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TECO's Responses to Staff's Second Set of Interrogatories, No. 2.

TAMPA ELECTRIC COMPANY
DOCKET NO. 20220001-EI
STAFF'S SECOND SET OF INTERROGATORIES
INTERROGATORY NO. 2
BATES PAGE(S): 1 - 4
FILED: SEPTEMBER 27, 2022

2. Please refer to TECO's Response to OPC's First Interrogatories, Nos. 22 and 23 including supplemental responses.

a. Provide a full timeline of the November 2021 Polk Unit 1 outage event from the commencement of the outage to the time that the unit returned to service.

b. Would preventative maintenance have prevented this outage? If not, explain why not. As a part of this response, explain the preventative maintenance procedures that TECO had in place at the time of the event and whether they were followed.

c. Provide the age of the Syngas Block Valve (VS4-2), Syngas Control Valve (VGC1) and Syngas Purge Air isolation valve (WW-23). As a part of this response, describe the manufacturer's recommended replacement/maintenance schedule for each part and TECO's internal replacement/maintenance schedule for each part when the outage occurred.

d. Provide the full maintenance schedule of the Syngas Block Valve, Syngas Control Valve and Syngas Purge Air isolation valve. As a part of this response, explain if this maintenance schedule met either the manufacturer's recommended replacement/maintenance schedule or TECO's internal replacement/maintenance schedule when the outage occurred. If not, explain why the procedure was not followed.

e. Explain why the labeling of valve WW-23 was burned off from the heat in compartment.

f. Explain why the color deviated from the labelling associated with normal water wash practice for valve WW-23.

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A.

a. Please see below for a full timeline of the November Polk Unit 1 outage event.

Date	Event
11/29/2021	Attempted start (3rd Stage Bucket liberation)
11/30/2021	GE contacted for estimates to get unit on the half shell.
12/1/2021	Formal RCA initiated
12/7/2021	Executed agreement with GE for opening of CT
12/8/2021	Mobilization of GE resources (3 days and nights)
12/11/2021	-Replacement identified of 3rd stage hardware -Removal of Turbine components started
12/16/2021	Exhaust frame identified as need of replacement
12/30/2021	Exhaust frame delivered
1/13/2022	Executed agreement for reassembly, reassembly started
2/16/2022	Reassembly and air leak test successful
2/27/2022	Instrumentation install and pre-startup checks
3/10/2022	Return to Service

b. Tampa Electric is unable to state whether or not preventative maintenance would have prevented this outage. The syngas system was placed in layup prior to this incident since the unit was burning natural gas for an extended period. This involved use of a nitrogen blanket, filling the piping and valves with nitrogen gas to preserve equipment and prevent corrosion. At the time, there were no leaks for Valves VS4-2 and VGC1. The company performed preventative maintenance by exercising the valves during outages. The only additional maintenance that the company could have performed would have been to remove the valves and perform full overhauls. Since the valves were no longer exercised while in operation and remained in the closed position, it was thought not to be necessary to remove the valves and perform full overhauls. Since the incident, the system has now been "air gapped" and the valve fully removed with flanges installed, and the valve saved to reinstall if the need arise.

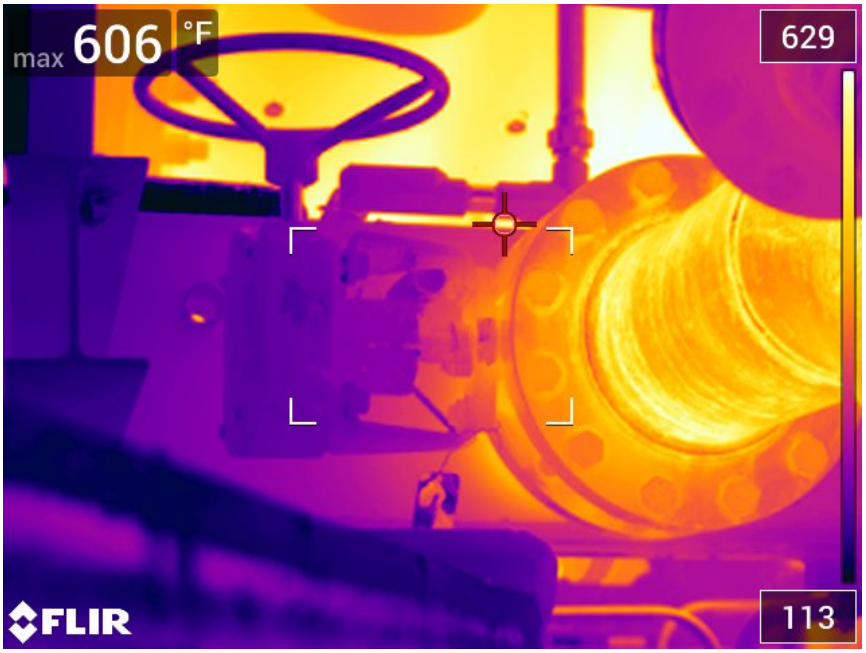
c. VS4-2, VGC1, and WW-23 were original valves dating from when Unit 1 was constructed in 1995. The valves are approximately 27 years old. The

company has performed repairs and overhauls on the valves since installation, including valve removal for overhaul. The valve manufacturer does not have a prescribed maintenance schedule; however, the manufacturer recommends that "valve parts subject to normal wear must be inspected and replaced as necessary. The frequency of inspection and replacement depends upon the severity of service conditions."

Removal and overhaul of a non-cycling valve was not believed to be necessary as it remained in the closed position during operation and was only exercised during outages. Tampa Electric monitored process conditions such as valve position vs flow, buffer pressure (indication of excess leak if buffer pressure drops) and performed visual inspection on the actuators for fluid leaks and seal leaks during outages.

d. Yes, Tampa Electric followed its internal maintenance schedule as overhauls were performed based on the monitoring above. Additionally, please see Tampa Electric's response to Interrogatory 2 (c), above.

e. The heat in the compartment, an enclosed area below the turbine, reach 600 degrees Fahrenheit. Since valve WW-23 is in the vicinity of the combustion turbine casing, the labeling was burned off. The picture below displays the location of the valve and the temperature around it.



f. A portion of the valve was not fully painted. The valve was painted for full visibility from the most common entry point to the compartment. When personnel enter the compartment from an unusual and more difficult access point, the water wash labelling was not apparent. Hard permanent field tagging is being implemented to ensure visibility regardless of the entry point into the compartment.

DECLARATION

I sponsored the answers to Interrogatories No. 2 from Staff's 2nd Set of Interrogatories to Tampa Electric Company in Docket No. 20220001-EI, and the responses are true and correct based on my personal knowledge.

Under penalties of perjury, I declare that I have read the foregoing declaration and the interrogatory answers identified above, and that the facts stated therein are true.

DocuSigned by:

/s/ Ashley Sizemore
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M. Ashley Sizemore
Manager, Rates

Date: 9/27/2022