

NRC Staff Resolution of Public Comments Received on the Draft Generic Letter on the Potential Impact of Debris Blockage on Emergency Recirculation During Design Basis Accidents at Pressurized-Water Reactors

Table 1 Key for Resolution of Comments

Source(s) of Comments, (ADAMS Accession #)	Comment Designator¹	Remarks
Union of Concerned Scientists (ML041490087)	U	
Nuclear Energy Institute (NEI) (ML041550866)	N	
Progress Energy, Inc ML041620346	P	
Tennessee Valley Authority (ML041540383)	T	
Westinghouse Owners Group (WOG) (ML041540377)	W	
Nuclear Utility Backfitting and Reform Group (ML041620354)	B	
Westinghouse (ML041600093)		Comments same as Westinghouse Owners Group comments.
Florida Power & Light (ML041600090)	F	
Duke Power (ML041600569)	D	
Mr. Lanson Rogers (ML041620366)	R	Mr. Rogers' provided information concerning containment coatings.
Dominion Resources (ML04166025)		Comments duplicates those in the NEI and WOG comments.
Strategic Teaming and Resource Sharing (STARS) (ML041690323)	S	STARS endorses the NEI comments and supports the NUBARG Comments.
State of New Jersey (ML041810102)		The State of New Jersey supports the issuance of this generic letter as written.

Bin #	Description
1	Comments related to schedule
2	Comments related to backfit determinations and justifications
3	Comments related to the use of or reference to Generic Letter 91-18
4	Comments related to the burden estimation
5	Comments related to connecting the generic letter to compliance with regulations
6	Miscellaneous comments

Table 2 Resolution Matrix

Bin	Comment #	Comment	Resolution F - Fully Incorporated, P- Partially Incorporated, N - Not Incorporated
1	B-1	<p>In this instance, NUBARG is concerned that ... the request is premature in that the Staff has suggested use of a proposed methodology, which does not yet exist. With these considerations, NUBARG recommends that the Staff not issue the generic letter or, at a minimum, provide the appropriate 10 C.F.R. 50.109 justification and await completion of the Staff's review and approval of the referenced industry methodology before issuing its request of the industry.</p>	<p>N - The NRC approved methodology will be issued shortly after the generic letter is issued and will not impact addressees' ability to respond to the generic letter.</p>
1	N-4	<p>The schedule for actions and information that are requested or required by the draft GL do not appear to take into account the effect of related activities that will impact the conduct and outcome of industry actions in response to the GL and do not appropriately account for the time and effort necessary to perform requested mechanistic evaluations and implement any actions and modifications that may be deemed necessary following completion of these evaluations.</p> <p>Within 15 days of the issuance date of the GL, addressees are required to determine their ability to provide the full scope of information identified in the GL by the requested dates. A key source of information necessary to support this required assessment is an approved evaluation methodology, by which licensees will perform a mechanistic evaluation of ECCS and CSS recirculation functions. As noted in the draft GL, NRC is currently reviewing generic industry guidance and will issue a safety evaluation endorsing portions or all of the generic industry guidance.</p> <p>The NRC's current schedule for actions related to GSI-191 calls for issuance of the GL in August 2004. This schedule also calls for completion of the technical review of industry guidance in September 2004. Per this schedule, licensees will be required to assess their capability to respond to the GL by early to mid September, without having an approved methodology available for use in performing this assessment.</p> <p>Within 60 days of the issuance date of the GL, addressees are requested to provide information regarding their planned actions and schedule to confirm</p>	<p>P - In light of the information provided in this and other similar comments, the staff has changed the timeline as follows:</p> <ol style="list-style-type: none"> 1) The information requested in paragraph 1 of the Requested Information section of the generic letter will now be due to the NRC 90 days after the issuance of the NRC approved methodology. 2) The information requested in paragraph 2 of the Requested Information section of the generic letter will now be due September 1, 2005, instead of April 1, 2005. Also, implementation of the identified actions should be initiated no later than the first refueling outage starting after April 1, 2006; all actions should be completed by December 31, 2007. This should allow ample time for addressees to complete the actions necessary to respond to the generic letter. The new schedule will also allow for any research to either be completed or have enough progress to allow the effects being

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		<p>their compliance with applicable regulations. The requested information includes:</p> <ul style="list-style-type: none"> • A description of the methodology used or that will be used • Completion date of any analysis that will be performed • Plans, schedule and methodology for performance of containment walkdown surveillance <p>As noted above, the current schedule calls for completion of NRC review and endorsement of an evaluation methodology approximately 1 month following the planned issuance of the GL. Assuming these two activities occur per the schedule and there is no delay in issuing the evaluation methodology endorsement, licensees would have approximately 30 days to review the methodology, decide if the methodology is appropriate for their plant(s) and identify necessary resources and schedule to support the evaluation. Because the schedule for responding to the GL and NRC approval of evaluation methodologies are not tied together, the time available for review of approved methodologies could easily be less than the estimated 30 days.</p> <p>The mechanistic evaluation of ECCS and CSS recirculation performance called for by the draft GL requires a comprehensive and detailed evaluation of system performance and operation. This will likely require addressees to contract portions of the evaluation to qualified contractors. We do not believe the resources of qualified contractors are sufficient to support initial evaluations of up to 69 PWRs within the limited time period provided by the draft GL.</p> <p>By April 1, 2005, addressees are requested to provide the results of a comprehensive mechanistic evaluation of ECCS and CSS recirculation functions, including a description and implementation schedule for any planned plant modifications and programmatic controls. The calendar date by which this information is to be provided is not tied to the GL issuance date. As such, any delays in issuance of the GL will directly impact the time available to complete necessary analyses and respond to the GL.</p>	<p>researched to be adequately accounted for in any analysis.</p> <p>In addition, the 15 days to submit an alternate course of action under Required Response has been increased to 30 days.</p>

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		<p>The above discussion identifies a number of concerns related to the time frames for completion of necessary actions and submittal of required and requested information. These time frames should be revised so that they are consistent with the intent of the GL, as identified in the <i>Discussion</i> section 6. In order for licensees to adequately complete their walkdowns, determine the status of their sumps and containments, perform the required analysis and calculations and develop, procure and complete any necessary modifications; the response dates of the draft GL should be extended and should begin following the availability of accepted evaluation guidance.</p> <p>The <i>Requested Information</i> response of the draft GL should be one year after the date of issuance of approved evaluation guidance instead of April 1, 2005. This schedule would take into account the time constraints identified above and would allow time for resolution of the concerns regarding chemical effects (see Comment N-6) and would accommodate the development and implementation of a risk-informed resolution option (see Comment N-5).</p> <p>The following time line is proposed:</p> <ul style="list-style-type: none"> A. NRC endorsement of evaluation guidance - ~September 2004 B. Generic Letter Issued - ~September 2004 C. Licensee response containing plans and B+180 days ~March 2005 <p>Schedule</p> <ul style="list-style-type: none"> D. Licensee response containing results of B+1 yr ~September 2005 evaluation E. All required modifications complete ~December 31, 2007 	
1	P-4	<p>The 15 days to submit an alternate course of action under <i>Required Response</i> ” (2) seems to be an inadequate period of time. Thirty days would seem more appropriate.</p>	See the response to comment N-4.

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1	W-9	<p><u>Requested Information</u></p> <p>Item 2, in the draft GL requests licensees to provide information confirming their compliance with regulatory requirement, including any plant modifications that may be necessary to bring the plant(s) into compliance by April 1, 2005. Licensees will likely not have the qualified resources available to perform all of the activities required to complete the mechanistic evaluations, and to design any necessary plant modifications. Some or all of these activities will likely be performed by qualified contractors. Given the amount of qualified resources available to the industry, it is highly unlikely that the entire fleet of 69 PWRs will be able to complete the evaluations needed by April 1, 2005.</p> <p>The April 1, 2005 date in the GL should be revised to one year from the date of the GL.</p>	See the response to comment N-4.
1	N-1	<p>The generic letter should be modified to support industry action to expeditiously resolve GSI-191 concerns. Specifically, the GL should request PWR licensees to take appropriate action, utilizing the latest approved methods, to provide a high degree of assurance that PWR recirculation systems address the effects of debris generation.</p> <p>If the resulting evaluation confirms a "potential susceptibility" (not the same as non-compliance) of PWR recirculation sump screens to post-LOCA debris blockage, licensees should be permitted to take action to eliminate susceptibility by incorporating the revised evaluation into the plant licensing basis. A licensee should also be permitted to develop and implement any resulting corrective actions in a time frame that allows for the design of plant modifications, the procurement of materials, the preparation of procedures, training, implementation, testing, and (if necessary) operating license amendments.</p>	See the response to comment N-4.
1	T-4	It is our understanding that the NRC intends to issue this GL in final form in	See the response to comment N-4.

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		<p>August 2004. For plants that have outages in the spring of 2005, but starting after April 1, 2005, there is a very short time window to complete the analysis, design the modifications, receive NRC approval for the modifications and changes to the analysis techniques, and install the modification. Typically, modifications planned for an outage are design complete six months prior to the outage. TVA does not believe that it is realistic that this can be accomplished in the nine to ten months between August 1, 2004, and May 30, 2005. It is likely to require at least six months getting NRC approval of the analysis and design change, even considering an expedited review. Utilities will be hesitant to start manufacture of new sump screens until such a time as they have at least a reasonable confidence that the available screen area and screen design will be acceptable to the NRC. Instead, NRC should consider requesting plant schedules that complete closure of this generic issue by 2007.</p>	
1	T-2	<p>In section 2(b) of requested information, the GL asks for a justification for any corrective actions that will not be completed by the end of the first refueling outage after April 1, 2005. Is the intent of this for a plant entering a refueling outage on March 1, 2005, and scheduled to start up in early April 2005 to have corrective actions complete prior to start up, or would the corrective actions be tied to the first refueling outage started after April 1, 2005?</p>	See the response to comment N-4.
1	D-5	<p>On page 18, item 2.(b), delete "... of the first refueling outage" and replace with "... of the second refueling outage. This will provide resolution to GSI 191 consistent with the Commission's timetable while permitting adequate time for development of any safe and effective plant modifications, for processing of potential Licensing Amendment Requests, and for refueling outage scheduling issues.</p>	See the response to comment N-4.
1	W-8	<p><u>Requested Information</u></p> <p>Item 1 in the draft GL requests addressees to provide the requested information within 60 days of the date of the GL. The current schedule for issuing the GL is August, 2004. Licensees will have 15 days from the date of issuance to</p>	See the response to comment N-4.

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		<p>determine whether they will be able to provide the information requested in the GL, and if so, 60 days from the date of issuance to provide the requested information to the NRC.</p> <p>Given the scheduled August, 2004 date of issuance of the GL, and the issuance of the Safety Evaluation for the industry guidance (methodology) in September, 2004, licensees will have to base the evaluation of their ability to provide the requested information based on an as-yet unapproved methodology for the mechanistic evaluation of ECCS and CSS recirculation functions.</p> <p>In addition, licensees will have a very limited time (possibly 30 days or less) to evaluate the NRC approved methodology (assuming that the approval occurs at the time of completion of the technical review), determine the applicability to the methodology to their plant(s), identify internal or external resources needed to support the evaluation, and provide a schedule for the completion of the evaluation.</p> <p>If the GL and NRC Safety Evaluation approving the evaluation methodology are not issued on the same date, the GL should be revised to state, "Within 60 days following the issuance of the Safety Evaluation for the methodology, addressees should..."</p>	
1	N-5	<p>In a March 4, 2004 letter to NEI, NRC opened the possibility for risk-informing portions of the evaluation process for addressing GSI-191 concerns.</p> <p>"...the NRC staff plans to discuss, in public meetings, the use of current or planned work to risk-inform Title 10, <i>Code of Federal Regulations</i> Section 50.46, "Acceptance criteria for emergency core cooling system for light-water nuclear power reactors," as a suitable technical basis for defining a spectrum of break sizes for debris generation and containment sump strainer performance."</p>	<p>N - The NRC approved methodology will be issued shortly after the generic letter is issued and will not impact addressees' ability to respond to the generic letter. Options for risk-informing parts of the evaluation will be discussed in the methodology.</p>

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		<p>The development of a risk-informed GSI-191 resolution option is important to industry in that it would enable risk information to be utilized in a technical area that is traditionally treated in a manner that unrealistically compounds known conservatisms. We believe that the GL issuance schedule should be modified to reasonably accommodate the time necessary to complete discussions between NRC and industry on a risk-informed GSI-191 resolution option. In addition, the GL schedule for industry responses to the GL should address the time needed to implement a risk-informed GSI-191 resolution option</p>	
1	W-10	<p><u>Requested Information</u></p> <p>Item 2. (d) (iii) in the draft GL includes the consideration of the head loss effects from the chemical environment in containment. The joint NRC/ industry effort to determine these effects will not be completed until at least the end of 2004. The expectation of licensees to accommodate these unknown effects seems unreasonable.</p> <p>The schedule for the consideration of the impact chemical environment should be revised to reflect the completion and NRC approval of this effort.</p> <p>The time frame required for providing the information requested by the proposed GL does not take into account the related activities being performed by the industry to resolve GSI-191, or the review period that would follow the submittal of industry findings. Licensees would be put in the position of submitting license amendment requests based on methods that have not yet been approved at the time of submittal.</p>	See the response to comment N-4.
1	N-6	<p>As part of the mechanistic evaluation, the results of which are requested by April 1, 2005, addressees are asked to address any debris which might result from the containment environment (thermal and chemical). The GL identifies</p>	N - The NRC approved methodology will be issued shortly after the generic letter is issued and will not impact addressees'

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		<p>chemical precipitants caused by chemical reactions in the pool as an example of the type of chemical reaction to be considered. While the potential for chemical precipitants is worthy of further study to identify if it is a valid concern for PWR containment environments, there have been no studies, evaluations or experiments that demonstrate that chemical precipitants can form under the conditions that will be present in a PWR containment. The necessary experiments to determine whether chemical precipitants can form under prototypic PWR containment conditions are planned to be performed under the joint sponsorship of EPRI, WOG and NRC Research. Results from these tests are not expected until late 2004.</p> <p>Under the current schedule for responses to the GL, results from planned testing will not be available before licensees have to begin the mechanistic evaluations called for by the GL. Licensees will thus be placed in a position where they are called upon to address a potential concern with no technical foundation upon which to base their evaluation.</p> <p>Other than providing some reasonable design margin for the uncertainty associated with these effects, it is not clear how licensees are to address chemical effects under the proposed response schedule. As noted in Comment 4, the response timeline should provide sufficient time for completion of necessary confirmatory research or the GL should cite, with supporting justification, the appropriate standards or requirements to be applied.</p>	<p>ability to respond to the generic letter. Methods for addressing chemical effects will be discussed in the staff's safety evaluation.</p>
1	T-7	<p>If NRC is considering a risk-informed solution to this original design concern, it is important that the timing of such solution is properly integrated into the proposed solutions options. Licensees should be able to allocate resources to implement a risk-informed solution before it invests in a deterministic only solution, otherwise, it will not be cost effective to implement a risk-informed solution. That is, a risk-informed solution is only viable if it can be chosen during the early planning stages. Both options should be on the same schedule.</p>	<p>See the response to comment N-4.</p>

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1	B-6	<p>4. Vagueness of Information Request</p> <p>The industry proposed a methodology for evaluating PWR sumps and provided it to the Staff for review. Although the Staff has indicated that it is reviewing generic industry guidance, and will issue a safety evaluation on the portions that may be used to assist in determining the status of regulatory compliance, it gives no estimate of the schedule for completing this review. The generic letter would, however, request licensees to provide an initial response the generic letter in a time frame that could be prior to the Staff's approval of the industry guidance. It is also not clear at this time whether many of the affected licensees may need to seek Staff review and approval of the plant-specific implementation of the industry methodology in order to change their plant's licensing basis. The Staff's review and approval schedule could also impact a reply by April 1, 2005, wherein a licensee is to demonstrate compliance and address "the configuration of the plant that will exist once all modification required for regulatory compliance have been made." Licensees that are planning outages scheduled to begin shortly after April 1, 2005, would likely be unable to complete corrective actions, as requested by the proposed generic letter, and, yet, would required to provide justification for the delays</p>	See the response to comment N-4.
2	B-2	<p>In this instance, NUBARG is concerned that (1) the Staff does not appear to be following appropriate administrative processes in this proposed action (in that the Staff has not justified the information request in accordance with 10 C.F.R. 50.54(f) and 10 C.F.R. 50.109)With these considerations, NUBARG recommends that the Staff not issue the generic letter or, at a minimum, provide the appropriate 10 C.F.R. 50.109 justification and await completion of the Staff's review and approval of the referenced industry methodology before issuing its request of the industry.</p>	N - The draft generic letter issued for public comment was not a backfit and the backfit discussion was appropriate for that determination. The requests in the final generic letter are considered compliance exceptions to 10 CFR 50.109. The final generic letter fully discusses the rationale for the determination of a compliance exception to the Backfit Rule.

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2	W-11	<p><u>Backfit Discussion</u></p> <p>Contrary to the backfit discussion that states; "No backfit is intended or approved by the issuance of this generic letter, and the staff has not performed a backfit analysis.," the resolution of the issue is likely to constitute a major backfit. Specifically, Item 2. c. in the Requested Information section of the draft GL states: "The submittal may reference a guidance document (e.g., Regulatory Guide 1.82, industry guidance) or other methodology previously submitted to the NRC." Regulatory Guide 1.82, Revision 3 was issued in November 2003, which is well after any operating PWR's operating license was granted.</p> <p>Additionally, the draft GL does not contain a documented evaluation for not performing a backfit analysis as required by 10 CFR 50.109(a)(4).</p>	<p>By definition, a generic communication cannot impose a backfit as it cannot require an addressee to take an action. However, the NRC determined that addressees may view requests in generic communications as requirements. Therefore, where appropriate, the staff treats requests in generic communications as if they were backfits under 10 CFR 50.109. Based on public comments and the resulting evaluation, the generic letter has been changed to a compliance exception to the backfit rule.</p> <p>Since, the draft generic letter issued for public comment was not a backfit, the backfit discussion was appropriate for that determination. The requests in the final generic letter are considered compliance exceptions to 10 CFR 50.109. The final generic letter fully discusses the rationale for the determination of a compliance exception to the Backfit Rule.</p> <p>As discussed in NRR Office Instruction LIC-503, Generic Communications Affecting Nuclear Reactor Licensees, the backfit rule does not require the performance of a backfit analysis when the compliance exception to the backfit rule is invoked. NRR has determined that the staff should prepare simplified value-impact</p>

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			assessments of compliance exceptions to the backfit rule. In accordance with LIC-503, the staff prepared a simplified value-impact assessment.
2	B-3	<p>1. Compliance Backfit</p> <p>The Staff suggests that the information that it would request in the generic letter is necessary to ensure that licensees comply with their current licensing basis and existing NRC regulations. However, the information request clearly establishes that the Staff expects many licensees will find it necessary to perform complex calculations, change their plant's licensing basis, and modify the plant. For example, the Staff states that licensees should use the enhanced debris blockage evaluation guidance in Regulatory Guide ("RG") 1.82 (Rev. 3, Nov. 2003), "Water Sources for Long-Term Recirculation Cooling Following a Loss-of-Coolant Accident," even though most if not all, of the affected licensees have not committed to comply with this revision of RG 1.82.</p> <p>As another example, in the proposed generic letter, the Staff explains the background of Generic Safety Issue ("GSI") 191, "Assessment of Debris Accumulation on PV@WR Sump Performance," and suggests that it may be necessary for licensees to "undertake complex evaluations to determine whether regulatory compliance exists" in light of new information that indicates previous Staff positions regarding sump blockage may not be conservative. The Staff also admits that methodologies to perform such complex evaluations may not be currently available. If these actions are necessary to ensure compliance with NRC regulations, then, in accordance with 10 C.F.R. 50.109, the Staff should clarify its position in the generic letter.</p>	See the response to Comment W-11.
2	T-5	Contrary to the backfit discussion which state that no backfit is intended or approved, the draft GL constitutes a major backfit. Specifically, the letter states	See the response to Comment W-11.

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		<p>that applicants may use the guidance in Regulatory Guide 1.82, Revision 3, to determine compliance or not yet issued industry guidance. Revision 3 was issued in 2003. Since all operating PWR plants received operating licenses years before the issuance of this regulatory guide, the use of the requirements in that regulatory guide constitute a backfit. A similar argument applies to the forthcoming industry guidance. There have been discussions in public meetings and in correspondence between the NRC and NEI of positions relative to dynamic effects, application of pipe break rules, and other regulatory positions that are different from those currently approved in plant licensing and design bases. Each of these constitutes a backfit.</p>	
2	N-2	<p>As discussed in a separate letter from the Nuclear Utility Backfitting and Reform Group (NUBARG), the NRC purpose for this generic letter is not clear in that, on one hand, it is requested that a licensee confirm compliance with its licensing basis.</p> <p>However, on the other hand, the NRC appears to request that licensees perform evaluations based on guidance that arguably may be outside of their licensing basis. Unless the NRC justifies requiring the use of this guidance as a "compliance backfit," such an action should not be required pursuant to 10 C.F.R. § 50.54(f). Furthermore, should the NRC claim that this issuance is a justified backfit pursuant to 10 C.F.R. § 50.109, a regulatory analysis consistent with 10 C.F.R. § 50.109(a)(6) would still be required.</p>	P - See the response to Comment W-11.

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2	B-5	<p>3. Extent of Actions Necessary to Respond to Information Request</p> <p>NUBARG maintains that the provisions of Section 50.109 apply generally to information requests pursuant to 10 C.F.R. 50.54(f), as discussed in the above-quoted references, and apply specifically to the proposed generic letter due to the extent of the efforts that would be involved in responding to the request. As noted above, licensees may find it necessary to perform complex calculations, change their plant's licensing basis, and to modify the plant to address the concerns identified in the proposed generic letter. Pursuant to 10 C.F.R. 50.54(f) and 10 C.F.R. 50.109, the Staff must justify these burdens that are outside the scope of a plant's current licensing basis, even if the Staff makes a determination that these actions are necessary to assure compliance with regulations or adequate protection of public health and safety.</p>	<p>F - The Backfit Discussion, the Required Response, and the Reasons for Information Request sections of the generic letter document the justification for the requests made in the generic letter in accordance with NRR Office Letter LIC-503.</p> <p>As required by NRR Office Instruction LIC-503, the evaluation in the Required Response section of this generic letter provides assurances that the burden to be imposed on the respondents is justified in view of the potential safety significance of the issue to be addressed in the requested information.</p> <p>The "Backfit Discussion" section of the this generic letter clearly delineates the basis for the staff's backfit determination in accordance with NRR Office Instruction LIC-503.</p> <p>The Reasons for Information Request section succinctly states why addressees are being requested to provide information and how the staff will use the information.</p>
2	B-4	<p>2. Compliance Backfit Evaluation Requirement</p> <p>To comply with its regulatory process requirements, the Staff should clarify in the "Backfit Discussion" that the information request falls within the compliance exception of the backfitting rule (or justify that one of the other exceptions</p>	<p>F - The information request in the draft generic issued for comment was not considered a compliance exception to the backfit rule. The generic letter has since be revised and the requests in the revised</p>

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		<p>apply). 10 C.F.R. 50.109(a)(4). Pursuant to this provision, the Staff must demonstrate that its actions are within one of the exceptions. " New or modified interpretations of what constitutes compliance would not fall within the exception and would require a backfit analysis."</p> <p>Even when the Staff makes a determination that an action is necessary to bring a facility into compliance with a license, rule or order, or into conformance with a written commitment, it still must document the evaluation for its determination. 10 C.F.R. 50.109(a)(4). The documented evaluation must include a statement of the objectives of and reasons for the modification and the basis for invoking the exception, 10 C.F.R. 50.109(a)(6).</p> <p>The proposed generic letter does not adequately justify that the information request is necessary for assuring compliance with existing requirements or commitments. The Staff, therefore, should modify the "Backfit Discussion" to include adequate justification for its position that the information is necessary for it to make a determination that the affected licensees comply with the referenced regulatory requirements for assuring post-accident long- term cooling. If the Staff cannot make this finding, then it must justify the backfit otherwise, or perform a backfit analysis to demonstrate that there will be a substantial increase in the overall health and safety of the public in view of the burden imposed through the information request. 10 C.F.R. 50.109(a)(3).</p>	<p>generic letter are considered compliance exceptions to the backfit rule. Accordingly, in the revised generic letter, the staff has provided a documented determination that the generic letter now falls within the compliance exception to the backfit rule.</p> <p>The "Backfit Discussion" section of the this generic letter clearly delineates the basis for the staff's backfit determination in accordance with NRR Office Instruction LIC-503.</p>
3	U-3	<p>The section of the draft generic letter titled Related Generic Communications (beginning on page 16985, col. 3 and continuing through page 16986, col. 2) lists more than two dozen bulletins, generic letters, and information notices relevant to the subject. This listing is incomplete because it does not include NRC Generic Letter 91-18, Rev. 1, dated October 8, 1997, " Information to Licensees Regarding NRC Inspection Manual Section on Resolution of Degraded and Nonconforming Conditions." This generic communication is pertinent to the PWR containment sump issue. As stated in GL 91-18, Rev. 1, its stated purpose included guidance for resolving degraded and nonconforming</p>	<p>F - This generic letter was revised to include GL 91-18 in the list of related generic communications.</p> <p>If an addressee determines that while responding to the GL that its current sump configuration does not support its current licensing basis, the staff expects the addressee to take the appropriate steps</p>

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		<p>conditions at nuclear power plants:</p> <p><i>This guidance provided a process for licensees to develop a basis to continue operation or to place the plant in a safe condition and to take prompt corrective action.</i></p> <p>GL 91-18, Rev. 1 had NRC Inspection Manual Part 9900, “ Technical Guidance,” attached. Thus, the NRC provided PWR owners with its rulebook on handling degraded and nonconforming conditions. Section 4.4. of Part 9900 states:</p> <p>In the course of its activities, the licensee may discover a previously unanalyzed condition or accident. Upon discovery of an existing but previously unanalyzed condition that significantly compromises plant safety, the licensee shall report that condition in accordance with 10 CFR 50.72 and 50.73, and put the plant in a safe condition.</p> <p>For a previously unanalyzed condition or accident that is considered a significant safety concern, but is not part of the design basis, the licensee may subsequently be required to take additional action after consideration of backfit issues (see Section 50.109(a)(5)). As noted above, the draft generic letter contains the NRC staff’s express determination that fixes to the PWR containment sump problem are not a backfit. Therefore, this significant safety concern is part of the design basis and licensees “ shall report that condition in accordance with 10 CFR 50.72 and 50.73.”</p> <p>Comment (3) overlaps with Comment (2) (U-2) above because it provides necessary guidance on how to handle the non-conforming conditions that will be identified. The draft generic letter must explicitly reference Generic Letter 91-18, Rev. 1, because this document establishes the NRC’s expectations for dealing with degraded and nonconforming conditions such as those that may be discovered in response to the generic letter.</p>	<p>outlined in GL 91-18.</p> <p>The staff considers the GL 91-18 to now be properly referenced in this generic letter.</p>

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3	N-3	<p>In the <i>Background</i> section of the draft GL it states, <i>During the process of resolving the potential concerns identified in this generic letter, the revised analysis of sump performance may affect addressees' understanding of their facilities' ECCS and CSS recirculation capabilities. In accordance with GL 91-18, Revision 1, ...addressees may find it necessary to reevaluate the adequacy of their compensatory measures in light of the new information and take further action as appropriate and necessary.</i></p> <p>Use of GL 91-18, Revision 1 is appropriate should a licensee determine that its plant fails to conform to its licensing basis. However, for an evaluation of sump performance using guidance, assumptions, and analyses that have not been approved by the NRC on a plant specific basis, use of GL 91-18 is not appropriate.</p> <p>As discussed at the May 19 public meeting on the draft GL, the changes in analytical techniques and assumptions, as well as some of the physical modifications that may be introduced as part of the resolution process can lead to a need for NRC approval before such changes can be implemented. When the new analyses are approved and the modifications installed, they become the new licensing basis and then fall under the provisions of Generic Letter 91-18. The Background section should be revised reflect this clarification on the use of GL 91-18.</p>	<p>P - The final generic letter drops the reference to GL 91-18 in the Background section since it might unnecessarily confuse addressees. This section of the GL has been revised to read: <i>“During the process of resolving the potential concerns identified in this generic letter, the revised analysis of sump performance may affect addressees' understanding of their facilities' ECCS and CSS recirculation capabilities,. Therefore, addressees may find it necessary to reevaluate the adequacy of their compensatory measures in light of the new information and take further action as appropriate and necessary. Upon resolution of the potential concerns identified in this generic letter and the completion of any corrective actions resulting from that resolution, addressees may consider continuing, revising, or retiring their compensatory measures as appropriate.”</i></p> <p>The GL requests that addressees evaluate their compliance with the applicable regulations after all actions are complete and the licensing basis has been updated. If an addressee determines with the new methodology that there are concerns with the ECCS and CSS recirculation functions, the GL provides a justification for continued operation while addressees are implementing the corrective actions</p>

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			identified while responding to this generic letter.
3	T-1	<p>TVA considers that the GL should identify that new research information has identified that the current licensing basis for sump blockage should be re-evaluated and substituted with a more rigorous evaluation. The new methodology, currently being proposed by NEI, would become the new licensing basis once completed and modifications implemented, if they are required.</p> <p>Therefore, the need for PWRs to evaluate operability for a degraded or non-conforming condition in accordance with GL 91-18 as provided in this draft GL is inappropriate because there is no deviation at this time from the current licensing basis. If a plant fails to conform to its current licensing basis, then using GL 91-18 would be appropriate. However, it is difficult to envision how a plant would deviate from the current 50 percent sump blockage assumption which is the basis for most sump designs and which is implicit compliance with 10 CFR 50.46 and the associated general design criteria of Appendix A are based on analyses and assumptions that have NRC approval and are part of the plant licensing basis. However, for an evaluation of sump performance using new regulatory requirements, assumptions, and analyses that have not been approved by the NRC on a plant-specific basis is beyond the requirements of GL 91-18. The changes in analytical techniques and assumptions and some of the physical modifications that have been discussed are likely to require NRC approval before such changes can be implemented. As noted earlier, when the new analyses are approved and the modifications installed, they become the new licensing basis and then fall under the provisions of GL 91-18.</p> <p>NRC should note that this GL identifies potential problems with the original licensing basis. That is, original design assumptions may need to be re-evaluated in light of new information. As such, new design assumptions would be backfitted into the licensing basis of operating reactors. While this may be warranted in light of current research and operational data, it is</p>	See the response to comment N-3.

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		important that the transition be properly managed to avoid improper assessment of emergency core cooling system (ECCS) systems operability. New design assumptions, more conservative than those used during the original design, may prompt design modifications to current systems and structures. However, those assumptions should not come into consideration until after the design modifications are implemented.	
3	W-3	<p><u>Background Section</u></p> <p>To resolve potential concerns identified in the proposed GL, the GL suggests that licensees may need to "reevaluate the adequacy of their compensatory measures in light of the new information and take further action as appropriate and necessary" in accordance with GL 91-18, Revision 1. Operability determinations performed in accordance with GL 91-18 are performed based on a plant's current licensing basis. The methods for evaluating the condition under the proposed GL have not been reviewed and approved by the NRC, and as such, are not part of any plant's current licensing basis. Therefore, this is an inappropriate reference to the use of GL 91-18. When the evaluation methods are approved by the NRC, and any plant modifications, if necessary are completed, these changes will then become the new (current) licensing basis, and operability determinations performed in accordance with GL 91-18 will be based on the new licensing basis.</p> <p>The Background section of the GL should be revised to delete the discussion with respect to the application of GL 91-18.</p> <p>Please also see the discussion for Comment I (Comment W-1) above, regarding compliance with 10 CFR 50.46(b)(5).</p>	See the response to comment N-3.
4	T-6	The estimate of 1000 hours per response for the burden to the public is very low. TVA's estimate for in-house work, not including major physical modifications is approximately 5000 man-hours. Considering contractor costs	P - In light of the information provided in this and similar comments, the staff is changing the burden estimate to 7000 hrs. The new

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		as a man-hour equivalent, we estimate that the project will require 10,000 man-hours per site, not including the cost and installation of a new sump screen design.	staff estimate is based on information provided by nine addressees on their estimated burden.
4	N-8	In the <i>Paperwork Reduction Act Statement</i> section of the draft GL a burden estimate of <i>1000 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the necessary data, and completing and reviewing the information collections</i> is provided. This estimate is low and does not adequately capture the effort necessary to respond to the information requested by the draft GL. We estimate between 5000 and 10000 man-hours to accomplish the work necessary to collect and analyze necessary plant information (including containment walkdowns), perform mechanistic analyses, documentation and review. This estimate does not include the cost and time necessary to implement any plant changes resulting from the analysis, such as procedural changes, plant modifications and revision to the plant licensing basis. The burden estimate should be revised to better reflect the estimated impact of the generic letter requests.	See the response to Comment T-6.
5	W-1	<p><u>Purpose Section</u></p> <p>Item (1) in the draft GL requests that addressees submit information "to confirm compliance with 10 CFR 50.46(b)(5), which requires long-term core cooling, and other existing regulatory requirements listed in this generic letter."</p> <p>The purpose of the GL should be revised to clarify that the intent of the GL is to confirm compliance with 10 CFR 50.46(b)(5) and the other existing requirements listed in the GL, based on the new information (test data and analyses) utilized in the parametric study and technical assessment of GSI-191, that was completed on June 9, 2003. Licensees may be required to revise their "current design and licensing basis," to be in compliance with 10 CFR 50.46(b)(5) based on this new information, and performing a mechanistic analysis that addresses</p>	<p>F - The staff assumes that the addressees current design and licensing basis are adequate to show compliance with the regulatory requirements listed in Applicable Regulatory Requirements section of this generic letter.</p> <p>However, based on new information identified during the efforts to resolve GSI-191, the staff has determined that the previous guidance used to develop current licensing-basis analyses does not adequately and completely model sump</p>

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		<p>debris generation and transport. A schedule for revising the design and licensing basis, if required, which may include NRC approval, would be provided in the response to the GL.</p> <p>The GL should be revised to acknowledge that all licensees are in compliance with 10 CFR 50.46(b)(5) and the applicable regulatory requirements that form their current design and licensing basis.</p>	<p>screen debris blockage and related effects. The staff is revising its guidance for determining the susceptibility of PWR recirculation sump screens to the adverse effects of debris blockage during design basis accidents requiring recirculation operation of the ECCS or CSS.</p> <p>An addressee may determine while evaluating the recirculation function of the ECCS and CSS using the new staff guidance that the addressee needs to revise its licensing basis and update its design to ensure compliance with the regulatory requirements .</p>
5	S-1	The STARS plants believe that the generic letter must allow for the incorporation of identified changes to the licensing basis when applying the new guidance while not affecting current operability.	See the response to Comment W-1.
5	P-1	In a manner similar to Bulletin 96-03, the proposed generic letter should clearly acknowledge the continued safe operation of the plants under the current licensing basis until this issue can be resolved.	See the response to Comment W-1.
5	W-7	<p><u>Applicable Regulatory Requirements</u></p> <p>The proposed GL states: "If, in the course of preparing a response to the requested information, an addressee determines that its facility is not in compliance with the Commission's requirements, the addressee is expected to take appropriate action in accordance with the requirements of Appendix B to 10 CFR Part 50 and the plant technical specifications to restore the facility to</p>	P- The generic letter was revised to reflect the staff's expectation that addressees will not evaluate their current sump configuration using the new methodology and the section of the generic letter referenced in the comment was removed.

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		<p>compliance."</p> <p>Please see the discussion for Comment I (Comment W-1) regarding compliance.</p>	<p>While not explicitly addressed in this generic letter, the staff does expect addressees to take the appropriate actions if they determine that while responding to the generic letter their current sump configuration does not support their current licensing basis. The staff expects the addressees to take the appropriate steps outlined in GL 91-18.</p>
5	D-4	<p>On page 16, last Paragraph, it should be clarified that noncompliance with the Commission's requirements does not imply entry into Technical Specification 3.0.3 (ie, this analysis does not constitute a formal operability evaluation). The provision of appropriate Justification for Continued Operation would be the responsibility of the licensee.</p>	<p>See the response to Comment W-1.</p>
5	W-6	<p><u>Discussion Section</u></p> <p>The proposed GL states: "To assist in determining on a plant-specific basis whether compliance exists with 10 CFR 50.46(b)(5), addressees may use the guidance contained in Regulatory Guide 1.82, (RG 1.82), Revision 3, "Water Sources for Long-Term Recirculation Cooling Following a Loss-of-Coolant Accident," dated November 2003."</p> <p>Please see the discussion for Comment I regarding compliance.</p>	<p>See the response to Comment W-1.</p>
5	W-4	<p><u>Discussion Section</u></p> <p>The proposed GL states: In light of the credibility of the concerns identified above, the NRC staff has determined that it is appropriate to request that addressees submit information to confirm their plant-specific compliance with NRC regulations and other existing regulatory requirements listed in this generic letter pertaining to post-accident debris blockage."</p>	<p>See the response to Comment W-1.</p>

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		Please see the discussion for Comment I regarding compliance.	
6	N-9	The <i>Requested Information</i> section of the draft GL (section 1b) requests as part of the 60-day response, the results of any completed containment surveillance walkdowns. This request for results should be a) modified to identify the specific results or derived conclusions that are to be addressed in the response and b) moved to be incorporated as part of the detailed information request following completion of the evaluation (section 2 of <i>Requested Information</i>).	F - The requested information on the results of completed containment surveillance walkdowns has been removed from the 90-day response and incorporated in item 2(c) of the Requested Information section.
6	D-1	On page 7, second paragraph, delete "...were unable to confirm regulatory compliance implemented" and replace with "chose to implement". The focus of NRC Bulletin 2003-01 was to suggest various interim actions to reduce risk. Actions taken were selected based on actual impact on plant risk.	F - The generic letter was changed to reflect this comment. The change reflects the fact that Bulletin 2003-01 gave addressees another option if they chose not to confirm regulatory compliance.
5	W-2	<p><u>Background Section</u></p> <p>The draft GL states "Addressees who were unable to assure regulatory compliance pending further analysis were asked to describe any interim compensatory measures that have been or will be implemented to reduce risk until the analysis could be completed."</p> <p>This statement should be revised to reflect that NRC Bulletin 2003-01 provided two options for the Requested Information and the second option was describe what interim compensatory measures that have been or would be implemented. Option 2 was provided in Bulletin 2003-01, because the methodology necessary to perform the mechanistic analysis to address debris generation and transport was not available.</p> <p>Please also see the discussion for Comment I above, regarding compliance with 10 CFR 50.46(b)(5).</p>	See the response to Comment D-1.
6	U-4	The draft generic letter mentions revisiting the adequacy of compensatory	N - In the referenced April 22, 2004, letter

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		<p>measures taken in response to last year's bulletin and to revise/supplement them as applicable. By letter dated April 22, 2004, Mr. James Dyer of the NRC informed Mr. Jim Riccio of Greenpeace that the NRC believes "failure to meet a commitment in itself does not constitute a violation of a legally binding requirement." If that indeed is the NRC's position (as unbelievable as it seems), then the compensatory measures that licensees commit to take, either in response to the bulletin or generic letter) are unenforceable by NRC and therefore little or no credit in safety space should be accorded to them. If the NRC is to place any reliance on compensatory measures as risk reduction features, the NRC must issue Confirmatory Orders to ensure the agency can compel licensees to do them.</p>	<p>from Mr. Dyer to Mr. Riccio, it is stated that the NRC in most cases cannot take formal enforcement actions solely on the basis of whether licensees fulfill commitments, since failure to meet a commitment in itself does not constitute a violation of a legally binding requirement such as a rule, order, license condition, or technical specification. It is also stated that if failures to meet commitments result in violations of the Commission's health and safety regulations, the staff will take the appropriate enforcement actions.</p> <p>In this case, the staff continues to work with addressees and does not believe it is necessary to take additional actions to ensure addressees carry out the compensatory measures identified in their responses to Bulletin 2003-01. These compensatory measures are temporary measures to reduce risk only until an evaluation to determine compliance is complete and are not being used to show compliance with any regulation. These compensatory measures will no longer be necessary once an addressee has responded to the generic letter and completed all identified actions. As discussed in the reference April 22, 2004 letter, if these compensatory measures were being used to show compliance with a</p>

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			regulation, the staff could take additional action if they were not being implemented.
6	U-1	<p>According to the notice, “In response to these ECCS suction strainer plugging events, the NRC issued several general communications, including Bulletin 93-02... These bulletins requested that BWR licensees implement appropriate procedural measures, maintenance practices, and plant modifications to minimize the potential for the clogging of ECCS suction strainers by debris accumulation...” (page 16981, col. 3). And, “If, in the course of preparing a response to the requested information, an addressee determines that its facility is not in compliance with the Commission’s requirements, the addressee is expected to take appropriate action in accordance with the requirements of Appendix B to 10CFR Part 50 and the plant technical specifications to restore the facility to compliance” (page 16984, col. 2). And, “Therefore, the information requested in this generic letter is necessary to confirm plant-specific compliance with 10 CFR 50.46 and other existing regulations” (page 16985, col. 3). And, “Under the provisions of Section 182a of the Atomic Energy Act of 1954, as amended, and 10CFR 50.54(f), this generic letter transmits an information request for the purpose of verifying compliance with existing applicable regulatory requirements (see the Applicable Regulatory Requirements section of this generic letter)” (page 16986, col. 2). And finally, “No backfit is either intended or approved by the issuance of this generic letter” (page 16986, col. 2).</p> <p>In sum, the NRC will not be asking PWR owners to meet some new regulatory requirement. Instead, the NRC will be asking PWR owners to state how they do now or will in the future comply with existing regulatory requirements.</p> <p>During public meetings conducted by the NRC on May 19, 2004, members of the Nuclear Energy Institute (NEI) and representatives of NRC licensees asserted that the language in the draft generic letter placed an undue burden on them. They argued that the draft generic letter would have them conduct two sets of analyses: (1) to determine if the existing containment sump configuration</p>	<p>P-The staff remains committed to making addressees comply with the regulations. The primary reason this generic letter is being issued is to ensure that addressees continue to comply with regulations in light of the information coming from the resolution of GSI-191.</p> <p>Currently, addressees are assumed to be in compliance with their licensing basis and should remain in compliance until the licensing basis has been updated.</p> <p>Based on the new information identified during the efforts to resolve GSI-191, the staff has determined that the previous guidance used to develop current licensing-basis analyses does not adequately and completely model sump screen debris blockage and related effects. The deficiencies in the previous guidance potentially resulted in an analytical error that could result in ECCS performance that does not conform with the requirements in 10 CFR 50.46(b)(5). As a result, the staff revised the guidance for determining the susceptibility of PWR recirculation sump screens to the adverse effects of debris blockage during design basis accidents</p>

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		<p>complied with regulations, and (2) to determine if the existing containment sump configuration conformed with net positive suction head margins as calculated using some methodology allegedly to be submitted by NEI and approved by NRC later this year. They asserted that they would perform the second analysis, but opposed doing the first analysis because it was, in the words of Mr. Tony Pietrangelo of NEI, “distracting.”</p> <p>The industry representatives also asserted that the second analysis was overly conservative and would lead to a gross over-design of the containment sump.¹ Consequently, it was their stated view that results from the second analysis indicating that plant modifications were necessary did not constitute proof that the existing configuration did not comply with regulations.</p> <p>The approach advocated by industry is flawed because it would omit any determination as to the compliance of the existing configuration to the regulations. According to the industry representatives, the analysis using the to-be-approved methodology has the remarkable quality of demonstrating compliance with the regulations (a) if the initial screening shows no modifications are necessary, (b) if the initial screening plus “refinements” shows no modifications are necessary, or (c) once modifications to the plant are completed. They contend (or pretend) that results from this methodology can only show “goodness,” not “badness.” That’s preposterous and/or absurd.</p> <p>The industry argues that the determination of whether the existing configuration complies with regulations is an undue burden on them. Yet in the same breath, they talk about using methodology that biases them towards installing grossly over-designed containment sumps. This cognitive dissonance strains credibility to the point of disbelief.</p> <p>If the NRC buckles to this industry pressure, there will be adverse consequences. First, absent a plant specific determination of non-compliance, the NRC lacks the means to compel any licensee who balks about upgrading</p>	<p>requiring recirculation operation of the ECCS or CSS. The staff expects that once the evaluation requested in this GL has been performed, addressees will update their licensing basis. The staff has developed a schedule for addressees to evaluate the impact of the revised guidance on sump screen performance and other related effects of extended post-accident operation with debris-laden fluids, make any necessary modifications, and update their licensing basis. In the interim period, while addressees are responding to the generic letter and updating their licensing bases, the staff believes that continued operation of PWRs is justified. The justification for continued operation is documented in this generic letter. The results of the evaluation requested in this generic letter will only be used to determine nonconformance with the regulation once the addressees’ licensing basis has been updated. Therefore, the staff does not expect addressees to evaluate their current configuration using the new methodology.</p> <p>If an addressee determines while responding to the GL that its current sump configuration does not support its current licensing basis, the staff expects the addressee to take the appropriate steps outlined in GL 91-18.</p>

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		<p>the containment sump to do so. If the to-be-submitted-and-approved methodology is considered to be “ overkill,” any analysis using it showing that a plant lacks adequate net positive suction head does not provide the NRC staff with sufficient grounds for compelling that licensee to implement the modifications suggested by the results. After all, the NRC cannot impose such a requirement without a full-fledged cost-benefit backfit analysis.</p> <p>The other major adverse safety implication from failure to make compliance determinations stems from the NRC’s move to risk-informed regulation. Absent a plant-specific determination of noncompliance, there will be no licensee event reports (LERs) about operability impairments. Thus, no LERs will go into the databases on equipment and system reliability/performance. Thus, no LERs will go into the NRC’s Accident Sequence Precursor program. Thus, this longstanding safety problem will not appear on the risk radar and future risk-informed regulatory decisions will be based on incomplete information. The fact is that many reactors operated for many years with inadequate net positive suction head for emergency core cooling systems under certain design basis conditions. Compliance determinations are absolutely necessary so as to provide information to the risk databases on which reactors and for how long. Had the NRC stayed with deterministic regulation, then fixing the containment sump problem without compliance determinations would not little consequence. The shift to risk-informed regulation carries with it the obligation on the part of NRC and industry to collect and apply all plant information – not just that information that yields favorable results.</p> <p>Another adverse consequence from failure to make compliance determinations relates to the to-be submitted- and-approved methodology being advertised as overly conservative and yielding grossly over-designed containment sumps. Left unchallenged by compliance determinations showing the extent of the safety problem, this would permit the industry from pointing to this matter as an example of NRC’ s alleged regulatory excess. The compliance determinations are necessary to shield the NRC from industry’ s future charges of NRC “</p>	<p>For this issue, the information in any LER will be of little value because this generic issue is known, the generic implications have been assessed, and the issue is being resolved. Additionally, since the addressees are complying with their current licensing basis, there is no requirement for the submittal of LERs.</p>

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		<p>ratcheting” up the safety levels.</p> <p>The NRC must either require compliance determinations or abandon its risk-informed regulatory initiatives.</p>	
6	T-3	<p>In section 2 (c) of requested information, the GL states that "the submittal may reference a guidance document (e.g., Regulatory Guide 1.82, industry guidance, or other methodology previously submitted to the NRC.)" The current industry guidance is very conservative so that it is unlikely that many, if any, plants could show acceptable ECCS performance using that guidance alone. The GL needs to have a provision to allow plant-specific analyses based on the technical considerations and assumptions presented in that analysis as a new license amendment. Plants should not be constrained to previously approved methodologies.</p>	<p>N - The generic letter does not restrict addressees to previously approved methodologies. The reference section of the generic letter allows addressees to reference guidance documents previously submitted to the NRC so that addressees will not have to duplicate information that has already been submitted.</p>
6	P-3	<p>The term “containment walkdown surveillance” under “<i>Requested Information</i>” 1 (b) should be clarified as being equivalent to the NEI 02-01 walkdown or an appropriate definition should be provided.</p>	<p>N - The staff is not endorsing specific methodology for the performance of containment walkdowns.</p>
6	P-2	<p>Throughout the proposed generic letter, greater clarity is needed in discussing the current licensing basis, Commission’s requirements, regulatory requirements, and other such terms, especially with regard to compliance.</p>	<p>See the response to Comment U-1</p>
6	R-1	<p>Mr. Rogers supports in-situ testing of containment coatings to determine their condition.</p>	<p>N - The addressees will have to take failed coatings and paint into account when performing their analysis. The NEI baseline methodology under review by the NRC addresses coatings.</p>
6	N-7	<p>In the <i>Background</i> section of the draft GL it states, <i>In response to Bulletin 2003-01, PWR licensees that were unable to confirm regulatory compliance implemented or plan to implement compensatory measures to reduce risk or otherwise enhance the capability of the ECCS and CSS recirculation functions.</i></p>	<p>P- The generic letter was revised to accurately reflect Bulletin 2003-01. Specifically, the generic letter now reflects the following from the bulletin: Option 1 in</p>

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		<p>(Emphasis added)</p> <p>Similarly, in the <i>Reasons for Information Request</i> section of the draft GL it states Bulletin 2003-01 requested information to verify addressees' compliance with NRC regulations and to ensure that any interim risks associated with post-accident debris blockage are minimized while evaluations to determine compliance proceed....(Emphasis added)</p> <p>These statements are incorrect. The Bulletin requested information and provided two options by which to respond. Option 1 requested a statement that mechanistic analyses have been performed that take into account recent research findings described in the Bulletin. Option 2 requested a description of compensatory measures that have been or will be implemented to reduce the risk associated with potentially degraded or nonconforming ECCS or CSS recirculation functions. Because reviewed and accepted guidance necessary to perform the mechanistic analyses cited in Option 1 is not currently available, most PWR licensees chose Option 2 and implemented compensatory measures. Confirmation of compliance with a plant's licensing basis was not requested and would not have served the intent of the Bulletin since the licensing bases for most plants do not include mechanistic analyses that take into account recent research findings. The draft GL statements cited above should be revised to accurately reflect the Bulletin 2003-01 information request.</p>	<p>Bulletin 2003-01 requested that addressees state that the ECCS and CSS recirculation functions have been analyzed with respect to the potentially adverse post-accident debris blockage effects identified in the bulletin, taking into account the recent research findings described in the Discussion section of the bulletin, and are in compliance with all existing applicable regulatory requirements. Option 2 asked addressees to describe any interim compensatory measures that have been implemented or that will be implemented to reduce the risk associated with potentially degraded or nonconforming ECCS and CSS recirculation functions until an evaluation to determine compliance is completed. If none of the interim compensatory measures listed in the Discussion section will be implemented, provide a justification. Additionally, for any planned interim measures that will not be in place prior to your response to this bulletin, submit an implementation schedule and provide the basis for concluding that implementation is not practical until a later date.</p> <p>The staff reviewed the generic letter to ensure it reflected the contents of Bulletin 2003-01</p>

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6	U-2	<p>The draft generic letter discusses containment walkdowns. For example, "... provide a statement of whether or not you plan to perform a containment walkdown surveillance in support of the analysis of the susceptibility of the ECCS and CSS recirculation functions to the adverse affects of debris blockage" (page 16984, col. 3).</p> <p>The draft generic letter' s treatment of potential debris sources is unduly limited. Containment walkdowns serve a useful function in establishing the current condition of potential debris sources. Anything that should not be within containment, like the unqualified coatings applied inside the Davis-Besse containment or the " temporary" materials found lingering within the DC Cook containments, should be identified by the walkdowns and either removed or justified in-place.</p> <p>But the draft generic letter fails to look into the future so as to provide sufficient protection against potential debris sources down the road. To remedy this fundamental flaw, the draft generic letter must be supplemented with explicit requirements for PWR owners to identify the procedural measures (e.g., foreign material exclusion, housekeeping, design reviews for modifications within containment, inspection programs for containment coatings, etc.) that provide reasonable assurance that potential debris sources will continue to be properly controlled.</p>	<p>N - The generic letter already goes beyond containment walkdowns as a means to control potential debris sources. Paragraph 2(f) of the Required Information section of the generic letter requests addressees to provide a description of the existing or planned programmatic controls that will ensure that potential sources of debris introduced into containment (e.g., insulations, signs, coatings, and foreign materials) will be assessed for potential adverse effects on the ECCS and CSS recirculation functions.</p> <p>Additionally, the industry guidance addresses the need for containment cleanliness programs. The NRC staff intends to document its review of the industry guidance in a safety evaluation.</p>
6	D-3	On page 9, seventh line, "section head" should be "suction head."	F - The generic letter was changed to reflect this comment.
6	D-2	On page 8, first paragraph in "Discussion" section, delete third and fourth sentences. Chemical effects are not considered by industry to be relevant for PWRS. This will be confirmed by EPRI/industry test program currently in progress.	N - There is ongoing research on the impact of chemical effects on sump performance. The assumption remains that chemical effects may potentially affect sump performance and needs to be accounted for in modeling analyses.

Bin	Comment #	Comment	Resolution F - Fully Incorporated, P- Partially Incorporated, N - Not Incorporated
6	R-2	If GSI-191 is to be properly addressed, no credit should be taken for any paint that has been in place for 10 years.	N - See response to comment R-1.
6	W-5	<p><u>Discussion Section</u></p> <p>The proposed GL states: "NRC staff recommends the use of an analysis method that mechanistically accounts for debris generation and transport, post accident equipment and systems operation with debris laden fluid."</p> <p>This "recommendation" will be inferred by licensees as a requirement, which will limit the options licensees are likely to explore to resolve the issue. As such, the statement should be deleted from the proposed GL.</p>	N - The statement in the generic letter is a staff recommendation for the analysis method. The staff considers that a mechanistic analysis of debris generation and transport, post-accident equipment and systems operation with debris-laden fluid is the most accurate method to model sump performance. Addressees are free to use a method other than the one recommended by the staff. The staff is open to other methods of resolving this issue.

1.Used to distinguish between comment numbers from various sources. This designator is used in the table above that resolves these comments. For example, the first comment by UCS is designated U-1.