

## PMSTPCOL PEmails

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**From:** Tai, Tom  
**Sent:** Wednesday, February 15, 2012 12:30 PM  
**To:** Chappell, Coley  
**Cc:** jeprice@stpegs.com; STPCOL  
**Subject:** FW: Transmittal of Letter U7-C-NINA-NRC-120013 (SUNSI)  
**Attachments:** STP Fuel Rack BNL RAI status table 02-15-2012.docx

Coley,

For your use this afternoon.

Tom Tai  
DNRL/NRO  
(301) 415-8484  
[Tom.Tai@NRC.GOV](mailto:Tom.Tai@NRC.GOV)

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**From:** Chakrabarti, Samir  
**Sent:** Wednesday, February 15, 2012 12:25 PM  
**To:** Tai, Tom  
**Subject:** FW: Transmittal of Letter U7-C-NINA-NRC-120013 (SUNSI)

Tom,

Here is the final version I got from Rich. You may forward this to STP.

Samir Chakrabarti  
NRO/DE/SEB2  
301-415-1106

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**From:** Morante, Richard J [<mailto:morante@bnl.gov>]  
**Sent:** Wednesday, February 15, 2012 11:16 AM  
**To:** Chakrabarti, Samir  
**Cc:** Wei, Xing  
**Subject:** RE: Transmittal of Letter U7-C-NINA-NRC-120013 (SUNSI)

Samir,  
Here's the update to the Status Table, based on your comments. All entries since last teleconference are in gray highlight. All prior entries are NOT highlighted. I think this is what you wanted.  
Rich

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**From:** Chakrabarti, Samir [<mailto:Samir.Chakrabarti@nrc.gov>]  
**Sent:** Tuesday, February 14, 2012 3:18 PM  
**To:** Morante, Richard J  
**Cc:** Wei, Xing  
**Subject:** RE: Transmittal of Letter U7-C-NINA-NRC-120013 (SUNSI)

Rich,

Regarding status of RAIs, we call it U when review is not yet complete to call it resolved. AIP is in intermediate step when we have agreed on a draft response, or the approach, but status is still U until we see the formal response and call it resolved. Confirmatory is only when we have reviewed and agreed with the response, and

yet to confirm changes proposed in the response with the FSAR/technical report update. If we have to confirm something at an audit, it should be AIP, or U. All AIPs are U, except that AIP status provides insight that we have agreed with the proposed resolution, but did not close the issue yet as resolved. Accordingly, I am giving my recommendations below.

RAI-17: AIP. We do not have an issue at this time other than auditing their calculation. There may be something after the audit that may need to be addressed. Therefore, I prefer to call it AIP.

RAI-28: U. We still believe that the report needs to be revised to clarify the issue. There is potentially misleading information in the report, as I understand.

The coloring of the status table is getting cumbersome. It may be a good idea to remove the colors next time from those that are already discussed. Also please change the date to 02/13/2012 at the table heading.

Let us discuss these tomorrow along with the earlier ones (20, 21, 23, 26, 27, and 29). We will have about 30 minutes tomorrow for Section 9 discussions. Thanks.

Samir Chakrabarti  
NRO/DE/SEB2  
301-415-1106

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**From:** Morante, Richard J [<mailto:morante@bnl.gov>]  
**Sent:** Tuesday, February 14, 2012 12:16 PM  
**To:** Chakrabarti, Samir  
**Cc:** Wei, Xing  
**Subject:** RE: Transmittal of Letter U7-C-NINA-NRC-120013 (SUNSI)

Samir,

See the attached update to the RAI Status Table. Additions are in green highlight. We are not sure whether to call RAI-28 as U or AIP. I put it as AIP. Xing favors U. What do you think? Also for RAI-17, I called it C, but I want to audit the transformation of coordinate systems at the follow-up audit. Do you think C applies?

Rich

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**From:** Chakrabarti, Samir [<mailto:Samir.Chakrabarti@nrc.gov>]  
**Sent:** Monday, February 13, 2012 8:21 AM  
**To:** Morante, Richard J  
**Cc:** Wei, Xing  
**Subject:** FW: Transmittal of Letter U7-C-NINA-NRC-120013 (SUNSI)

Rich,

Please review the response and provide your assessment. I am working from home today till 12:00 noon. I will work on STP 3.8 section. I will be at work tomorrow. Thanks.

Samir

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**From:** Foster, Rocky  
**Sent:** Sunday, February 12, 2012 1:16 PM  
**To:** Chakrabarti, Samir  
**Subject:** FW: Transmittal of Letter U7-C-NINA-NRC-120013 (SUNSI)

Samir,

Wanted to make sure you got these.

Rocky

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**From:** Elton, Loree [<mailto:leelton@STPEGS.COM>]

**Sent:** Thursday, February 09, 2012 2:39 PM

**To:** Casto, Chuck; Misenhimer, David; Wunder, George; Eudy, Michael; Foster, Rocky; Jenkins, Ronaldo; Joseph, Stacy; Tai, Tom

**Subject:** [WARNING: MESSAGE ENCRYPTED]Transmittal of Letter U7-C-NINA-NRC-120013

Please find attached a courtesy copy of letter number U7-C-NINA-NRC-120013, which provides responses to staff questions in Request for Additional Information (RAI) letter number 415 related to Combined License Application (COLA) Part 2, Tier 2, Section 9.1, "Fuel Storage and Handling."

The attached letter contains proprietary information and is password protected. The password will be provided in a separate email.

The official version of this correspondence will be placed in the mail. Please call Jim Agles at 860-514-1381 if you have any questions concerning this letter.

Loree Elton

Licensing, STP 3 & 4

[leelton@stpegs.com](mailto:leelton@stpegs.com)

361-972-4644

**Hearing Identifier:** SouthTexas34Public\_EX  
**Email Number:** 3266

**Mail Envelope Properties** (0A64B42AAA8FD4418CE1EB5240A6FED160DF2FBCCC)

**Subject:** FW: Transmittal of Letter U7-C-NINA-NRC-120013 (SUNSI)  
**Sent Date:** 2/15/2012 12:29:40 PM  
**Received Date:** 2/15/2012 12:29:43 PM  
**From:** Tai, Tom

**Created By:** Tom.Tai@nrc.gov

**Recipients:**

"jeprice@stpegs.com" <jeprice@stpegs.com>  
Tracking Status: None  
"STPCOL" <STP.COL@nrc.gov>  
Tracking Status: None  
"Chappell, Coley" <ccchappell@STPEGS.COM>  
Tracking Status: None

**Post Office:** HQCLSTR02.nrc.gov

<b>Files</b>	<b>Size</b>	<b>Date &amp; Time</b>
MESSAGE	4867	2/15/2012 12:29:43 PM
STP Fuel Rack BNL RAI status table 02-15-2012.docx		49922

**Options**

**Priority:** Standard  
**Return Notification:** No  
**Reply Requested:** No  
**Sensitivity:** Normal  
**Expiration Date:**  
**Recipients Received:**

**STP UNIT 3 & 4 –Spent Fuel Storage Racks**

**RAI STATUS TABLE**

(Prepared by BNL, 02/15/2012)

<b>RAI No.</b>	<b>RAI item</b>	<b>NINA Response Date</b>	<b>BNL Assessment Date</b>	<b>Action</b>	<b>Current Status</b>	<b>Comment</b>
09.01.02-2 (RAI No.5685, RAI Letter #377)  Provide more descriptive information on pools, racks and fuel-handling system.	a	6/23/11  Revised 11/14/2011	09/05/2011  12/22/2011		R	Response to follow-up RAI 09.01.02-11, item a, is included in this revised response.
	b	11/14/2011	12/22/2011		Closed/U	Tied to resolution of sliding displacement issue.  See follow-up RAI-20 and RAI-30, and Audit Action Items #4, #5, and #6.
	c	6/23/11  Revised 11/14/2011	09/05/2011  12/22/2011		R	NINA included a material table in the technical report revision.
	d	6/23/11  Revised 11/14/2011	09/05/2011  12/22/2011		R	NINA included in the technical report the statement that all racks for new and spent fuel will be permanently located in the spent fuel storage pool.
	e	6/23/11  Revised 11/14/2011	09/05/2011  12/22/2011		R	NINA included information about tie joints between adjacent cell walls in the technical report revision.
	f	6/23/11	09/05/2011		R	RAI item regarding new fuel racks is no longer applicable.
	g	6/23/11  Revised 11/14/2011	09/05/2011  12/22/2011		R	NINA included updated support plate configuration in the technical report revision.

	h	6/23/11 Revised 11/14/2011	09/05/2011 12/22/2011		R	Response to follow-up RAI 09.01.02-11, item h, is included in this revised response.
	i	6/23/11 Revised 11/14/2011	09/05/2011 12/22/2011		R	NINA included updated welding information in the technical report revision.
09.01.02-3 (RAI No.5685, RAI Letter #377)	a	11/14/2011	12/22/2011		R	Response acceptable.
Provide additional information on loads and load combinations	b	6/23/11 Revised 11/14/2011	09/05/2011 12/22/2011		R	NINA included updated information on temperatures in the technical report revision.
	c	6/23/11 Revised 11/14/2011	09/05/2011 12/22/2011		Closed/U	Response to follow-up RAI 09.01.02-12, item c, is included in this revised response.  Tied to resolution of weld stress limit based on base metal properties.  See follow-up RAI-28.
09.01.02-4 (RAI No.5685, RAI Letter #377)	a	8/1/11 Revised 11/14/2011	09/05/2011 12/22/2011		R	See response to follow-up RAI 09.01.02-13
Provide additional information on fuel drop analyses.	b	8/1/11	09/05/2011		R	Response provides sufficient clarification.
	c	8/1/11	09/05/2011		R	Response provides sufficient clarification.
	d	8/1/11 Revised 11/14/2011	09/05/2011 At audit		R	Staff audited back-up calculations.
	e	8/1/11 Revised 11/14/2011	09/05/2011 At Audit		R	NINA provided additional information in the Technical Report, Revision 2. Staff audited

						back-up calculations.
09.01.02-5 (RAI No.5685, RAI Letter #377)  Provide more information on modeling and analysis.	a	6/23/11	09/05/2011		R	RAI item regarding new fuel racks is no longer applicable.
	b	6/23/11	09/05/2011		R	Response provides sufficient clarification.
	c	11/14/2011	12/22/2011		Closed/U	Tied to resolution of impact stiffness issue.  See follow-up RAI-24, and Audit Action Item #13.
	d	6/23/11  Revised 11/14/2011	09/05/2011  12/22/2011		R	Response to follow-up RAI 09.01.02-14, item d, is included in this revised response.  Response provides sufficient clarification.
	e	6/23/11  Revised 11/14/2011	09/05/2011  12/22/2011		Closed/U	Response to follow-up RAI 09.01.02-14, item e, is included in this revised response.  Tied to resolution of fluid coupling issue.  See follow-up RAI-22, and Audit Action Item # 7.
	f	6/23/11	09/05/2011		R	Response provides sufficient clarification.
	g	11/14/2011	12/22/2011		Closed/U	Tied to resolution of fuel assembly evaluation issue.  See follow-up RAI-10 and RAI-25, and Audit Action Item # 17.
	h	6/23/11	09/05/2011		R	Response provides sufficient clarification.
	i	11/14/2011	12/22/2011		R	Response describes modeling and design calculation method for the clevis and pin.
	j	6/23/11  Revised 11/14/2011	09/05/2011  12/22/2011		R	NINA included results for 0.5 coefficient of friction in technical report revision

	k	6/23/11 Revised 11/14/2011	09/05/2011 12/22/2011		R	NINA clarified in the Technical Report revision that simultaneous application of 3 directional seismic loading and algebraic summation are used.
	l	6/23/11 Revised 11/14/2011	09/05/2011 12/22/2011		R	NINA included an explanation of ANSYS modeling of the welds in technical report revision.
	m	11/14/2011	12/22/2011		R	Response provides sufficient clarification.
	n	11/14/2011	12/22/2011		Closed/U	Tied to resolution of partially loaded racks issue.  See follow-up RAI-30, and Audit Action Items #4 and #5.
	o	6/23/11	09/05/2011 At Audit		R	Staff audited computer code validation process.
09.01.02-6 (RAI No.5685, RAI Letter #377)  Provide more information on design checks.	a	6/23/11 Revised 11/14/2011	09/05/2011 12/22/2011		Closed/U	Response to follow-up RAI 09.01.02-15, item a, is included in this revised response.  Loads on base plate-to-support plate fillet welds are still an open technical issue. Need to resolve moment arm for leveling screw.  See follow-up RAI-18, item 2, and Audit Action Item #14.
	b	11/14/2011	12/22/2011		R	Response provides sufficient clarification.
	c	11/14/2011	12/22/2011		U	Issue is meeting Code allowable stress limits for the cell wall and cell wall-to-base plate fillet welds.  Tied to resolution of local stress on cell wall



						<p>due to fuel assembly impact, and several other technical issues that may affect the final predictions of stress on the cell walls and the fillet welds.</p> <p>The resolution of several follow-up RAIs and several Audit Action Items is necessary before this issue can be resolved.</p>
	d	11/14/2011	12/22/2011		U	<p>Tied to resolution of the cell wall buckling evaluation.</p> <p>Audit Action Item #19 discusses NINA's commitment to prepare a white paper on the cell wall buckling evaluation.</p>
	e	11/14/2011	12/22/2011		R	Response provides sufficient clarification.
	f	6/23/11	09/05/2011		R	RAI item regarding new fuel racks is no longer applicable.
<p>09.01.02-7 (RAI No.5685, RAI Letter #377)</p> <p>Provide information regarding quality assurance program, materials control, quality control, and special construction techniques; and discuss provisions for in-service inspection (ISI) of the racks.</p>	-	6/23/11			Closed/U	See follow-up RAI-16, for resolution.
<p>09.01.02-8 (RAI No.5685, RAI Letter #377)</p> <p>Provide information regarding thermal stress evaluation for the spent fuel racks.</p>	-	11/14/2011			Closed/U	<p>Staff questioned the use of a 10 degree temperature difference.</p> <p>See follow-up RAI-29 for proposed resolution.</p>
<p>09.01.02-9 (RAI No.5685, RAI Letter #377)</p>	a	6/23/11	09/05/2011			

Provide additional information about the seismic loading for the nonlinear time history analysis of the spent fuel racks.		8/17/11 (Rev. 1)		NINA	AIP	When NINA formally submits the RAI response, this becomes Resolved. Staff audited the related calculation. Also see RAI - 21.
		01/18/2012 (DRAFT Rev. 2)	01/19/2012 (At Audit)			
		02/09/2012 (FORMAL Rev. 2)	02/13/2012		R	NINA formally submitted Revision 2 to the RAI response. NINA deleted its Revision 1 RAI response commitment to include the check of the 3 synthetic time histories against SRP acceptance criteria in Technical Report Revision 2. Instead, a statement that the criteria are satisfied has been included in Technical Report Revision 2.  BNL conducted an independent check of the time history input files, and concluded that they are technically acceptable because they meet SRP acceptance criteria. The staff initially had several technical concerns.
	b	6/23/11	09/05/2011	NINA	AIP	When NINA formally submits the RAI response, this becomes Resolved. Staff audited the related calculation. Also see RAI - 21.
		8/17/11 (Rev. 1)				
		01/18/2012 (DRAFT Rev. 2)	01/19/2012 (At Audit)		R	NINA formally submitted Revision 2 to the RAI response. NINA deleted its Revision 1 RAI response commitment to include the check of the 3 synthetic time histories against SRP acceptance criteria in Technical Report Revision 2. Instead, a statement that the criteria are satisfied has been included in
		02/09/2012 (FORMAL Rev. 2)	02/13/2012			

						<p>Technical Report Revision 2.</p> <p>BNL conducted an independent check of the time history input files, and concluded that they are technically acceptable because they meet SRP acceptance criteria. The staff initially had several technical concerns.</p>
	c	6/23/11 8/17/11 (Rev. 1)	09/05/2011		R	Rev. 1 Response provides sufficient clarification.
	d	6/23/11 8/17/11 (Rev. 1)	09/05/2011		R	Rev. 1 Response provides sufficient clarification.
	e	6/23/11	09/05/2011		R	Rev. 0 Response provides sufficient clarification.
	f	6/23/11 8/17/11 (Rev. 1)	09/05/2011		R	Rev. 1 Response provides sufficient clarification. (BNL conducted independent check.)
09.01.02-10 (RAI No.5987, RAI Letter #412)	a	11/14/2011	11/15/2011	NINA	U	<p>Response is too vague, short of quantitative detail. It is not clear that the capacity estimate is for the specific DCD fuel assembly and exactly how it was determined. Additional quantitative information needed. Follow-up RAI will be prepared. Require a revised response prior to audit of detailed calculations/test results that establish the fuel assembly impact load capacity. Audit should be confirmatory, not exploratory.</p> <p>Follow-up RAI-25 below continues the assessment of fuel assembly integrity for seismic loading.</p>
Provide information on Spent Fuel Assembly Integrity.	b	11/14/2011	11/15/2011	NINA	U	
	c	11/14/2011	11/15/2011	NINA	U	
	d	11/14/2011	11/15/2011	NINA	U	
	e	11/14/2011	11/15/2011	NINA	U	

						See Audit Action Item #17.
09.01.02-11 (RAI No.6070, RAI Letter #413) <b>Follow-up RAI for RAI 09.01.02-2, items a and h</b>	a	11/14/2011			Closed/U	Applicant revised the response to original RAI 09.01.02-2, item a, to address follow-up RAI-11, item a.
	h	11/14/2011			Closed/U	Applicant revised the response to original RAI 09.01.02-2, item h, to address follow-up RAI-11, item h.
09.01.02-12 (RAI No.6070, RAI Letter #413) <b>Follow-up RAI for RAI 09.01.02-3, item c</b>	c	11/14/2011			Closed/U	Applicant revised the response to original RAI 09.01.02-3, item c, to address follow-up RAI-12, item c
09.01.02-13 (RAI No.6070, RAI Letter #413) <b>Follow-up RAI for RAI 09.01.02-4, item a</b>	a	11/14/2011	12/22/2011		R	NINA provided acceptable responses to the follow-up questions, and made appropriate additions to Rev. 2 of the Technical Report.
09.01.02-14 (RAI No.6070, RAI Letter #413) <b>Follow-up RAI for RAI 09.01.02-5, items d and e</b>	d	11/14/2011			Closed/U	Applicant revised the response to original RAI 09.01.02-5, item d, to address follow-up RAI-14, item d.
	e	11/14/2011			Closed/U	Applicant revised the response to original RAI 09.01.02-5, item e, to address follow-up RAI-14, item e.
09.01.02-15 (RAI No.6070, RAI Letter #413) <b>Follow-up RAI for RAI 09.01.02-6, item a</b>	a	11/14/2011			Closed/U	Applicant revised the response to original RAI 09.01.02-6, item a, to address follow-up RAI-15, item a.
09.01.02-16 (RAI No.6070, RAI Letter #413) <b>Follow-up RAI for RAI 09.01.02-7</b>	-	11/14/2011	12/22/2012		R	NRC staff accepts NINA's follow-up response on QA requirements and periodic inservice inspection. Commitment to QAPD Part 2 and Maintenance Rule are judged to be sufficient.
09.01.02-17 (RAI Tracking No. 6263; RAI Letter No. 415, 01/09/2012)		01/18/2012 (DRAFT)	01/19/2012 (AT AUDIT)	NINA	AIP	When NINA formally submits the RAI response, this becomes Confirmatory. When NINA formally submits the Technical Report revision, this becomes Resolved.

<p>Typos in Technical Report, Rev.2</p>		02/09/2012 (FORMAL)	02/13/2012	NINA/ Staff	AIP	<p>NINA formally submitted the RAI response, consistent with the DRAFT response that the staff reviewed during the 01/17-20/2012 audit. The RAI response is acceptable.</p> <p>At the follow-up audit, the Staff will confirm that the transformation of the time history input to the "model" coordinate system was done correctly. Following the audit, status will be Confirmatory, unless a problem is identified.</p>
<p>09.01.02-18 (RAI Tracking No. 6263; RAI Letter No. 415, 01/09/2012)</p> <p>Six questions on Section 8.2 of technical report, Rev.2</p>		01/18/2012 (DRAFT)	01/19/2012 (AT AUDIT)	NINA	<p>AIP</p> <p>Items 1,3,5,6 When NINA formally submits the RAI response, this becomes Confirmatory. When NINA formally submits the Technical Report revision, this becomes Resolved.</p> <p>U</p> <p>Item 2: The leveling screw evaluation is still under review. See Audit Action Item #14.</p> <p>U</p> <p>Item 4: Load application for the localized fuel assembly impact is still under review. See Audit Action Item #15.</p>	
<p>09.01.02-19 (RAI Tracking No. 6263; RAI Letter No. 415, 01/09/2012)</p> <p>Issue of fuel assemblies protruding above top of racks.</p>		01/18/2012 (DRAFT)	01/19/2012 (AT AUDIT)	NINA	<p>U</p> <p>NINA will revise its draft response and the Technical Report for the drop analysis.</p> <p>Audit Action Items #1, #11, and #12</p>	
<p>09.01.02-20 (RAI Tracking No. 6263; RAI Letter No. 415, 01/09/2012)</p> <p>Issue of subsequent gap changes between racks and</p>		01/18/2012 (DRAFT)	01/19/2012 (AT AUDIT)	NINA	<p>U</p> <p>NINA will revise its draft response, to explain how 10 CFR 50.59 would be triggered. Audit Action Item #6.</p>	
		02/08/2012	02/08/2012	NINA	AIP	NINA revised its draft response, to explain how

pool wall.		(FORMAL)				10 CFR 50.59 would be triggered, per Audit Action Item #6. Technical Report Figure 4-1 needs to be revised. Also, staff recommends that part of the RAI response be included in the Technical Report for clarity and completeness.
09.01.02-21 (RAI Tracking No. 6263; RAI Letter No. 415, 01/09/2012)  Change in prior RAI commitment to include additional seismic input information in the Technical report		01/18/2012 (DRAFT)  02/08/2012 (FORMAL)	01/19/2012 (AT AUDIT)  02/08/2012	NINA	AIP  R	When NINA formally submits the RAI response, this becomes Resolved. Staff audited the related calculation. Also see RAI - 9.  NINA formally submitted the draft RAI response.
09.01.02-22 (RAI Tracking No. 6263; RAI Letter No. 415, 01/09/2012)  Issue of fluid-structure coupling; hydrodynamic mass calculation.		01/18/2012 (DRAFT)	01/19/2012 (AT AUDIT)	NINA	U	NINA will revise its draft response, to address changes in the hydrodynamic effects due to large sliding displacements.  Audit Action Item #7
09.01.02-23 (RAI Tracking No. 6263; RAI Letter No. 415, 01/09/2012)  Differences between design and analytical model.		01/18/2012 (DRAFT)  02/08/2012 (FORMAL)	01/19/2012 (AT AUDIT)  02/08/2012	NINA  NINA	AIP  AIP	When NINA formally submits the RAI response, this becomes Resolved.  Staff recommends that the RAI response be included in the Technical Report.
09.01.02-24 (RAI Tracking No. 6263; RAI Letter No. 415, 01/09/2012)  Selection of impact stiffness values		01/18/2012 (DRAFT)	01/19/2012 (AT AUDIT)	NINA	U	Audit Action Item #13 should identify discussion with the Peer Review Group, and revision of the RAI response to provide a stronger technical basis for not conducting additional sensitivity analyses.
09.01.02-25 (RAI Tracking No. 6263; RAI Letter No. 415, 01/09/2012)		01/18/2012 (DRAFT)	01/19/2012 (AT AUDIT)	NINA	U	Audit Action Item #17

Follow-up to RAI-10, on fuel assembly evaluation for seismic loads						
09.01.02-26 (RAI Tracking No. 6263; RAI Letter No. 415, 01/09/2012)		01/18/2012 (DRAFT)	01/19/2012 (AT AUDIT)	NINA	AIP	Track under RAI-25
Clarification of properties of fuel assemblies used for evaluation.		02/08/2012 (FORMAL)	02/08/2012	NINA	AIP	Staff recommends that the RAI response be included in the Technical Report.
09.01.02-27 (RAI Tracking No. 6263; RAI Letter No. 415, 01/09/2012)		01/18/2012 (DRAFT)	01/19/2012 (AT AUDIT)	NINA	AIP	When NINA formally submits the RAI response, this becomes Resolved.
TP304/TP304L dual certification		02/08/2012 (FORMAL)	02/08/2012		R	NINA formally submitted the draft RAI response.
09.01.02-28 (RAI Tracking No. 6263; RAI Letter No. 415, 01/09/2012)		01/18/2012 (DRAFT)	01/19/2012 (AT AUDIT)	NINA	AIP	When NINA formally submits the RAI response, this becomes Resolved
Follow-up to RAI-12.		02/09/2012 (FORMAL)	02/13/2012	NINA	U	NINA formally submitted the RAI response, consistent with the DRAFT response that the staff reviewed during the 01/17-20/2012 audit.  The response provides a design check for the shear stress in base metal (base plate) for the stuck fuel assembly load case. The staff notes that the calculation for the stuck fuel assembly analysis is based on the conservative assumption that only two cells of the spent fuel storage rack resist the stuck fuel assembly load. The staff determined that the RAI response adequately addresses shear loading in the base metal, and is acceptable.  The staff recommends that the applicant (1) include this response in the Technical Report, and (2) change the title "Base Metal Shear Allowable" on top of Page 8-24 of the

						<p>Technical Report Revision 2. This title is appropriate for the design calculation provided in the response to RAI-28, but it is not appropriate for the calculation presented in the technical report.</p> <p>Status will become Confirmatory when the applicant formally submits its proposed changes to the technical report.</p>
<p>09.01.02-29 (RAI Tracking No. 6263; RAI Letter No. 415, 01/09/2012)</p> <p>Follow-up to RAI-8, on temperature effects of isolated hot cell.</p>		<p>01/18/2012 (DRAFT)</p> <p>02/08/2012 (FORMAL)</p>	<p>01/19/2012 (AT AUDIT)</p> <p>02/08/2012</p>	<p>NINA</p> <p>NINA/Staff</p>	<p>AIP</p> <p>U</p>	<p>50 degree temperature difference replaces the original 10 degree temperature difference. Thermal stress still acceptable.</p> <p>When NINA formally submits the RAI response, this becomes Confirmatory. When NINA formally submits the Technical Report revision, this becomes Resolved.</p> <p>Staff expected numerical details, including the proposed revision to the Technical Report. The formal response does not provide this information.</p> <p>Staff will review applicable updated calculations at the follow-up audit.</p> <p>NINA needs to submit the proposed revision to the Technical report to the staff for review.</p> <p>Following successful completion of these 2 activities, status will become Confirmatory.</p>
<p>09.01.02-30 (RAI Tracking No. 6263; RAI Letter No. 415, 01/09/2012)</p> <p>Issue of large sliding displacements and unexpected trend with friction coefficient.</p>		<p>01/18/2012 (DRAFT)</p>	<p>01/19/2012 (AT AUDIT)</p>	<p>NINA</p>	<p>U</p>	<p>Audit Action Items #4 and #5</p>
<p>09.01.02-31</p>		<p>01/18/2012</p>	<p>01/19/2012</p>	<p>NINA</p>	<p>U</p>	<p>Audit Action Items #8 and #9</p>



(RAI Tracking No. 6263; RAI Letter No. 415, 01/09/2012)  Issue of cell-to-cell coupling; lack of rotational compatibility.		(DRAFT)	(AT AUDIT)			
09.01.02-32 (RAI Tracking No. 6263; RAI Letter No. 415, 01/09/2012)  Modeling of local fuel assembly impact on rack cell walls.		01/18/2012 (DRAFT)	01/19/2012 (AT AUDIT)	NINA	U	Audit Action Items #15 and #18
Audit of calculation # CN-MRCDA-11-23  Further explanation needed for buckling assessments, and 2 other issues,			01/20/2012 (AT AUDIT)	NINA	U	Audit Action Item #19  NINA to submit white paper on buckling assessment, to address staff concerns identified on 01/20/2012.  Also address staff questions on page 80 and page 87 of calculation.
Define the basis for the assumed gap between the fuel assembly and the top of the rack cell, currently set at 0.05".			01/19/2012 (AT AUDIT)	NINA	U	Audit Action Item #10
Re-convene Peer Review Group, to discuss (1) implementation of the 16 group recommendations; and (2) the remaining technical issues from the 01/17-20/2012 Audit.			01/19/2012 (AT AUDIT)	NINA	U	Audit Action Item #16

R- Resolved.

U - Unresolved.

C - Confirmatory (Response acceptable; draft FSAR and/or Report revision submitted; FSAR and/or Report formal revision needed.)

AIP – Agreed in Principle (Staff and Applicant agree on a path toward resolution; additional review needed to achieve resolution.)

Closed/U – Unresolved, but closed; further evaluation of technical issue is under the referenced RAI(s) and/or Audit Action Item(s).

