

August 4, 2009

MEMORANDUM TO: Michael L. Scott, Chief
Safety Issues Resolution Branch
Division of Safety Systems
Office of Nuclear Reactor Regulation

FROM: Joseph A. Golla, Project Manager /RA/
Generic Communications and Power Uprate Branch
Division of Policy and Rulemaking
Office of Nuclear Reactor Regulation

SUBJECT: SUMMARY OF JUNE 23, 2009, PUBLIC MEETING WITH THE
PRESSURIZED WATER REACTOR OWNER'S GROUP (PWROG),
LICENSEES, AND THE NUCLEAR ENERGY INSTITUTE (NEI) TO
DISCUSS THE RESOLUTION OF GENERIC SAFETY ISSUE (GSI)-191

On June 23, 2009, Nuclear Regulatory Commission (NRC) staff met with representatives of the PWROG, Westinghouse, NEI and industry in a public meeting in Rockville, Maryland. Enclosure 1 provides a list of those in attendance. Enclosure 2 is the meeting agenda. Information presented at the meeting is available in the NRC Agencywide Documents Access and Management System (ADAMS) under Accession No. ML092050123.

The purpose of the meeting was to discuss issues related to the resolution of GSI-191. Opening remarks were made by Mr. William Ruland, Director, Division of Safety Systems (DSS) in the NRC Office of Nuclear Reactor Regulation. Mr. Ruland commented on the need to be clear about where the staff and industry believes a success path is for a given plant and where it is not. Mr. Ruland stated that the goal of the NRC and industry is to get this generic issue behind us.

Following this, Mr. Michael Scott, Chief of the Safety Issues Resolution Branch, DSS, made a presentation entitled, "Status and Path Forward on Generic Safety Issue (GSI) 191, Pressurized Water Reactor Sump Performance." This is included in the presentation materials for this meeting. During this presentation, Mr. Scott discussed the review and closure process which the NRC is utilizing to process licensee supplemental responses to Generic Letter 2004-02, the current status and condition of the staff's review, review results, obstacles to closure, resolution of debris loading request for additional information (RAIs), process going forward, status of the staff's review of WCAP-16793 (Long Term Core Cooling), closure activities, and conclusions.

Following Mr. Scott's presentation, industry representatives asked various questions regarding the review process. Mr. Scott responded to all of these questions. Within the context of responding to these questions, Mr. Scott suggested that interested licensees might benefit from the success paths of other licensees. Mr. Scott provided the ADAMS Accession Nos. for the North Anna supplemental responses (ADAMS Accession Nos. ML090641038 and ML080650563) and suggested interested licensees may also benefit from reviewing the audit reports of North Anna and other plants which are on the GSI-191 website. Mr. John Butler of NEI and Mr. Mo Dingler of the PWROG asked how to get success stories out to the industry. Mr. Butler stated he would work toward finding a vehicle by which this could be done. Mr. Butler

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stated that he receives questions from licensees asking where they are in the review process. Mr. Scott replied that licensees may contact their NRC licensing project manager regarding this.

After this discussion the NRC staff presented a table containing descriptions and status of issues applicable to multiple plants. This table is included in the presentation materials for this meeting. There are 13 issues described on the table. NRC and industry representatives discussed a path forward for these multi-plant issues. Action items were noted as discussed below.

Following this the staff discussed the review status of WCAP-16793-NP, "Evaluation of Long Term Core Cooling Associated with Sump Debris Effects." A slide depicting this status is included in the presentation materials for this meeting. The staff noted that it does not believe the data presented in the topical report supports the proposed acceptance criteria. This issue needs to be resolved before the NRC safety evaluation on the topical report is issued.

There were several actions agreed to for follow up after the meeting, they are:

1. NEI will discuss the multi-plant issues and get back to the NRC with suggested paths forward. (action pending)
2. NRC staff will review the recently provided industry report on erosion testing and will provide feedback to the PWROG. (action closed)
3. The NRC staff will provide to the industry, through NEI, an example of a well constructed flashing calculation. (action closed)
4. There will be a phone call with the PWROG concerning the WCAP-16793-NP RAIs. (action closed)

There were no questions or comments from the public. The meeting was then adjourned.

Enclosure 1: List of Attendees
Enclosure 2: Meeting agenda

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Enclosure 1: List of Attendees

Enclosure 2: Meeting agenda

ADAMS ACCESSION NUMBER: ML092020497

OFFICE	LA:DPR:PGCB	PM:DPR:PGCB	BC:DPR:PGCB	BC:DSS:SSIB
NAME	CHawes	JGolla	MMurphy	MScott
DATE	07/27/2009	07/27/2009	07/29/2009	08/04/2009

**List of Attendees for June 23, 2009,
Meeting With NEI And Industry On GSI-191**

Wes McGoun	Progress Energy
Kiran Mathur	PSEG
Paul Leonard	AEP/DC Cook
Deann Raleigh	Scientec
Kip Wallar	Enercon
Kenneth Leorelli	SCE&G
Steven Unikewicz	Alion
Hikoshi Hamamoto	MNES
Koji Shinomiya	MNES
Aaron Smith	Enercon
Andre Drake	Constellation Energy
Steve Kinsey	MPR Associates
Mo Dinger	WCNOC
Susan Baier	Westinghouse
Matt Brandes	Amergen
Tim Croyle	Westinghouse
Gil Zigler	Alion
Mehrdad Hojati	So Cal Edison
John Maruschak	Westinghouse
Nicholas Petit	Entergy
Greg Ferguson	Entergy
Joe Gasper	OPPD
Ives Jacobson	ANO
Mike Testa	First Energy
Fariba Gartland	Areva
Brian Dunn	FPL
Jim Bleigh	PCI
Len Gucwa	Areva
Ken Peterson	STARS
Rob Choromokos	Alion
Henry Hegrat	First Energy
Andrew Kaufman	CDI
Chuck Feist	Luminant Power
Leland Cerra	Entergy
Valerie Myers	Entergy/Indian Point
Mark Harris	Entergy/ANO
Bob Peterson	Sargent & Lundy
George Goralski	Energy/Palisades
Pete Wilkens	So Cal Edison
Mark Harriman	Constellation
Bob MacMeccan	Dominion
Jin Chung	MNES

**List of Attendees for June 23, 2009,
Meeting With NEI And Industry On GSI-191
Continued**

Wendy Croft	Exelon
Ken Heffner	Progress Energy
Tony Zimmerman	Progress Energy
Gary Miller	Dominion
Rob Tregoning	NRC
Candace Clemons	NRC
Mirela Gavrilas	NRC
Eric Miller	NRC
Roberto Torres	NRC
Steve Smith	NRC
Sher Bahadur	NRC
Erv Geiger	NRC
Paul Klein	NRC
Matt Yoder	NRC
Ralph Architzel	NRC
Stew Bailey	NRC
Z. Wang	NRC
Robert Dennig	NRC
John Lehnig	NRC
Tim Collins	NRC
Tommy Morgan	NRC
Bill Ruand	NRC
Mike Scott	NRC
Joe Golla	NRC
Gordon Wissinger*	Areva NP

* Indicates Participated Via Telecon

MEETING AGENDA
U.S. NUCLEAR REGULATORY COMMISSION (NRC)
NEI AND PWROG

JUNE 23, 2009

****A PORTION OF THIS MEETING MAY BE CLOSED****

8:30-8:45	Opening remarks	NRC/NEI/PWROG
8:45-9:00	Status of NRC GL 2004-02 reviews	NRC
9:00-9:45	Remaining issues pertinent to multiple plants and path forward	NRC/NEI/PWROG
9:45-10:15	General process for getting to closure -roadblocks and plans for dealing with them	NRC/NEI/PWROG
10:15-10:30	Break	
10:30-11:00	Success stories -how they can inform other licensees and how to share them	NRC/NEI/Licensees
11:00-12:00	WCAP-16793-NP, "Evaluation of Long Term Core Cooling Associated with Sump Debris Effects" -questions and potential requests for additional information ***this discussion, or portions thereof may be closed to the public***	NRC/PWROG
12:00-12:30	Open discussion	NRC/PWROG
12:30-12:45	Opportunity for public comment	NRC/Public

Enclosure 2

Memorandum to Michael Scott from Joe Golla

SUBJECT: NOTICE OF PUBLIC MEETING ON JUNE 23, 2009, WITH NEI, PWROG
AND INDUSTRY TO DISCUSS VARIOUS ISSUES RELATED TO THE
RESOLUTION OF GENERIC SAFETY ISSUE (GSI)-191

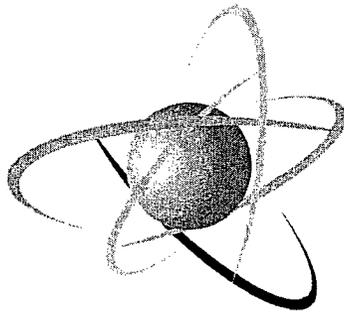
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Joe Golla
Ralph Architzel
Martin Murphy
Paul Klein
John Lehning
Michael Scott
Ervin Geiger
Matthew Yoder
Mirela Gavrilas
William Ruland
Sher Bahadur
Stephen Smith
Stewart Bailey
Robert Tregoning
John Burke
Roberto Torres
John Butler (JCB@NEI.ORG)



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Protecting People and the Environment

**Status and Path Forward on
Generic Safety Issue (GSI) 191
Pressurized Water Reactor Sump Performance**

**Presented by:
Michael Scott
Office of Nuclear Reactor Regulation**

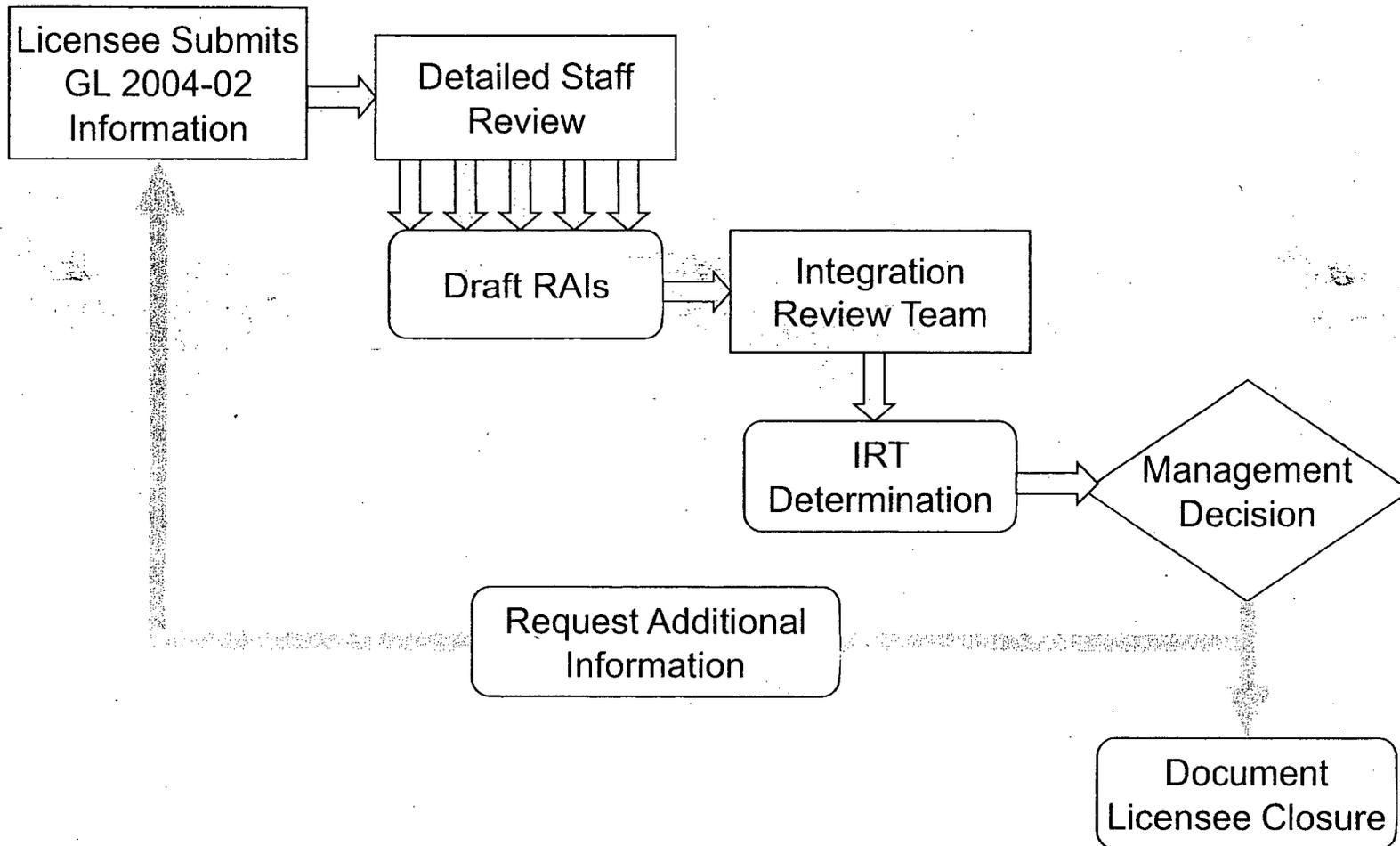
**Presented to:
Public Meeting on GSI-191
June 23, 2009**

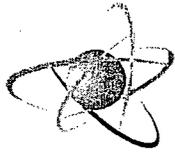


NRC Review Process

- Detailed review of licensee supplemental responses in each subject area
- Follow-on review by Integration Review Team (IRT) to reach holistic conclusion based on evidence presented by licensees as to whether each licensee has adequately addressed the sump performance issue
- Intention was to get beyond technical questions that would not impact the overall conclusion of safety and compliance

Review and Closure Process





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Problem Definition

- The deadline for resolving GSI-191 issues (Generic Letter 2004-02) was December 31, 2007
- However...
 - As of June 2009, NRC staff considers only 13 of 69 PWR units to be complete or essentially complete
 - The NRC staff still has potentially significant technical issues with many plants' testing and/or evaluations of strainer performance



Current Condition

- All PWRs have made a number of modifications that have significantly improved plant safety, and most have concluded that their corrective actions for GL 2004-02 are complete

HOWEVER:

- Information available in most supplemental responses is not sufficient for NRC staff to conclude plants compliant for design-basis limiting break



Crux of the Matter

- A relatively small amount of problem debris can lead to a significant head loss – and there is no known empirical basis for a debris bed thickness beneath which there is categorically no concern
- While a holistic review has been able to reach closure in the face of limited uncertainties and potential nonconservatisms, it has not been able to do so given numerous uncertainties and potential nonconservatisms
- Thus, for many plants, NRC has not yet been able to conclude that a problem debris bed will not form on the emergency core cooling system (ECCS) strainers



Current Review Results

- The staff has informed several licensees with “low-fiber” plants that the staff has few or no additional questions
- North Anna, a two-unit plant with significant fibrous insulation, has attained the same status
- Most other plants have received, or will receive in 2009, requests for additional information (RAIs)
- Some plants are being “re-reviewed” using latest supplemental response rather than send out RAIs based on earlier information
- “Placeholder” RAI for in-vessel downstream effects, since most plants relied on WCAP-16793-NP



Current Status

- The 69 PWRs may currently be binned into four groups:
 - Essentially Complete (~20%)
 - No remaining items or placeholder in-vessel item only
 - Approaching Completion (~20%)
 - Some residual items remaining
 - Resolution likely without significant additional testing
 - Significant Obstacles Remaining (~55%)
 - Large number of issues remaining
 - Likely need to retest and revise analyses
 - Different types of retesting possible (e.g., ZOI and head loss)
 - Non-trivial additional plant modifications may be needed
 - Unclear due to insufficient information in submittals (~5%)



Contrasting Characteristics

Plants Complete or Approaching Completion

- Fewer problematic debris sources
- Larger strainers
- Audited plants or lots of interactions with staff
- Plants with recent head loss testing without crediting settling
- Plants that maintained high consistency with conservative 2004 safety evaluation (SE) positions

Plants with Significant Obstacles

- More problematic debris sources
- Smaller strainers
- Plants with less interaction with staff
- Plants with “old” head loss testing or testing that credited debris settling
- Plants that applied custom methodologies without adequate justification



Why Make Refinements to the Testing and Evaluation Methodology?

- Low-fiber plants do not generally need the refinements
- Refinements generally intended to avoid removing fibrous insulation
- Only acceptable if the refinements are defensible
- Some plants have already concluded that major insulation changeout is needed
- North Anna is evidence that it is not always needed



Genesis of Obstacles to Closure

- Licensee reliance on industry-developed methodologies that were not reviewed in advance by staff
- Licensee and regulator emphasis on near-term actions to reduce vulnerability (“build before validate”)
- New information and approaches from licensees are still surfacing in 2009 – thus not surprising that new issues are still emerging
- Greater knowledge in 5 years since issuance of safety evaluation on NEI 04-07
- Differences in expectations and outcomes - licensees may have underestimated/misunderstood NRC staff expectations for level of detail of information needed



Obstacles to Closure

- For plants with significant obstacles:
 - Too many uncertainties and potential non-conservatisms of unknown magnitude to reach holistic decision
 - Indeterminate magnitude of conservatisms
 - Resolution from analysis alone is unlikely
- For plants with fewer obstacles:
 - Some have relied on testing on which the staff cannot rely
 - Difficult to rule out a problem thin debris bed without an adequate test



Learning Lessons

- Licensees that are struggling should consider successful examples
- Some high-fiber plants have had relatively few issues, e.g., North Anna (acceptable test and evaluation protocol)
- Some submittals have had helpful discussions of conservatisms
 - Dominion plants
 - Quantification helps where possible
- Resolution of individual issues
 - Millstone 2 presented an acceptable response for the issue of a LPSI pump single failure to stop
- Licensee interactions with NRC staff are crucial to success



Resolution of Debris Loading RAIs

- Issues such as those related to ZOI testing, debris erosion, and interceptors affect strainer debris loading
- Resolution of these issues needs to occur in the near term since an unfavorable resolution could require additional strainer testing
- NRC views extensive delays in doing retesting as not acceptable
- NRC considering issue-specific group dialogue with affected plants to expedite resolution of issues – need to discuss today



However...

- Some licensees plan additional near-term head loss testing, although they have not resolved RAIs that affect the debris loading
- If the debris loading RAIs are not resolved acceptably, the additional head loss testing may be a waste of time and money
- NRC encourages plants with significant testing and/or evaluation issues to discuss path forward with NRC staff prior to testing
 - Provide NRC and licensee staffs confidence that the new testing will be acceptable to the NRC



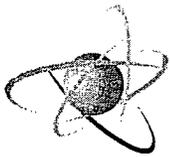
Now What?

- Need to determine issues identified in the supplemental reviews that affect multiple licensees - for each, determine best path to resolution
- List for discussion today
- Complex path forward where plants have plant-specific and “generic” questions
 - How to address plant-specific issues until generic concerns are resolved?
 - Industry progress on some multi-plant activities has been less than expected
 - If resolution path does not become clear for a given multi-plant issue, NRC will expect affected licensees to address on a plant-specific basis



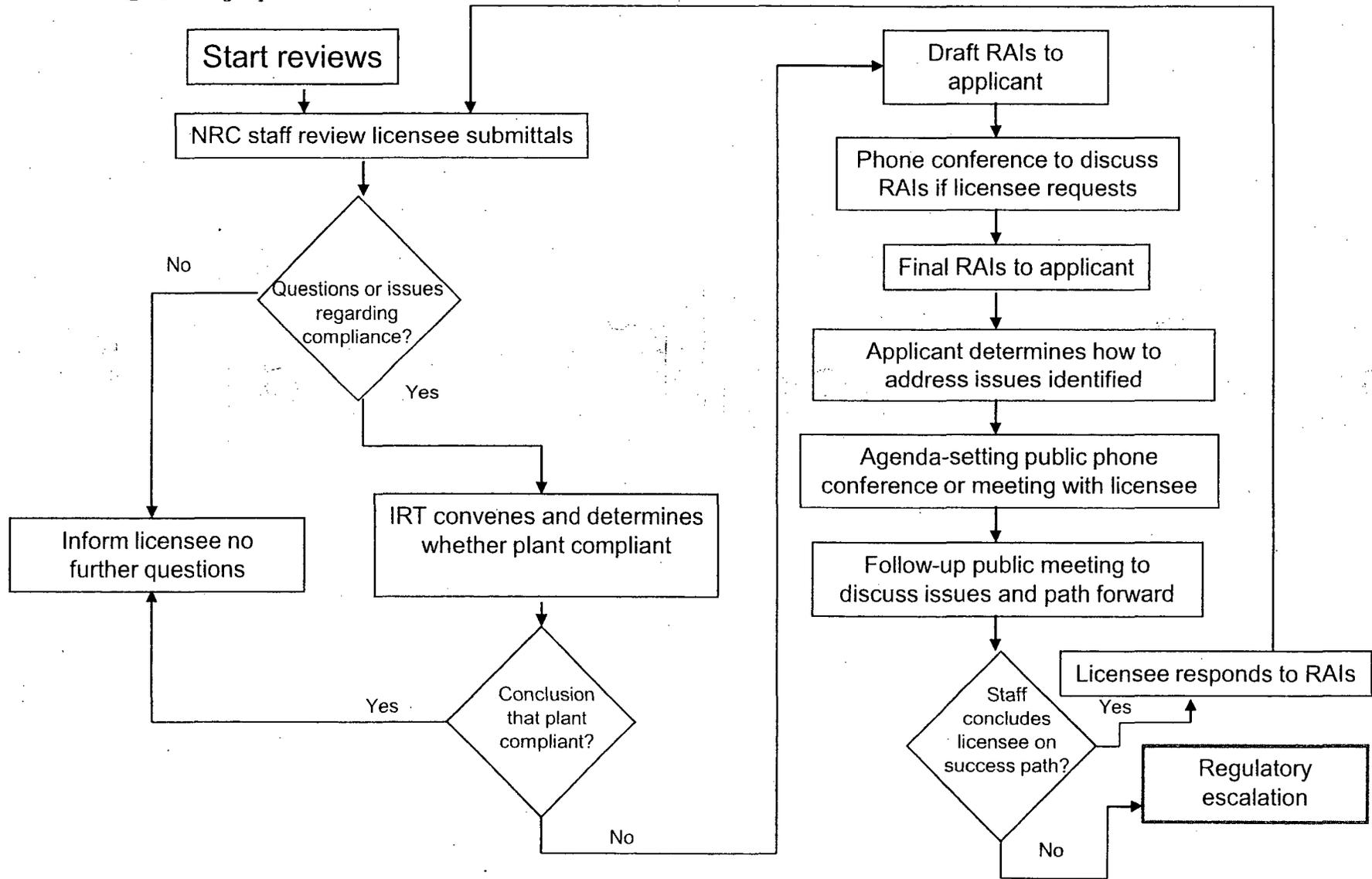
Now What? (Continued)

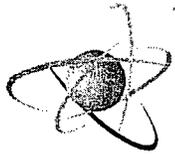
- NRC position is that an adequate test is needed to show satisfactory strainer performance unless licensee justifies that their strainer has significant nonfiltering area
- Ultimate result for many plants will be:
 - Defensible test and evaluation protocol
 - Removal of problem materials
 - Regulatory escalation [e.g., 10 CFR 50.54(f)]



U.S. NRC Process Going Forward

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Phone Calls and Meetings

- The “agenda-setting public phone call or meeting” involves discussing each RAI for plant in question and ensuring:
 - Licensee discusses how they plan to resolve each RAI
 - NRC staff provides feedback
- These discussions may last several hours
- NRC staff and licensee found the first such discussion helpful in reducing misunderstandings
- Planned licensee responses about which staff has significant concerns or questions are the primary subjects for the follow-up public meeting
- Licensee will also summarize holistic safety case for plant at the follow-up meeting
- At the end of the follow-up public meeting, NRC staff will summarize remaining concerns (if any), then both parties will caucus separately to decide on closing statements
- Final discussion will involve clear definition of agreements (and disagreements if any) and agreed actions, to be documented in meeting summary



Are There Other Paths Forward?

- Industry may choose to take additional actions
 - For example, develop enhanced risk perspectives
 - Or testing to identify a debris bed thickness beneath which there is no concern (challenging)
- Absent a changed approach, NRC staff expects to reach congruence, through the process described, with each licensee on its path forward by the end of 2009



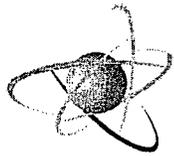
In-vessel Downstream Effects

- Revised topical report WCAP-16793 submitted late April 2009
- Staff reviewing – RAs due by early July 2009
- Initial review has led to concern that proposed limit (grams fiber per assembly) not adequately supported by test data
- Final NRC staff SE scheduled for February 2010
- Licensee submittals 90 days after issuance of final SE
 - Demonstration that plant is bounded by topical report and SE, or
 - Plant-specific demonstration of adequacy
- NRC review of submittals complete by late summer 2010



Closure Activities

- NRC will issue a closure letter to each licensee when sufficient information is provided to close the issue for that plant
- After all licensees have been issued closure letters, GL 2004-02 will be formally closed – expected to occur late 2010
- Some modifications will be made after planned issue closure - NRC will track all commitments to completion



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Conclusion

- Delayed resolution of GL 2004-02 to date is not surprising in hindsight – many factors
- Lack of alignment between intuitive expectation of plant safety and the inability to rigorously demonstrate compliance for limiting break
- Existing path will lead in 2009 to one-on-one interactions with licensees, followed by either agreed path forward or regulatory escalation
- Need to move forward on multi-plant issues
- Licensees need to learn from each other
- NRC staff open to outside-the-box ideas from industry as long as approach chosen demonstrates safety and compliance

**KNOWN UNRESOLVED POTENTIALLY SIGNIFICANT GSI-191 QUESTIONS/ISSUES APPLICABLE TO MULTIPLE PLANTS
(PRELIMINARY)
6/19/09**

Issue Description	Set of Affected Plants	Potential Significance	Status	Proposed Path Forward	Potential Need for Retesting? *
1. WCAP ZOI reduction test scaling and prototypicality issues	Approximately 1/3 to 1/2 of PWRs	This testing has resulted in significantly reduced debris loadings in strainer analyses (e.g., order of magnitude difference), but may not be prototypical	Identified fall 2008 through staff-sponsored review of industry technical reports. Staff is issuing RAIs to affected plants and is engaging PWROG on general test protocol issues	Continue series of interactions with PWROG; decision point in July regarding whether process likely to be fruitful. Staff will review licensee responses concerning plant-specific issues	Significant potential for either additional ZOI testing or plant-specific strainer testing with increased debris loading
2. SE Appendix II calcium silicate ZOI methodology	At least 3 plants and likely several others	Approaches based on SE Appendix II could result in an underestimate of fine calcium silicate debris	Identified spring 2009 in staff review of plant RAI responses. Staff is evaluating the significance of this issue and backfit implications	Staff evaluating	Staff evaluating
3. Assuming baseline debris size distributions for reduced ZOIs	Some plants that used reduced ZOIs	Assumption could non-prototypically result in reduced quantities of fine debris that is more prone to transport to strainer and cause head loss	Covered in existing guidance. Staff issuing RAIs to plants where issue appears to exist	Licensees should verify that the debris size distributions used are appropriate for the assumed ZOI radius	Potential for some licensees to re-perform strainer testing if debris loading cannot be shown to be bounding
4. Issues with Alion debris erosion testing	Approximately 1/3 to 1/2 of PWRs	Staff review of data indicates that the quantity of eroded fibrous fines is underestimated, which can be a significant contributor to strainer head loss	Identified fall 2008 in staff review of plant RAI responses. Staff is issuing RAIs to licensees that appear to be relying on debris erosion testing	Staff interact with vendor and affected licensees concerning adequacy of previous testing and any next steps	Significant potential for either additional erosion testing or plant-specific strainer testing with increased debris

**KNOWN UNRESOLVED POTENTIALLY SIGNIFICANT GSI-191 QUESTIONS/ISSUES APPLICABLE TO MULTIPLE PLANTS
(PRELIMINARY)
6/19/09**

Issue Description	Set of Affected Plants	Potential Significance	Status	Proposed Path Forward	Potential Need for Retesting? *
5. Flow modeling issues (e.g., with velocity and turbulence) in strainer tests that credit debris settlement	Plants that credited debris settlement in strainer testing	If flow is not prototypically modeled, flume transport and strainer head loss may be underestimated by testing	Part of ongoing discussions with vendors and licensees since 2007. Staff is issuing RAIs to licensees crediting debris settlement in strainer tests to verify the flume flow characteristics are prototypical of plant flow characteristics	Staff interact with groups of licensees and vendors to resolve conceptual parts of issues / review licensee responses concerning plant-specific issues	Potential for some licensees to re-perform strainer testing if flow modeling cannot be shown to be prototypical
6. Introduction of debris during head loss testing with pump stopped	Plants that credited debris settling using PCI test procedure	This testing practice may result in non-prototypical reductions in debris transport since containment pool is typically not quiescent during fill-up	Identified in winter 2008 during testing observations. Staff is reviewing each licensee's submittal to determine whether non-conservative debris introduction occurred during testing and issuing RAIs as appropriate	Licensees should verify that they did not use this type of debris introduction technique or provide justification that it did not result in non-conservatism in the head loss testing.	Potential for some licensees to re-perform strainer testing if adding debris prior to starting pump affected test result significantly
7. Erosion of settled debris during head loss testing	Plants that credited debris settlement in strainer testing	Quantity of fines reaching strainer may be underestimated since erosion was not considered for small and large debris that settled in flume	Identified in winter 2008 during testing observations. Staff issuing RAIs to licensees crediting debris settlement in strainer tests	Licensees should verify that a conservative quantity of fines was introduced during strainer testing with consideration of erosion	Potential for some licensees to re-perform strainer testing if not considering these eroded fines could have significantly affected test result

**KNOWN UNRESOLVED POTENTIALLY SIGNIFICANT GSI-191 QUESTIONS/ISSUES APPLICABLE TO MULTIPLE PLANTS
(PRELIMINARY)
6/19/09**

Issue Description	Set of Affected Plants	Potential Significance	Status	Proposed Path Forward	Potential Need for Retesting? *
8. Evaluation of flashing in the debris bed and containment accident pressure	Over half of units currently need accident pressure credit; 8-12 units do not credit it but appear to need to	Flashing can significantly increase the debris bed head loss	Covered in existing guidance. Staff is reviewing each licensee's submittal to determine whether flashing has been adequately evaluated and whether containment accident pressure is being credited, issuing RAIs as appropriate	Licensees should evaluate the extent of accident pressure required to prevent flashing. A plant-specific evaluation should be performed to verify that flashing will not occur in the debris bed	No, since issue is not directly related to testing
9. Increase in NPSH _R due to deaeration	Unknown; may affect plants with high head loss and low submergence	Per RG 1.82, presence of air entrained in the liquid entering a pump increases its NPSH _R	Identified spring 2009 in review of licensee submittal. Most plants have not recognized the issue (e.g., have only considered air ingestion due to vortexing, and not deaeration due to the debris bed pressure drop)	Staff plans to send RAIs to licensees that have not evaluated the issue. Licensees should determine plant-specific deaeration	No, since issue is not directly related to testing
10. In-Vessel Downstream Testing in support of WCAP-16793	Most PWRs	NRC staff has technical concerns with the WCAP-16793 approach that many plants are relying upon to evaluate in-vessel concerns	The staff is currently reviewing the recently submitted Revision 1 to WCAP-16793, and believes the testing performed to date is not sufficient to justify conclusions made in the topical report	PWROG should address staff concerns with WCAP-16793 so that PWRs can complete the in-vessel downstream effects part of sump analyses	Significant potential for performing additional fuel assembly head loss tests

**KNOWN UNRESOLVED POTENTIALLY SIGNIFICANT GSI-191 QUESTIONS/ISSUES APPLICABLE TO MULTIPLE PLANTS
(PRELIMINARY)
6/19/09**

Issue Description	Set of Affected Plants	Potential Significance	Status	Proposed Path Forward	Potential Need for Retesting? *
11. Potential debris blockage of refueling canal/ refueling cavity drains	Approximately 1/3 to 1/2 of PWRs (especially those with large debris quantities and small drains without trash racks)	If the flowpath becomes blocked by debris, the amount of water held-up in the refueling cavity can reduce the inventory of water available for the sump.	Many plants have addressed the issue either by installing trash racks over their drains or by assuming drains become clogged and accounting for water hold-up. However, some plants without trash racks have not adequately analyzed the potential for drain blockage, thus potentially underestimating the amount of water that could be held-up.	Staff continue current review process and issue RAIs as appropriate	No, since issue is not directly related to testing
12. Refinements to the WCAP-16530 chemical base model	Approximately 5-9	Some licensees have taken credit for refinements to the WCAP-16530 base model to reduce the quantity of chemical precipitates without providing sufficient justification in supplemental responses	Staff issuing RAIs to licensees that have not provided adequate justification to support refinements to the base model	Licensees should provide the basis for concluding that refinements taken to the base model are adequately justified	Potential for some licensees to re-perform strainer testing or other chemical testing if refined precipitate loading cannot be justified

**KNOWN UNRESOLVED POTENTIALLY SIGNIFICANT GSI-191 QUESTIONS/ISSUES APPLICABLE TO MULTIPLE PLANTS
(PRELIMINARY)**

6/19/09

Issue Description	Set of Affected Plants	Potential Significance	Status	Proposed Path Forward	Potential Need for Retesting? *
13. Prototypicality of debris interceptor testing	At least 2 plants and potentially several others	If debris interceptor tests are not conducted prototypically, credit for debris capture may be overestimated	Issue identified during GL 2004-02 supplemental response reviews. Staff has issued RAIs as appropriate	Licensees should address RAIs and demonstrate that the debris interceptor testing was adequate or consider alternate approaches (e.g., retesting and/or insulation removal)	Significant potential for either additional interceptor testing or strainer testing with increased debris

* Expectations regarding need to retest are based on NRC staff review progress for each issue, rather than on final conclusions from completed reviews. These expectations do not reflect the possibility that, absent other significant nonconservatisms, a staff review might reach a holistic conclusion of compliance.