

Tony:

Our current information on Testing Performed for Unit 1 ADV 185.

Regards,  
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> —Original Message—

> From: Berg, D. Lee (Z99751)  
 > Sent: Thursday, July 01, 2004 5:11 PM  
 > To: Straka, Donald J(Z99942)  
 > Cc: Smyers, Daniel W(Z89227); Fisher, Daniel A(Z99305); Landstrom,  
 > Carl E(Z98901); Jones, Stephen B(Z02094); Powell, Michael E(Z99700);  
 > McGhee, Mark A(Z65028); Fernandez, Amado T(Z02065); Muhs, Michael  
 > K(Z69505); Winter, Christian S(Z01491); Jones, Warren H(Z54741)  
 > Subject: Testing Performed for Unit 1 ADV 185

> Don,

> I was asked to update you regarding the testing performed and the  
 > final outcome for Unit 1 ADV 185. This valve was identified by  
 > operations as having erratic operation during recovery from the most  
 > recent trip. It appeared to operations that the valve was changing  
 > positions with no demand change from the control room. At least one  
 > time operations indicated that the valve went closed far enough to  
 > have indications in the control room that it was full closed. To find  
 > the cause for this issue three revisions to the action plan were  
 > issued.

> Revision 0

> ADV 185 was isolated from the steam source and stroked to the 50% open  
 > position looking for any indication of drifting. Instrument air  
 > fittings and associated parts were SNOOPed to locate leaks. The valve  
 > was instrumented to watch I/P signal and valve position.

> During the stroking no anomalies were discovered, also no leaks were  
 > detected.

> Revision 1

> Under this revision the ADV was stroked with steam using  
 > instrumentation monitoring the actuator and valve bonnet pressure.

> During this stroke the valve again behaved as expected. The bonnet  
 > pressure was found to be approximately 10 psig (lower than coming out  
 > of the last outage, -29 psig). The actuator pressures were similar to  
 > past traces performed on other ADVs. The valve was held open for about  
 > 3 minutes for this test. It was determined that the valve operated as  
 > expected.

> Revision 2

> This revision combined the previous the action plans with minor  
 > modifications. The control system (actuator, positioner, I/P, and  
 > demand signal) of the ADV was instrumented to detect any issues that  
 > might occur. It was also decided that the stroking would be performed  
 > similar to that reported from the area operator during trip recovery.  
 > A series of three strokes were performed, as outlined below. All  
 > strokes were with steam isolated.

> \* Provide a demand signal of 80% open. When the valve traveled to  
 > 20% open change the demand to 30% open. Leave the valve in this  
 > position for 20 minutes. After 20 minutes fully close the valve.

> \* The second stroke was the same as the first except the initial  
 > demand was 50% open.

> \* The third stroke had an initial demand of 50% open. When the  
 > valve achieved 15% open the valve was taken to 20% open. The demand

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> was left at this point for 20 minutes.

>

> All three strokes behaved almost identically. The difference between  
> demand and actual position was about 14%. This has been consistent  
> from the time the valve was last calibrated during the U1R11 outage  
> through the series of five strokes described above. When that valve is  
> given a demand there is a normal lag in time prior to the valve  
> moving. This is due to the long tubing run between the I/P and the  
> valve positioner (~110 feet). Once the demand was given the I/P  
> started changing pressure as expected to allow the positioner to port  
> air to the bottom of the actuator to start opening. This function  
> occurred as expected. No anomalies were detected in any of the  
> strokes. At no time did the ADV move from the desired position over  
> any of the three 20 minute time frames.

>

> Based upon the response of the valve as seen in the instrumentation  
> response charts ADV 185 is functioning similar to other ADVs observed  
> under the same conditions. The anomalies identified by operations  
> could not be recreated. Engineering cannot find any problem with the  
> operation of this valve or recreate the anomalies reported by  
> operations.

>

> In looking at equipment history I/C determined that the positioner is  
> approximately 6 years old. Based upon the age of the positioner and  
> not being able to recreate the described anomalies it was decided that  
> the positioner would be replaced (WM# 2715990) and calibrated. No  
> further actions will be performed at this time. When the positioner is  
> replaced and calibration is completed operations has indicated the  
> valve will be declared operable.

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> If you have any questions please call me at work or home.

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> Lee Berg  
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> "To hike is to live; to hike with family is to live in heaven"

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