

## AP1000DCDFileNPEm Resource

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**From:** Buckberg, Perry  
**Sent:** Thursday, March 11, 2010 7:07 AM  
**To:** 'Sanders, Mitchell P.'; 'Loza, Paul G.'  
**Cc:** McKenna, Eileen  
**Subject:** RE: RESEND - OI-SRP 9.1.4-SBPB-03 Response of 10/15/09

Paul/Mitch,

The tech reviewer checked into your interim response and is requesting a conference call to discuss this OI. It's possible we could talk late today (if I can set it up in time - I am out of the office today) or tomorrow (after the meeting in Rockville) - let me know while I check with the staff.

His concerns are as follows:

Westinghouse indicates that in the past the operators were required to verify hoist up limits, indicating lights, etc...prior to translating, which is acceptable while using the correct hoist. However by using the incorrect crane, even with the hoist up limits or indicating lights, will allow inadvertently traversing (translating) of the hoists in the configuration where the bottom of a fuel assembly does not have adequate clearance from the spent fuel racks. This could result in fuel damage if traversing movement is allowed.

1. How does Westinghouse intend to address the issue above.
2. Elaborate on the comment "*Being that there is approximately 20" difference between the two hook up limits, this condition should be detected by the operator*". It is not clear to me how the operator would detect this?
3. What is their intended use of single and non-single failure proof hoists.
4. Which crane will carry what over the SFP? and in fuel handling areas.

Thanks,

Perry Buckberg

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**From:** Sanders, Mitchell P. [mailto:sandermp@westinghouse.com]  
**Sent:** Friday, February 26, 2010 3:24 PM  
**To:** Buckberg, Perry; Loza, Paul G.  
**Subject:** RE: RESEND - OI-SRP 9.1.4-SBPB-03 Response of 10/15/09

Perry,

I have discussed your memo with Paul and appreciate your concerns regarding potential fuel handling incidents.

I will discuss this issue with our fuel handling system supplier to see if there is a fix for this using software controls. We could possibly prevent the single failure proof hoist from translating over the spent fuel racks with a "spent fuel handling tool" load on the hoist.

Past fuel handling procedures require operators to verify hoist up limits via hoist position, indicating lights, etc., prior to clearing bridge-trolley interlocks and translating with a fuel assembly. Being that there is approximately 20" difference between the two hook up limits, this condition should be detected by the operator. The AP1000 fuel handling operating procedures have not been developed at this time.

Would the incorporation of either or both of these defenses bring this issue to a close?

Please treat this as an informal response. I will look into these with our supplier and our procedure writer's group next week.

Sincerely,

Mitch Sanders  
AP1000 Aux. Equipment Eng.

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**From:** Buckberg, Perry [mailto:Perry.Buckberg@nrc.gov]  
**Sent:** Thursday, February 25, 2010 3:19 PM  
**To:** Loza, Paul G.  
**Cc:** Sanders, Mitchell P.  
**Subject:** RE: RESEND - OI-SRP 9.1.4-SBPB-03 Response of 10/15/09

Paul,

The early feedback was that the OI-SRP 9.1.4-SBPB-03 paragraph re-write may be acceptable to close the OI, but one question remains that an e-mail response could answer.

*Has Westinghouse considered the possibility of inadvertently attaching and moving a spent fuel assembly with the single-failure proof hoist (using spent fuel tool)? Although movement is not possible based on proposed height constraints, are any interlocks (procedure controls or other method) provided to avoid inadvertently damaging an assembly by mistakenly attaching the single-failure proof crane (and spent fuel tool) to an assembly and attempting to move without clearing the spent fuel rack?*

Thanks,

**Perry Buckberg**

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**From:** Loza, Paul G. [mailto:lozapg@westinghouse.com]  
**Sent:** Thursday, February 25, 2010 1:02 PM  
**To:** Buckberg, Perry  
**Cc:** Sanders, Mitchell P.  
**Subject:** FW: RESEND - OI-SRP 9.1.4-SBPB-03 Response of 10/15/09

Hi Perry,

I have the words below from my SMEs as a proposed compromise to your initial request. The changes I see are:

1. Your words, " Spent fuel handling is restricted to using the non-single failure proof hoist," are removed.

2. Your second sentence (The single failure proof hoist is used for handling new fuel and other loads, with the exception of spent fuel, throughout the fuel handling area.) is clarified to " Fuel assemblies are moved throughout the spent fuel handling area utilizing the non-single failure proof hoist. "

Please advise if your reviewers find this alternative wording sufficient and acceptable. If so, I will generate a revised OI response with these words.

Thanks,

Paul

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**From:** Sanders, Mitchell P.  
**Sent:** Monday, February 22, 2010 10:29 AM  
**To:** Loza, Paul G.  
**Subject:** FW: RESEND - OI-SRP 9.1.4-SBPB-03 Response of 10/15/09

Paul,

I would suggest that this statement be placed in 9.1.4.2.4 B.

#### 9.1.4.2.4 Component Description

A. Fuel Transfer Tube

The fuel transfer tube penetrates the containment and spent fuel area and provides a passageway for the conveyor car during refueling. During reactor operation, the fuel transfer tube is sealed at the containment end and acts as part of the containment pressure boundary. See subsection 3.8.2.1.5 for discussion of the fuel transfer penetration.

B. Fuel Handling Machine

The fuel handling machine performs fuel handling operations in the new and spent fuel handling area. It also provides a means of tool support and operator access for long tools used in various services and handling functions. The fuel handling machine is equipped with two 2-ton hoists, one of which is single failure proof. *Fuel assemblies are moved throughout the spent fuel handling area utilizing the non-single failure proof hoist. The single failure proof hoist in conjunction with the spent fuel handling tool is not capable of raising a fuel assembly to a height that clears the spent fuel racks, fuel transfer system basket, spent fuel shipping cask or the new fuel elevator.*

Do you want to propose this to Perry before we revise the RAI?

Mitch

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**From:** Loza, Paul G.  
**Sent:** Tuesday, February 09, 2010 4:29 PM

**To:** Sanders, Mitchell P.

**Subject:** FW: RESEND - OI-SRP 9.1.4-SBPB-03 Response of 10/15/09

Hi Mitch,

As SME, I ask that you concur with the requested change.

I suggest a location of either 9.1.4.3.1, A, at the end, or at the end of 9.1.4.3.7. Which is more appropriate to you?

If you (our customers) do not concur, please indicate what I may tell Perry as a compromise.

Thanks,

Paul

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**From:** Buckberg, Perry [mailto:Perry.Buckberg@nrc.gov]

**Sent:** Tuesday, February 02, 2010 9:57 AM

**To:** Loza, Paul G.

**Cc:** Melton, Michael A; McKenna, Eileen

**Subject:** RESEND - OI-SRP 9.1.4-SBPB-03 Response of 10/15/09

Paul,

The subject OI response seems acceptable. However, I would like to request that Westinghouse place text from the response, regarding use of single failure and non-single failure proof hoists and their respective new/fuel lifts, into next revision of the DCD. The text needed in the DCD is below:

*"Spent fuel handling is restricted to using the non-single failure proof hoist. The single failure proof hoist is used for handling new fuel and other loads, with the exception of spent fuel, throughout the fuel handling area. The single failure proof hoist in conjunction with the spent fuel handling tool is not capable of raising spent fuel to a height that clears the spent fuel racks, fuel transfer system fuel basket, spent fuel shipping cask, or the new fuel elevator."*

Thanks,

**Perry Buckberg**

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**From:** Buckberg, Perry

**Created By:** Perry.Buckberg@nrc.gov

**Recipients:**

"McKenna, Eileen" <Eileen.McKenna@nrc.gov>  
Tracking Status: None  
"Sanders, Mitchell P." <sandermp@westinghouse.com>  
Tracking Status: None  
"Loza, Paul G." <lozapg@westinghouse.com>  
Tracking Status: None

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