

USED FUEL STORAGE AND TRANSPORTATION ISSUE RESOLUTION PLAN**Issue Number:** N-10-01**Title:** Dry Spent Fuel Storage Canister Chloride Induced Stress Corrosion Cracking**I. Summary of Resolution Plan**

Industry and NRC will interact in public meetings and through letters to achieve the following:

Acquire and document data to determine:

1. The minimum conditions (cask and environment) necessary for potential initiation of CISCC.
2. The time scales under which CISCC could occur, based upon actual atmospheric and cask conditions.

II. Actions and Due Dates

ACTION	RESPONSIBLE PARTY	DUE DATE
1. Public meeting to discuss the data acquired in NRC and EPRI research	NRC/Industry	Completed – 3/14/2011
2. Industry develop draft criteria for the minimum conditions defining a chloride atmosphere under which SCC of canister confinement boundary made of austenitic stainless steel (304, 304L, 316L) could occur (e.g. relative humidity, chloride concentration in air, distance from salt water, cask surface temperature), and a method for determining the condition based time scale under which CISCC could occur (e.g. screening criteria)	Industry	Completed – February 2012
3. Public meeting for industry to present plans for acquiring field data.	NRC/Industry	Completed – 2/14/2012
4. Public meeting for 1) NRC to present technical data and regulatory questions, and 2) Industry to present conceptual screening criteria identifying the minimum conditions necessary for potential initiation of CISCC and a method for determining the condition based time scale under which CISCC could occur.	NRC/Industry	Completed – 4/12/2012
5. Perform pilot acquisition of field data (e.g. cask surface temperature, relative humidity, chloride content, and atmospheric parameters) at Calvert Cliffs Nuclear Station. This pilot will demonstrate the feasibility of acquiring certain data, be used to inform development of a more robust program, and provide useful data for addressing information gaps. which will support the basis of the condition based time scales under which SCC could occur; future plans to acquire field data will be based in part on the need for information to inform the screening criteria	EPRI/Industry	Completed – 6/27&28/2012
6. Public meeting to provide update on industry's plans/actions including: 1) proposed update to RIRP resolution plan, 2) R&D Roadmap, and 3) pilot data acquisition results and plans for future	Industry/NRC	Completed – 12/18/2012

inspections. Discussion to obtain NRC feedback on industry's plans. NRC update of related activities.		
7. Develop an draft R&D roadmap (referred to as Master Plan at 4/12/2012 meeting) for acquiring data necessary to fill-in gaps for understanding the condition based time scales under which SCC could occur. R&D Roadmap will start with the gaps identified in the Conceptual Screening Criteria, and will identify R&D being performed by industry, NRC, DOE, and others; as well as how/when this R&D is projected to result in data sufficient to close the RIRP.	EPRI/Industry	April 2012 – 1/31/2013
8. Submit draft R&D Roadmap for NRC feedback.	EPRI/Industry	January 31, 2013
9. Submit proposed update to RIRP screening form and resolution plan (Revision 2) to NRC, which incorporates feedback from public meeting.	NEI/Industry	Completed – 01/31/2013
10. Provide comments on proposed update to RIRP screening form and resolution plan for industry to incorporate. <u>OR</u> If NRC agreement on proposed forms, RIRP screening form and resolution plan Revision 2 are finalized.	NRC	March 2013
11. If NRC comments on proposed screening form and resolution plan, incorporate and finalize RIRP resolution plan Revision 2.	NEI/Industry	April 2013
12. Provide comments on draft R&D Roadmap.	NRC	April 2013
13. Finalize R&D Roadmap, incorporate NRC comments.	EPRI/Industry	May 2013
14. Collect/consolidate data per R&D Roadmap (including EPRI acquisition of actual canister data). Evaluate/update conceptual screening criteria as additional data becomes available. Monitor all R&D and update Roadmap as necessary. Assess when sufficient data exists to resolve RIRP.	EPRI/Industry	TBD – Based upon R&D Roadmap
15. NRC sponsored research at SwRI/CNWRA may result in data relevant to this RIRP.	NRC	As appropriate.
16. Periodic NRC/Industry public meetings to: 1) present updates on R&D and discuss development of data sufficient to close RIRP (including updates to conceptual screening criteria), 2) exchange information to increase the value of R&D activities (e.g. industry provide NRC with weld data for typical canisters), 3) discuss whether the RIRP resolution plan needs to be updated, and 4) discuss whether sufficient data exists to close the RIRP.	NRC/Industry	As appropriate. (e.g. every 6 months). Tentatively: March and September every year for as long as identified in R&D Roadmap
17. Finalize, and send to NRC, a screening process with criteria defining the minimum conditions (cask and environment) necessary for initiation of CISCC and a method for determining the condition based time scale under which SCC could occur (e.g. screening criteria) that can be used by ISFSI licensees to evaluate the potential	NEI/EPRI/Industry	30 days after the public meeting that 1) identifies that sufficient R&D has been completed to close the RIRP, and 2) discusses a draft final Screening Criteria.

for CISCC to occur on canisters at their site.		
15. NRC review and provide written comments on ISFSI CISCC screening criteria	NRC	60 days after receipt of Industry's Screening Process
16. Industry finalize ISFSI CISCC screening criteria based upon NRC feedback, and field data from actual casks	Industry	30 days after receipt of NRC comments
17. ISFSI owners use screening to identify CISCC-susceptible ISFSIs and time scales	Industry	60 days after finalizing screening criteria
18. Public meeting to discuss screening results, and closure of RIRP. Identify whether entire issue can be closed, or if another process is appropriate to continue to address issue.	NRC/Industry	30 days after ISFSI owners performing screening of their site
19. Submit proposed RIRP closure form to NRC.	NEI/Industry	30 days after public meeting
20. Provide comments on proposed closure form for industry to incorporate. <u>OR</u> If NRC agreement on proposed closure form, RIRP closure form is finalized.	NRC	60 days after submission
21. Finalize RIRP closure form (if necessary to address NRC comments).	NEI/Industry	30 days after public meeting

III. Date: 01/31/2013