Lessons Learned

Human Error Leads to Evacuation of Primary Control Room

**Primary Interest Groups**
Balancing Authorities
Transmission Operators
Generation Operators

**Problem Statement:** A utility had to evacuate its primary control center due to smoke from a nearby fire. The fire was caused by the maintenance workers’ failure to follow proper hot work procedures.

**Details:** A fire occurred in the powerhouse adjacent to the control center. Even though the fire was limited to the plastic material located inside of a rectangular metal tank, extensive smoke from the fire required evacuation of personnel from the powerhouse. Local fire departments responded immediately and aided in the fire extinguishment.

Smoke from the fire was extensive; some traveled up a utility tunnel and elevator shaft reaching the energy control center. As a precaution, the primary control center was partially evacuated, and electric system operators then utilized their back-up control center. After the relief crew reached the back-up control center, the system operators at the primary control center were able to leave their post and report to the back-up control center.

An investigation determined the fire was caused by maintenance workers assigned to remove a potable water tank that had been decommissioned for years. A spark from a torch ignited the plastic lining of the tank. When the workers assessed the tank prior to starting the removal, they viewed the side section of the tank which had no lining or combustible materials. The fire occurred in the center section of the tank which had the flammable lining.

The maintenance workers failed to follow proper hot work procedures, which included requirements to fully inspect the area for combustible materials. Furthermore, a fire watch was not established and a hot work permit was not issued.

**Corrective Actions:** All personnel have been retrained on the hot work permit system. The utility also plans to implement the measures necessary to prevent smoke travel into the control center such as appropriate fire stops and ventilation changes.
Lesson Learned:

- Workers should properly assess all work conditions before beginning any maintenance activities and follow established hot work permit processes.
- Give periodic training on hot work procedures to all maintenance employees.
- Properly assess ventilation equipment and fire stops in and around the control center and make appropriate changes in a timely manner.

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