

NATF Redacted Operating Experience Report

Near Miss – Reactor Bank Area Entered While Energized

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Topic

Reactor Bank Area Entered While Energized

Description

A contract vegetation crew was in a substation performing weed spraying. One member of the vegetation crew contacted an on-site substation maintenance technician and requested access to enter the reactor fenced area to perform spraying. The substation maintenance technician directed him to call the generation control room for an explanation of what he needed to do. A series of incomplete communications regarding “powering down” the reactors and several assumptions among the weed sprayer, the generation operations supervisor, and the transmission operator led to the weed sprayer entering the reactor fenced area without a clearance and without grounds in place. When the substation maintenance technician realized the weed sprayer was near energized equipment, he notified the weed sprayer of the hazard and had him safely exit the reactor fenced area.

Lessons Learned

1. Multiple assumptions took place that led to the weed sprayer entering the reactor fenced area without a clearance and grounds. If any one of the assumptions were verified by proper communication, the incident would have been prevented.
2. The substation entry training received by the weed sprayer did not explain clearances and protective grounds, or the importance of obtaining them, pertaining to working near normally energized electrical equipment.
3. Vegetation Management had not identified substations containing equipment located inside a second fence, which requires a clearance and grounds. This led to multiple trips to substations to spray all areas.
4. Identified a lack of signage on the reactor fenced areas to caution people from entering the area unless a clearance and grounds are in place.

Actions

1. Place unique signs on restricted fenced areas within substations that state “Do Not Enter Without Clearance and Protective Grounds in Place.”
2. If possible, place locks on gates on reactor fenced areas.
3. Include the definition of a clearance and protective grounds in the substation entry training, as well as how to identify if protective grounds are in place.
4. Share lessons learned among Transmission Operations, Plant Operations, Substation Construction & Management, and Vegetation Management to improve questioning attitude when interacting with groups or individuals that do not work in substations on a routine basis.
5. Explore the use of a pre-emergent granule that can be spread around the reactors from outside the restricted area to prevent the need to go into the fenced area. Electrically qualified employees can perform spot spraying as needed inside reactor fenced areas.

6. Recommend generation departments refer questions regarding substation equipment directly to the transmission operator.
7. Identify substations with restricted fenced areas prior to yearly weed spraying and coordinate with Substation Maintenance to have a clearance and grounds installed when these locations are sprayed.
8. Expand the vegetation pre-job briefing form to include reactors and other special hazards.

Extent of Condition

This condition exists at all substations with reactors.