions.	3.3.7	NRC	
70	NRC should establish procedures to ensure that decisions to allow deviations from agency guidelines and recommendations issued in generic communications are adequately documented.	3.3.7	NRC	
71	NRC should assess the use of risk methods and provide clearer guidance for integration of results into decision-making related to short-notice licensing actions. Clearer guidance addressing such situations would help ensure that appropriate decisions are made and that the bases for the decisions are well documented.	3.3.7	NRC	
72	NRC should revise the guidelines for review of industry topical reports to allow for staff review of safety-significant reports independent of their formal submittal to the NRC. NRC should also provide sufficient resources to support the reviews.	3.3.7	NRC	
73	NRR should either fully implement LIC-900, "Commitment Management Process" or consider revising the guidance if it determines that the project manager audit of licensee programs is not required. Further, the staff should consider the usefulness of the periodic report on commitment changes made by licensees, and if they are not to be reviewed, inform licensees that they do not need to be submitted.	3.3.7	NRC	
74	NRR should determine whether ISI summary reports should be submitted to the NRC, and revise the ASME submittal requirement, or staff guidance regarding disposition of the reports, as appropriate.	3.3.7	NRC	
75	The NRC staff should continue to pursue ongoing efforts to encourage the ASME Code requirement changes for inspections of reactor vessel heads, including nozzle penetrations, strengthened (NRR), or as an alternative, pursue changes to 10 CFR 50.55a.	3.4.1	NRC	
76	The NRC should pursue revision of the ASME Code to reduce the ability for plants to start up with known leakage from RCS mechanical joints.	3.4.1	NRC	
77	The NRC should establish a clear enforcement policy for RCS leakage and should not grant enforcement discretion for nozzle cracking.	3.4.1	NRC	
78	NRC should review the bases for the 1 gpm unidentified leakage limit to determine if this criterion is adequate to address low levels of leakage from the RCS pressure boundary.	3.4.1	NRC	

79	NRC should review, and revise as necessary, the Maintenance Rule requirements and guidance pertaining to RCS unidentified leakage. The results of this review should address requirements to establish a normal level of unidentified leakage and methods for establishing action levels based on deviations from normal.	3.4.1	NRC	
80	Industry should revise related ASME code requirements to address the shortcomings in VHP inspections and reduce the ability for plants to start up with known leakage from RCS mechanical joints.	3.4.1	IND	
81	Review the significance determination process for limitations in evaluating degraded conditions and applying risk assessments. Consideration should be given to the use of deterministic methods in assessment evaluations;	3.4.2	NRC	
82	Review the ROP inspection effort during refueling outages given the large amount of licensee activities in the relatively short outage time frame, limit future opportunities during operating cycle, and a lack of previous inspections for passive components;	3.4.2	NRC	
83	Consideration should be given to proceduralizing "good practices" such as containment building tours, Mode restraint reviews prior to startup, etc;	3.4.2	NRC	
84	Evaluate performance indicators in barrier integrity cornerstone to determine if improvements are needed,	3.4.2	NRC	
85	Evaluate the reactivation and implementation of inspection procedures 90700 and 62001 or provide comparable level of guidance for operating experience and boric acid corrosion program inspections;	3.4.2	NRC	
86	Consider risk of repetitive LCO entries or continuing problems, develop inspection guidance to focus on repetitive multiple tasks for significance (i.e. CAC cleaning/ALARA),	3.4.2	NRC	
87	Develop inspection guidance for resident inspector samples of licensing requests to understand the basis and provide necessary feedback to the project manager;	3.4.2	NRC	
88	PI&R guidance should be strengthened in the area of utilizing experience from members of the staff to develop area of review, i.e., handing off issues to the PI&R team, and screening corrective action issues when determining issues for follow up review,	3.4.2	NRC	
89	Develop NRC criteria for inspection of industry initiatives. Provide inspection guidance to address selected industry operational experience. Initiate GC-specific inspection procedures. Incorporate GC references in inspection procedures.	3.4.2	NRC	
90	Assess the need for changes to the ROP to allow regional follow up on issues of potential safety significance.	3.4.2	NRC	
91	Determine if the results from reviewing previous lessons-learned task force efforts suggest a need for programmatic guidance in this area.	3.4.2	NRC	

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92	NRC should work with industry to develop guidance for voluntary initiatives such as testing to more fully understand boric acid corrosion effects. NRC should take steps to review guidelines in industry topical reports (see Recommendations in Section 3.3.7). A possible step would be to assign NRC technical project managers to evaluate industry tests and review the widely distributed guidelines for adequacy and suitability.	3.4.3	NRC	
93	Industry should review and revise existing guidance related to boric acid corrosion control and RPV head penetration inspection and repair to better support licensee decision making involving these issues.	3.4.3	IND	
94	Industry should utilize plant condition information gained by vendor organization conducting inspection and repair activities at multiple plants.	3.4.3	IND	
95	Industry should review the approaches used by licensees to consider economic factors involved with RPV head penetration inspection and repair. This might include conducting representative cost/benefit analyses of RPV head inspections that would include factors for dose, cost, and time involved.	3.4.3	IND	
96	Industry groups should improve dissemination of information to members and hold members accountable for following guidance/recommendations. For example, one mechanism that would aid dissemination is for licensee staff to regularly attend Owner's Group meetings related to RPV degradation and inspection.	3.4.3	IND	
97	The industry should conduct further testing and analysis to develop a more reliable crack model and should assess the susceptibility of other RCS components fabricated from Alloy 600.	3.4.3	IND	

Items numbered in order of appearance in report. Will be renumbered when recommendations are available for other sections.