

From: Thomas Hipschman
To: Pete Eselgroth
Date: Thu, Mar 11, 2004 10:30 AM
Subject: Fwd: fire impairments

Pete,

Attached is what Jeff and I have found.

This is the excerpt of the URI from the Triennial fire protection inspection, January 2003 (2002-011). There we no other findings. PIMS has no other open issues.

During a review of FHA Appendix A, section 2.2, and section 3.1.4.b, the team found that OCNGS relied on a manual operator action, without an approved exemption from the regulations, to defeat the spurious operation of an electromatic relief valve (EMRV) for fire conditions in reactor building elevation 51 feet (RB-FZ-1D). The manual action required the operators to manually open the Core Spray System II, parallel path Injection valve, V-20-21, in the event that a fire caused the spurious operation of an EMRV. The license did not consider the cables associated with this equipment to be necessary for achieving and maintaining hot shutdown conditlons, and did not provide the protection from fire damage specified in Section III.G.2 of Appendix R to 10 CFR Part 50. The team concluded that the identified issues concerning potential effects of fire damage on associated circuits related to safe shutdown components and the resultant spurious actuation of such components was an unresolved item (URI). This issue will remain unresolved pending the completion of the NRC/industry review and resolution of issues affecting safe shutdown associated circuits and manual actions, or the satisfactory re-analysis of the OCNGS SSA. This issue was placed into the licensee's corrective action program as CAP No. 02003-0035. (URI 50-219/02-011-01)

Tom

CC: Jeffrey Herrera; Richard Barkley

E-4

From: Richard Barkley
To: Jeffrey Herrera
Date: Thu, Mar 11, 2004 10:39 AM
Subject: Re: fire impairments

Good work Jeff. Also, I am glad to hear they are almost done replacing their emergency lights. I looked into that system in May as part of a Maintenance Rule look and found they were in very bad shape. Their replacement was delayed by the strike this summer.

Richard S. Barkley, P.E.
Senior Project Engineer, NRC Region I
610/337-5065
Fax 610/337-5349/5354

>>> Jeffrey Herrera 03/11/04 07:48AM >>>

Tom,

I went through all the fire impairments that are currently active. The few major things that are currently active are:

- 1) The void beneath the 480V switchgear room - This is currently "inprogress" status I believe they plan filling the void with sand either during or just after the outage.
- 2) The other thing that can be considered a degradation or impairment is the problem they have been having with water intrusion into the mecatiss fire barrier in the turbine basement. This mecatiss is currently being worked and they have removed it for replacement/repair. Looks like this mecatiss is on the EDG 4160V cable penetration in the TB basement.
- 3) The other major task they have been working on was the replacement of all the ELUs on site. I believe the last status I heard on that was that there was two remaining for replacement.

The other issue is an URI from a triennial fire protection inspection. This is the issue that requires a manual operator action to open a valve on the 75' elevation. I spoke with Tim Trettle and one of the other fire protection engineers about this and they indicated that they took the fire protection inspectors and one operator and walked through the actions that were required to be performed in that event. This seems to be one of the issues associated with Markey's letter.

Jeffrey Herrera
Oyster Creek Resident Inspector
Phone: 609-693-0702, 800-432-1156 x 1214
Fax: 609-693-0770

From: Leonard Cline
To: wstewart@amergenenergy.com
Date: Wed, Apr 21, 2004 9:00 AM
Subject: Re: Oyster Creek PI&R - Lesson Plans - Fire Protection

Since there are only 6 RCAs, please provide copies of all documentation associated with the six CAPs on the RCA list.

2003-0473
2003-1674
2003-0638
2003-1552
2003-1843
2004-0165

L. Cline
SRI, James A. FitzPatrick
315-342-4298
lmc1@nrc.gov

>>> <wstewart@amergenenergy.com> 04/21/04 08:37AM >>>
Here's the fire protection lesson plan. I think this completes your lesson plan request list.

(See attached file: 22a-Lesson plans-fire protection.doc)

CC: OC PI&R team

Jeffrey Herrera - re: fire protection question

From: Roy Fuhrmeister
To: Herrera, Jeffrey
Date: Wed, May 19, 2004 4:00 PM
Subject: Re: fire protection question

Jeffrey,

GOOD CATCH !!

You did find a potential leakage path for Halon, which could have reduced the effectiveness of the system.

It will take about 6 % halon to snuff a fire in the switchgear room. During system design, there is always some additional agent introduced since all rooms leak (it is a fact of life, there are door, cable penetrations, etc). The additional agent is verified during the system acceptance testing. A Halon system only needs to maintain concentration for about 10 minutes, per the National Fire Protection Association standard, NFPA 12A.

The small gap around the circumference of the plumbing plugs would not significantly increase the leakage path out of the room (the doors, for example, have a gap 1/8 inch along the top and sides, and as much as 3/4 inch at the bottom). Room pressures on Halon discharge are typically less than 1/2 psi, so there won't be a lot of driving force to push the plugs down into the sand.

I read the corrective action document you faxed in. Their actions to date are not unreasonable. For the long term, they need to establish controls on the plugs to ensure that they remain tight, and are periodically checked when they do fire barrier integrity checks or penetration seal inspections.

Roy L. Fuhrmeister

CC: Eselgroth, Pete; Rogge, John; Summers, Robert

From: Thomas Hipschman
To: Richard Barkley
Date: Fri, Mar 19, 2004 4:06 PM
Subject: Re: Status/Next Steps of Open URIs >6 months old

This issue will remain unresolved pending the completion of the NRC/industry review and resolution of issues affecting safe shutdown associated circuits and manual actions, or the satisfactory re-analysis of the OCNGS SSA.

The licensee does not know when this will be. Maybe Chris has some insight.

Tom

>>> Richard Barkley 03/19/04 11:18AM >>>

Paul/Tom,

Pete asked me what our plans were for closing two old URIs in the branch.

The Beaver Valley one (2003002-03) involved methods to credit manual operator action for continued AFW availability.

The Oyster Creek one (2002011-01) involved associated circuits issues from the fire protection triennial inspection.

By COB Monday, please get back to Pete with an idea of where we are headed with these two items. Thanks!

Richard S. Barkley, P.E.
Senior Project Engineer, NRC Region I
610/337-5065
Fax 610/337-5349/5354

CC: Christopher Cahill; Jeffrey Herrera; Richard Barkley

From: Leonard Cline
To: Jeffrey Herrera
Date: Tue, Jun 8, 2004 7:27 AM
Subject: Re: OC PIR

I will give Dave a call today...

L. Cline
SRI, James A. FitzPatrick
315-342-4298
lmc1@nrc.gov

>>> Jeffrey Herrera 06/08/04 07:26AM >>>

Len,
This report indicates one finding. I got a call from Dave Slear stating that there were findings that he thought were not findings, i.e. 480V cable separation need for exemption request, 3hr fire rated barrier?

What's the latest on all of this?

Jeffrey Herrera
Oyster Creek Resident Inspector
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Fax: 609-693-0770

>>> Leonard Cline 06/07/04 01:24PM >>>

Attached is a draft of the report. Please review for content in particular, especially the writeups that deal with your issues. I would like to provide Ray a draft by the end of the day Tuesday. All comments are welcome.

L. Cline
SRI, James A. FitzPatrick
315-342-4298
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From: Timothy O'Hara
To: McArison@amergenenergy.com
Date: Tue, Jun 8, 2004 3:27 PM
Subject: Information Request & Questions on AR A2045756 E24

Hello Mark,

I've reviewed the evaluation (A2045756 E24) which you provided to Jeff Herrera on 5/26/04. After looking at the evaluation I'm requesting the following information.

Questions and information request relating to AR A2045756 E24, Attachment 1:

- (1) Please provide a copy of SER dated March 25, 1986 and SER dated June 25, 1990.
- (2) Please provide a copy of ECR 03-00851
- (3) Please provide a copy of the test and analysis which supports to statement made in the first sentence of paragraph 9.2
- (4) Please provide a copy of the ASTM E-119 fire rating test which supports the statement in the first sentence of paragraph 9.1.
- (5) Paragraph 4 of Section 4.4 discusses some of the physical characteristics of sand and cement. What sand compaction ratio is assumed in the statements made in this section? What sand compaction ratio was used in the installation of the sand in the void and in the floor penetrations? How will Amergen ensure these compaction ratios are maintained?
- (6) Paragraph 2 of Section 4.4 discusses "...Startup testing reports for GE BWR's with PGCC floor design have demonstrated that these sand barriers also provide an acceptable barrier for containing the halon used in underfloor design." Please provide a copy of these tests with results and conclusions and an analysis of how they are applied at Oyster Creek. What sand compaction ratio was used in these tests?
- (7) Section 4.3 says "NFPA 12A Section A.5.4.1 indicates that flammable liquid and gas fires are subject to prompt extinguishment when Halon 1301 is quickly introduced into the enclosure in sufficient quantity to provide an extinguishing concentration for the particular materials involved and Oyster Creek's halon systems have been designed and tested to satisfy these requirements." Please provide copies of these design calculations and tests which support this statement for the 480v switchgear rooms with the five holes in the floor? How much halon leakage existed in each switchgear room before the holes were drilled and after the holes were drilled?

Thanks for your help, I look forward to your response.

Tim O'Hara
610-337-5043

CC: Cline, Leonard; Dfawcett@amergenenergy.com; Herrera, Jeffrey