

Franke, Mark

From: Chou, Rich *RS*
Sent: Monday, December 21, 2009 8:33 AM
To: Franke, Mark; Lake, Louis
Cc: Chou, Rich
Subject: RE: NRC Activities During Repair CR Containment

Mark/Lou:

1. IP 50001 Man-Hours for SGRP

IP 50001 states estimated man-hours = 350 Hours

Additional man hours can be charged if the licensee has containment opening. I assumed additional hours for the Crystal River 50 hours.

Total man-hours can be charged is $350 + 50 = \underline{400 \text{ Hours}}$

2. Original SGRP Schedule hours

A. EB3 will perform 10 trips or weeks for SGRP inspection and will charge portion of hours to IP 71111.08 ISI

35 hours/trip X 10 trips - 35 hours to be charged to ISI = 315 Hours

B. George Kuzo performed for RP and he said that he would charge about 20 Hours.

C. This leaves the man-hours to be charged for Roger Reyes and Tom Morrissey $400 - 315 - 20 = \underline{65 \text{ Hours}}$ **and Roger said that it is OK.**

3. Additional man-hours to be charged by EB3 (We do not know how many man-hours to be charged by Roger or Tom or George)

A. EB3 Charged to IP 50001 for Direct Inspection up to today 12/21/2009

195.5 Hours (Rich Chou) + 27.0 Hours (Bob Carrion) + 13.75 Hours (Eric Michel) + 16.0 Hours = 252.25 Hours

Original Schedule to inspect and observe the containment opening closure one week or one trip 35 Hours.

Total hours to be charged including the unfinished containment opening closure is 252.75 Hours already spent + 35 Hours in the schedule to be charged = 287.25 Hours

B. Hours to be charged for the repair of delamination

(1) Assume 7 trips with 35 Hours per trip or week = 245 Hours

(2) Assume 10 Trips with 35 Hours per trip = 350 Hours

C. Total Hours for SGRP + Repair of Delamination

(1) Assume 7 Trips plus SGRP = 245 Hours + 252.25 Hours = 497.25 Hours **Say 500 Hours**

(2) Assume 10 Trips plus SGRP = 350 Hours + 252.25 Hours = 602.25 Hours Say 600 Hours

D. Total Hours including the repair of delamination over the original schedule

(1) Assume 7 Trips 500 Hours - 315 Hours = 185 Hours

(2) Assume 10 Trips 600 Hours - 315 Hours = 285 Hours

From: Franke, Mark *MS*
Sent: Monday, December 21, 2009 7:20 AM
To: Lake, Louis
Cc: Chou, Rich
Subject: RE: NRC Activities During Repair CR Containment

Lou/Rich,

This looks like a good plan.

When you get a chance, please provide an estimate (estimated range) on amount of direct inspection hours that will be above and beyond the original SGR activity.

Thanks,
Mark

From: Lake, Louis *MS*
Sent: Thursday, December 17, 2009 11:11 AM
To: Franke, Mark
Cc: Chou, Rich
Subject: NRC Activities During Repair CR Containment

Mark;

With input from Rich Chow, here is a recommended breakdown of activities that should receive NRC inspection during the repair of the Crystal River Containment. I have highlighted those activities that would have been inspected during the original SGR.

1. Observe and review tendon de-tensioning conducted prior to de-lamination removal.
2. Observe and review the de-lamination removal process.
3. Review and observe, if necessary, new rebar installation. Portion is Part of original SGR. the original rebar design should be modified for this repair.
4. Observe new concrete pour and slump tests. Part of original SGR
5. Observe and review retensioning of tendons. Portion is part of original SGR. Scope of tendons requiring re-tensioning is much larger than original SGR.
6. Observe and review post repair NDT (both visual and NDE) conducted to verify no anomalies' in containment.
7. Observe and review post repair pressure testing and ILRT. Portion is part of original SGR. Expect additional inspections due to de-lamination repair.

Each Item needs about 2 inspectors, 2 trips - one in the beginning and another one in the middle. Some of them can be combined if they work in the same week. I will estimate a total of 7 to 10 trips needed depending on the complexity or with the new items or cracks identified. The tendon de-tensioning will be a slow and deliberate process and the repair area is so large it will take some time to complete.

I will be in Atlanta on Monday.