

**Industry Questions and Comments on Bulletin 2003-01  
Provided in Support of June 30, 2003 NRC Public Meeting**

#	Topic	Question/Comment
1*	General	<p>It is acknowledged that there may be some plant-specific issues related to ECCS operation in Post-LOCA recirculation. These issues may stem from plant-specific compliance with what is presently recognized as an insufficient regulatory margin requirement, e.g., 50% blockage. It is also recognized that a few specific plants may have had some related problems and issues. However, it seems inappropriate to require an accelerated bulletin response from the remaining PWR plants. The 60 day response also seems premature considering the fact that the guidance provided (DG-1107) is draft and industry comments on this have not yet been resolved. An extension of the response period to permit industry time to complete development of their evaluation and resolution methodology is suggested. In the interim, some of the suggested interim compensatory measures may be appropriate.</p> <p>Some of the interim compensatory measures that are considered appropriate, include:</p> <ul style="list-style-type: none"> <li>o More aggressive containment cleaning and increased foreign material controls</li> <li>o Ensuring containment drainage paths are unblocked</li> <li>o Ensuring sump screens are free of adverse gaps and breaches</li> </ul> <p>However, some of the interim compensatory measures may be inappropriate, such as the emergency operating procedural modifications that could result in injection of undetermined quantities of water into containment or shutting down portions of the ECCS. Sufficient time needs to be provided for industry to study these suggested interim measures. Recall that one of the factors that set the stage for the TMI accident was a concern for pressurized thermal shock, which, in addition to other factors, may have led to inappropriate shutdown of the ECCS. LA-UR-02-7652, "The Impact of Recovery From Debris-Induced Loss of ECCS Recirculation on PWR Core Damage Frequency" presents some possible actions to recover or mitigate from a situation where sump blockage had or may have occurred. Implementation of any such actions, which may include shutting down portions of the ECCS, injecting water into containment from sources in addition to the normal source must be carefully evaluated to assure that they are appropriate, effective, and will contribute to mitigation and/or recovery from the situation, and not contribute to or exacerbate a core damage accident. It may take some time to thoroughly review and translate appropriate mitigation or recovery suggestions into emergency procedure guidelines.</p>
2*	General	<p>What guidance or measures (if any) will NRC use to evaluate the adequacy of licensee responses to the Bulletin? If this guidance exists, can it be made publicly available for use by licensees in preparing their response to the Bulletin? If it is not currently available, can NRC identify the key elements that NRC will be looking for in defining response adequacy?</p>

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3*	Comp Action	<p><b>Westinghouse Owners Group</b> Interim compensatory measures that are outside of the current design and licensing basis will be utilized. For example:</p> <ul style="list-style-type: none"> <li>Consistent with the severe accident management guidance (SAMG), components that are not qualified to operate in an adverse environment will be credited as alternate flow paths to make up to the RWST or to restore ECCS pump NPSH.</li> </ul> <p>Consistent with the SAMG, non-Reg Guide 1.97 instrumentation will be credited.</p>
4*	Comp Action	<p><b>Westinghouse Owners Group</b> If an alternate borated water source is utilized after the ECCS has been aligned for cold leg recirculation, do the components associated with the alternate borated water source have to meet the minimum leakage assumptions of the off-site and control room habitability dose assessments?</p>
5*	Comp Action	<p><b>Westinghouse Owners Group</b> If the containment spray pumps are turned off to restore the NPSH margin by decreasing the flow through the containment sump, can the results of the off-site and control room habitability dose assessments, that utilize the Alternative Source Term to credit these pumps be exceeded?</p>
6*	Comp Action	<p><b>Westinghouse Owners Group</b> Can operator actions that would require entry into high radiation areas be credited?</p>
7*	Comp Action	<p><b>Westinghouse Owners Group</b> There is a potential for inconsistency with the safety analysis assumptions if ESF pumps are stopped early (before the transfer to recirculation occurs) to delay the transfer to the sump.</p>
8*	Comp Action	<p><b>Westinghouse Owners Group</b> Leak-before-break will be used as a justification in the determination of interim compensatory measures.</p>
9*	Comp Action	<p><b>Westinghouse Owners Group</b> Components that do not satisfy the single failure criteria may be credited.</p>
10*	Comp Action	<p><b>Westinghouse Owners Group</b> Existing generic emergency response guidance (ERGs) and SAMGs that address the loss of ECCS recirculation will be credited as interim compensatory measures.</p>
11*	Comp Action	<p><b>Westinghouse Owners Group</b> What is the intent of “operator training on indications of and responses to sump clogging?” Is formal operator training required on all of the interim compensatory measures, or just on the phenomenon and indications used to recognize it?</p>
12*	Procedures	<p><b>Westinghouse Owners Group</b> The EOPs are written as symptom based procedures. Some of the suggested compensatory measures discussed in Bulletin 2003-01 appear to be event based. How should this inconsistency be addressed with respect to the EOPs?</p>

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13*		<b>B&amp;WOG OSC</b> The bulletin maintains the applicability of 10CFR50.46 and thus, Appendix K and GDC 35 requirements, but proposes interim compensatory measures counter to these requirements. Please clarify. (e.g. abundant core cooling requires full ECCS flow while sump clogging mitigation measures may require throttling that flow, maintaining 120% decay heat removal requirement may unnecessarily restrict the ECCS throttling margin available.)
14*	Comp Action	<b>B&amp;WOG OSC</b> In the Discussion section on Page 7, the bulletin states "Possible" interim measures may include several bulleted items, however, the Option 2 discussion on Page 9 states that any interim compensatory measures not implemented must be justified. This seems inconsistent. Please clarify.
15*	Non Reg. Guide 1.97 Instruments	<b>B&amp;WOG OSC</b> Please confirm that the use of non-Reg. Guide 1.97 instruments to recognize and respond to sump clogging issues is acceptable (e.g. Pump amp meters, Pump discharge pressure).
16*	Option 2	<b>B&amp;WOG OSC</b> For Option 2, what level of justification is expected for any compensatory measures not implemented?
17*		If the NRC allows an interim period for repairs/ modifications after the evaluation is complete, will enforcement discretion be exercised if the compensatory measures are in place until repairs / modifications are complete.
18		At present there is no approved guidance available to PWR licensees. What mechanism is available for those plants to define their level of compliance with regard to the issues identified in the Bulletin?
19	Addressing Bulletin Concerns	Is some discussion in the response required relative to the 3 mechanistic concerns identified on pages 4 and 5 of the Bulletin, or are these included for background information, and for disposition during the more-detailed evaluation phase of GSI-191 resolution? Specifically: <ul style="list-style-type: none"> <li>• Structural reinforcement of the sump screen</li> <li>• Flowpath restrictions ('chokepoints')</li> <li>• Downstream equipment concerns (CS nozzles, HPI pump clearances, HPI throttle valves, fuel assembly inlet screens, etc.)</li> </ul>
20	Addressing Bulletin Concerns	The Bulletin lists three additional concerns related to post-LOCA debris issues; (1) Sump screen design DP and breaches/gaps, (2) blocking of reactor building drainage paths to the sump creating holdup volumes, and (3) debris clogging of components which have a smaller opening than the recirculation sump screens. Does the NRC expect each of these smaller issues to be fully addressed (with supporting analysis complete) under the IB 2003-01 response?
21*	Adequacy Measure	If a licensee implements changes (procedures, training, process, operation) as requested in Bulletin 2003-01, is it necessary to demonstrate the effectiveness of the changes.
22*	Current Licensing Basis	If backfitting is not intended by the Bulletin, and the licensing basis for a plant precedes RG 1.82, why is using DG-1107 appropriate for determination of compliance with existing regulatory documents? Is not the 50% blockage assumption, if used, still considered the current design basis, founded on the licensing basis, for operability determination?

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23*	Elements of Option 1 and 2	On page 8 of the bulletin with respect to the options, if a licensee has analyses to support their position, but not a complete reanalysis for the ECCS and CSS functions, is it acceptable to have a combined response (combining Option 1 and Option 2), or should the licensee respond to Option 2 with the analyses to compliment the compensatory measures?
24*	Elements of Option 1 and 2	May the response be a combination of options 1 and 2 in lieu of either option alone?
25	Elements of Option 1 and 2	If option 1 is elected alone or in combination with option 2, must the supporting analysis be submitted with the response?
26	General Evaluations to determine compliance	What, if anything, is expected of the phrase: "while evaluations to determine compliance proceed" in the response section of the Bulletin (e.g., a commitment date or a long term plan)?
27*	Response Date	Given the large uncertainty in methodology(ies) and acceptable inputs to the individual plant evaluations for compliance with 10CFR50.46, will consideration be given to requests for extension of response date?
28	Schedule for Implementation	For plants with a Fall Refueling Outage, is it an expectation to implement Compensatory Actions (other than Containment Cleanliness) that may require a plant modification prior to restart from the outage.
29	Use of draft guidance	The bulletin offers draft Reg Guide DG-1107 as regulatory guidance for resolving the issues in the bulletin. However, industry provided extensive comments on the draft Reg Guide, and the draft without the comments incorporated may not be an adequate representation for the industry. When will the Reg Guide be finalized and to what extent is the draft applicable to issues in the bulletin?
30*	Use of draft guidance	As delineated on page 7 of 13, 2nd paragraph does "are in compliance with existing applicable regulatory requirements" mean that compliance with Draft Regulatory Guide 1107 is required for compliance with this bulletin?
31*	Option 1	If a plant elects to select Option 1, do all the items of DG 1107 (Draft Regulatory Guide 1.82 R3) need to be addressed?
32	Option 1	Can a plant implement Option 1 by performing a realistically conservative bounding analysis?
33	Option 1	If a plant elects to select Option 1, can some of the items in DG 1107 be addressed qualitatively pending a more detailed analysis?

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34	Option 1	<p>Our response to NRC Bulletin 2003-01 will be based on Option 1. Analyses were completed for our plant in 1992 in response to GL 85-22 and used the information presented in NUREG-0897. Information contained in NUREG/CR-6808 has been compared to the data and results contained in our analyses and, while the newer information is more detailed, the conclusions remain the same. The available NPSH is adequate given the amounts of debris generated and transported following a LOCA.</p> <p>We continue to review the NRC data and will be initiating a revision to our analyses. These revisions may not be completed prior the response deadline for the NRC bulletin. Therefore, our question for the NRC is: For those utilities that have analyses of record and need to update them based on this newer information, will Option 1 permit time to complete the necessary work considering that preliminary evaluations demonstrate adequate ECCS and CSS function?</p>
35	Option 1	<p>With respect to Option 1, are commitments to complete work permissible in the Bulletin response?</p> <p>What level of detail must be provided in supporting a statement that Option 1 is met?</p> <p>Current regulatory acceptance criteria are based on Revision 2 of Regulatory Guide (RG) 1.82. Will re-submission of information be required after Revision 3 to RG 1.82 is issued?</p> <p>Is a document that demonstrates how each of the criterion of RG 1.82, Rev. 2 and/or Draft Guide 1107 acceptable to support Option 1?</p>
36	Option 1	If an analysis is performed pursuant to option 1, is the level of rigor and complexity left to the discretion of the licensee? (Given the short turn-around time available and the absence of industry guidance on methodology.)
37	Adequacy Measure	The bulletin does not offer any quantification of adequate risk reduction. The bulletin references the generic PRA evaluation in LA-UR-02-7562 but does not indicate if plant-specific PRA evaluations are necessary to justify specific compensatory actions. Please clarify the expectation with respect to PRA evaluations for this bulletin.
38	Comp Action	<p><b><u>Ensuring that alternate water sources are available to refill the RWST or to otherwise provide inventory to inject into the reactor core and spray into the containment atmosphere</u></b></p> <ol style="list-style-type: none"> <li>1. Does the capability to refill the RWST need to be proceduralized?</li> <li>2. This item does not say a plant should have a procedure to inject the water. It only addresses ensuring availability. Ensuring availability should not be inconsistent with a plant's licensing basis or any accident analysis. In fact it is required for implementation of a particular EOP and SAMG and could be viewed as consistent with a plant's licensing basis.</li> <li>3. NUREG/CR-6808 acknowledges the issue of overfill on containment and can be used as a reason for plants <b>not</b> to replenish the RWST</li> <li>4. If submergence becomes an issue by refilling the RWST, what guidance is available to weigh the benefits/risks? Is core cooling more important than indication</li> </ol>

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39	Comp Action	<b><u>More aggressive containment cleaning and increased foreign material controls</u></b> What does 'more aggressive cleaning' and 'increased FME controls' mean? More aggressive than what reference? An increase as compared to what reference?
40	Comp Action	<b><u>Ensuring containment drainage paths are unblocked</u></b> What does 'unblocked' mean for drainage paths? Is this referring to normal operation, such as doors, gates, or barriers? Wire Mesh rad gates and scuppers permit flow, but not certain debris. Although drainage through these is not 'blocked' it could become a choke point post-LOCA, but an evaluation is needed to determine potential.
41	Comp Action	Some reactor research empirical data appeared to indicate that the uniform insulation debris mat on the fine mesh sump screen would disengage from the screen when suction from the sump was terminated. There does not appear to be any discussion of this point in the NRCB. Should utilities consider termination of suction from the sump as one of the strategies in coping with the current sump performance issues?
42	Comp Action	Page 8 of the Bulletin states that: "The NRC staff recognizes that the implementation of certain compensatory measures involving containment entry may not be feasible until the next outage." Please provide clarification to this statement and include specific examples, if possible.
43	Comp Action	The third bullet on page 7 states: "ensuring that alternative water sources are available to refill the RWST or to otherwise provide inventory to inject into the reactor core and spray into the containment atmosphere". What engineering documentation is necessary, if any, to support the acceptability of injecting additional water into containment (e.g. flood level, seismic)?
44	Comp Action	How much dose is acceptable to allow on-line performance of inspections in containment (i.e., for debris, sump screen condition, flow path blockage)?
45*	Comp Action	Is crediting existing programs (such as periodic sump inspections, containment cleaning and FME) acceptable as compensatory actions?
46	Comp Action	On page 7 of the bulletin with respect to the bullets, is it acceptable for licensees in their response to document conservatisms in existing analyses in combination with or in lieu of the compensatory measures? For example, on bullet item 3, plants that have available margin for the BWST/RWT inventory between the technical specification limit/calculation assumptions and the actual available inventory, credit could be taken for this additional inventory, and administrative controls could be established to control this level to a higher limit.

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47	Comp Action	<p>Care needs to be exercised in the training of the operators to recognize indications of sump clogging. At present the two most common ways of attempting to detect sump screen clogging is to monitor flow and pump current. It should be noted however, that based on head loss experiments that I have conducted in the past that initially did not have a robust support for the screen, the flow rate did not change significantly while sufficient debris accumulate to cause failure of the screen. A failed screen would then allow debris ingestion into the ECCS potentially impacting the pumps and containment spray nozzles. Additionally, based on the NRC studies of the impact of debris on pumps, clogging of the pump bearing cooling channels may cause the pump to oscillate as the bearings freeze up resulting in a concurrent oscillation of the pump current. As such, should a screen fail mechanically, the operator could be presented with a situation where the containment spray flows start to reduce due to clogging of the containment spray nozzles together with possible pump current oscillations leading to the inappropriate diagnostic that sump screen clogging may be occurring. The LPI flow, however, would not be as impacted as the containment spray. A nominal LPI flow indication with indications of reduced containment spray flow would be a possible indication that sump screen failure had occurred. In this set of conditions the operator perhaps should try to immediately switchover to other sources of clean water or shutdown the system while an alternative water source is established.</p>
48	Comp Action	<p>Turning off ECCS trains may not be appropriate for some plants. For example, based on the Davis Besse analysis, a mostly RMI plant should keep ALL ECCS trains running at full flow to ensure that as much RMI crumpled debris reaches the sump screen. The RMI debris will form a "beehive" accumulating on the sump screen creating a significantly increased surface area which would trap any miscellaneous fibers and preclude the formation of the thin bed effect. On the other hand, a plant with a mixture of significant quantities of fibers and Cal-Sil (and very little or no RMI) should implement procedures to delay switchover as long as possible and consider further reduction in flow after switchover such as intermittent operation of pumps. Note that some BWRs trip redundant trains 10 minutes after the accident – shortly after the time needed to identify that a LOCA has occurred.</p>
49	Comp Action	<p>Injection of alternative water sources has the associated issue of the impact of increased water level beyond the maximum pool level due to the current external water inventories. Issues such as impact on instrumentation and containment integrity should be addressed to establish the absolute maximum volume of alternative water that could be introduced into the system.</p>
50	Comp Action	<p>Methods to delay going into a recirculation mode are clearly identified in the bulletin. However, methods to reduce or delay plugging of the ECCS Sump Strainers after switching to recirculation is not identified as a Compensatory Action. Was this intentionally excluded from the scope.</p>
51	Mitigating Factors	<p>When responding under Option (2), should discussion of mitigating factors (NPSH margin, post-LOCA water depth, limited use of fibrous insulation, etc.) in the plant design and operation be included? Or should only the compensatory actions be addressed?</p>
52	Operator Action	<p>Operator action to reduce flow to the core following an event to delay switchover to recirculation is not an advisable compensatory action. It is counter intuitive to maintaining core cooling and preventing core damage. Any guidance to reduce core flow would have to go through industry review before implementation.</p>

#	Topic	Question/Comment
53	Operator Training	<p><b><u>Operator Training on indications of and responses to sump clogging</u></b></p> <ol style="list-style-type: none"> <li>1. What is the intent of the training? Is it sufficient just to impart knowledge of the phenomenon, or is it assumed the training is to support accompanying procedure changes?</li> <li>2. For “interim corrective actions” it seems acceptable to add instructions to monitor pre-identified parameters for indications of degraded sump performance. As long as no operator action is directed, deviation from a plant’s licensing basis does not occur.</li> <li>3. Must all potential responses to indications of sump clogging be proceduralized or can 10CFR50.54.X be invoked?</li> <li>4. For “interim corrective actions,” is it acceptable to add instruction to direct the “plant engineering staff” to evaluate and recommend mitigating actions with the understanding that implementation will likely require invoking 10CFR50.54.x?</li> <li>5. Can all plants (or even some plants or any single plant) provide a definitive set of symptoms the “plant engineering staff” or control room operators can use to conclude sump performance is “degraded” sufficiently to require implementation of mitigating actions?</li> <li>6. Is it necessary for “interim corrective actions” that the instruments use for the determination be environmentally qualified?</li> <li>7. A particular EOP directs actions that are not consistent with the plant accident analyses and certain portions of plant licensing basis. These actions include reduction of ECCS and CSS flow. This guideline is currently implemented; however, only for “beyond design basis” events where it has been positively identified that ECCS recirculation flow cannot be established or has been lost. Can plants make a case in a 50.59 evaluation that it is acceptable to “pre-emptively” implement strategies in this EOP?</li> <li>8. Can PSA determinations be used in 50.59 evaluations to demonstrate that “temporarily” incorporating mitigating actions that are not consistent with a plant’s accident analyses is acceptable based on the impact on CDF?</li> </ol>
54*	Option 2	If Option 2 is selected, should the selected compensatory measures need to be quantitatively evaluated as to their potential risk reduction?
55	Option 2	If Option 2 is selected, does the plant need to address the structural integrity, flow path blockage, and downstream effects issues?
56	Option 2	What is meant in Option 2 by “until evaluation to determine compliance is complete.”
57	Option 2	What type of compliance evaluations need to be started to be performed if a plant elects to select Option 2?



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58	Option 2 Prior NRC Review and Approval	Some compensatory measures may require prior NRC review and approval. For example, reducing the injection flow rates (prior to transfer to recirculation) could allow more time for debris sources to settle and be a tremendous benefit. One means of reducing injection flow rates is to secure one train of injection. However, subsequently, if this train fails (single active failure) the operators would need to restart the secured train. This would be substitution of manual operator action for automatic action. And it appears would require prior NRC review and approval. Given the risk significance of the sump blockage issue as discussed in Bulletin 2003-01, would the NRC find these types of actions to be acceptable.
59	Option 2 PSA assessment of Comp Measures	Does the PSA impact of compensatory measures need to be assessed and/or quantified?
60	Option 2 EOPs	Do EOP/TSC procedure revisions need to be in place by submittal, or is a schedule to do so adequate?
61	Option 2 Consistency w/ licensing basis	Some of the compensatory measures listed in the Bulletin are inconsistent with the accident analyses and/or licensing basis of a majority of PWRs.
62	Option 2 Operability	Does selection of Option 2 by inference signify that the plant's ECCS sump would be impaired by LOCA induced debris?
63	Option 2 Operability	As evaluations proceed, should operability of sump screen become questionable, are the interim compensatory measures established in the Bulletin response adequate until all analyses and modifications are completed?
64	Option 2 Prior NRC Review and Approval	The recommended interim compensatory measures include: procedural modifications, if appropriate, that would delay the switchover to containment sump recirculation (e.g., shutting down redundant pumps that are not necessary to provide required flows to cool the containment and reactor core, and operating the CSS intermittently) Based on 50.59 evaluations, such procedural changes could result in a "Yes" to the question: "Does the proposed activity create a possibility for a malfunction of an SSC important to safety with a different result than any previously evaluated in the FSAR?" Therefore, prior NRC approval (License Amendment) would be required prior to implementation of these changes. Is the NRC prepared to issue license amendments within 60 days of the date of the bulletin?
65	Prior NRC Review and Approval	Actions such as turning sprays on only intermittently would require a licensing amendment for my station due to crediting sprays for dose reduction under 10CFR100. The current design/licensing basis requires operation of sprays for several hours. Is the NRC receptive to performing expedited reviews for an amendment of this nature.

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66	Procedures	<p><b><u>Procedure modifications, if appropriate, that would delay the switchover to containment sump recirculation</u></b></p> <ol style="list-style-type: none"> <li>1. What is intended by the phrase: “if appropriate”?</li> <li>2. What is the objective for delaying switchover? Is it to reduce flowrates to the sump screens? Is it to delay any occurrence of degraded sump performance so the “plant engineering staff” can perform the evaluation versus control room operators?</li> <li>3. If the redundant train of cooling is secured early, can PSA determinations be used to demonstrate that the train can likely be successfully restarted with little or no impact on plant’s CDF?</li> <li>4. For LBLOCA shutting down the redundant RHR pump does not seem prudent at all, regardless of the low probability of failure of the remaining pump and fact that high head SI pumps can remain in service. Securing the redundant CSS pump early is more palatable, even for plants that require CSS operation for alternate source term assumptions.</li> <li>5. Why is shutting down redundant pumps during RWST injection a consideration for recirculation NPSH concerns that may not even occur? In high flow situations (e.g. LBLOCA), where NPSH is most challenged, this would delay switchover to recirculation very little (minutes) and adds time critical steps to the operator duties. In low flow situations (e.g. SBLOCA), this may be reasonable, but it is doubtful that sump water will be hot enough, or flow across the screen high enough, to warrant actions strictly for precluding pump cavitation when NPSHr is very low (low flow).</li> </ol>
67	Procedures	<p>The bulletin suggests changing the emergency operating procedures to shutdown ECCS pumps or throttle flow. Responsible changes to emergency operating procedures require significant effort between licensees and owners’ groups to ensure adequate preparation, evaluation, review, and distribution of generic changes. The evaluation of proposed changes against assumptions in the safety analyses can take considerable time. NRC should provide an acceptable timeframe that considers a responsible evaluation and implementation of procedure changes.</p>

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68	Procedures	On page 7 of the bulletin with respect to the second bullet, "In the event of an actual high-energy line break (HELB) at a PWR leading to recirculation operation of the ECCS, there will not be any indications that debris capable of blockage is, in fact, being generated and transported to the ECCS sump until recirculation is initiated. Depending on the break size, the time to recirculation can be 20 minutes to several hours. It is <u>only</u> during this time, <u>prior</u> to recirculation, that deliberate operator actions can be taken to "delay the switchover to containment sump recirculation (e.g., shutting down redundant pumps that are not necessary to provide required flows to cool the containment and reactor core, and operating the CSS intermittently)". Emergency Operating Procedures (EOPs) and licensed operator training, both classroom and simulator, for responding to a Loss of Coolant Accident (LOCA) provide for the operation of both redundant trains of ECCS and CSS if they are available as well as the restoration of redundant trains if lost, even though it is recognized that plant design and safety analyses demonstrate the adequacy of a single train to mitigate accident consequences. Is it the intent of this bulletin to suggest that in light of this issue, EOPs and Operator training should be modified, even on an interim basis, to include securing of redundant ECCS and/or CSS pumps prior to recirculation in the absence of indications that debris capable of blockage is in fact being generated and transported to the ECCS sump?
69	Procedures	Modifications to Emergency Operating Procedures to require throttling and/or securing operating ECCS pumps is counter to intuitive thinking and operator training with regard to emergency core cooling. Extensive safety review would be necessary to implement such a procedure change. The operating culture at most plants would make this a hard change to get approved.
70	Schedule for Implementation	The effects of shutting off pumps or not starting pumps has not been fully evaluated and is counter intuitive to operator training. Additional time is required to properly evaluate this change. This could be done on a generic industry level to properly consider all the effects. A time frame of 60 days is insufficient to perform this evaluation.
71*	GL 91-18	Use of Option 2 (preliminary compensatory measures) does not, in and of itself, invoke the Generic Letter 91-18 Process (resolution of degraded and nonconforming conditions).
72*	GL 91-18	Industry is concerned that "compensatory measures" in the context of the Bulletin will be confused with "compensatory measures" in the context of the Generic Letter 91-18 Process. They are not the same. Compensatory measures taken in response to the Bulletin are preliminary in the sense that a degraded condition is not verified until the functional analysis has been completed. At that point, the licensee will have confirmed operability, identified a degraded condition, or declared the system inoperable.
73*	General	Industry considers all PWRs to be operable (with respect to this issue) pending the results of a rigorous FA. The results of each plant-specific functional assessment will determine the plant's status with respect to compliance, operability, and corrective actions (if any).