

NATF Redacted Operating Experience Report

Tree Contact with Energized Line

About NATF Redacted Operating Experience (OE) Reports

North American Transmission Forum (NATF) operating experience reports highlight positive or negative transmission (reliability or resiliency) experiences worth sharing for learning opportunities or potential trending. The overall goal is to help each other learn without experiencing the same issues first-hand. This sharing originates confidentially within the NATF membership.

Redacted operating experience reports are posted on the NATF public website to allow the NATF and its members to more broadly share information, especially safety-related alerts and learnings, with contractors and other utilities to benefit the industry at large.

The NATF member company that submitted the initial restricted distribution OE report for this topic/event has approved the NATF to issue this redacted OE report.

Open Distribution

Copyright © 2020 North American Transmission Forum. Not for sale or commercial use. All rights reserved.

Disclaimer

This document was created by the North American Transmission Forum (NATF) to facilitate industry work to improve reliability and resiliency. The NATF reserves the right to make changes to the information contained herein without notice. No liability is assumed for any damages arising directly or indirectly by their use or application. The information provided in this document is provided on an “as is” basis. “North American Transmission Forum” and its associated logo are trademarks of NATF. Other product and brand names may be trademarks of their respective owners. This legend should not be removed from the document.

Topic

Tree Contact with Energized Line

Description

A contract vegetation management (VM) crew was clearing trees and brush for a new transmission line to run parallel to an existing energized 69 kV radial line. Crews were working to complete clearing on this line section for an upcoming wire pull. The line crews were only a few spans away.

The job started in the morning with a two-person crew, who performed a job briefing and then began clearing with chainsaws. Mid-morning, a third person from another crew, who had not previously worked with this crew composition, joined the crew. The three-member crew continued to perform clearing work with chainsaws when the crew leader decided to switch tasks to tree felling. This decision was based on concerning behaviors observed of the member who recently joined the crew. The crew leader decided it was best to move this crew member to a safer task dedicated to roping, instead of chainsaw use.

The crew leader conveyed expectations and observed the roping and tree-felling process of one tree. The crew leader felt confident the other two crew members could work independently, so he moved about a span away to continue clearing brush with a chainsaw. The crew leader was still listed on the job briefing as participating in the tree removal process. The crew continued to work this way all morning.

That afternoon, the two crew members continued removing trees and came to a 16-inch diameter, 76-foot tall spruce tree that was much taller than the surrounding trees. Winds were gusting around 10 mph, and there was no precipitation. The crew identified the tree was tall enough to contact the adjacent energized line, and a rope was placed in the tree. The crew members began the felling process with a notch and back cut when the tree fell in an unintended direction, contacting the energized transmission line. Nobody was hurt, and no facilities were damaged during this event.

Contributing factors to this event include:

- The crew leader had two years of experience, one crew member had two months of experience, and the new addition to the crew had eight months experience.
- The rope was not placed in accordance with the clearing contractor's company policy and only placed eight feet above the ground.
- Time pressure was underlined in the crew job briefing, and the crew did not want to delay nearby line-crew work.
- The hinge (hold) wood was cut through during the back cut by the employee with two months experience.
- The saw was dull.
- The crew leader identified the newly added crew member was incapable of accurately and dependably performing a task but decided to change the crew member's tasks rather than address the performance issue.

Lessons Learned

1. The crew did not follow company and industry standards for proper rope placement; neither crew member used a questioning attitude or “stop work authority” during the process; and proper hinge (hold) wood was not maintained, which caused the tree feller to lose control of the tree.
2. The tree feller was inexperienced and should have practiced on trees without targets until the skill was mastered.
3. The crew felt self-imposed time pressure to complete the work and cut corners instead of discussing their concerns with the general foreperson.
4. Time should be taken to perform proper tool maintenance.
5. Crew members and supervisors should take appropriate action when observing employees exhibiting an indication or sign that they may not be capable of performing a task accurately and dependably.
6. If individuals assigned tasks are changed in the field, it should be reflected and changed on the job briefing so assignments and expectations are clear.

Actions Taken

Contractor involved in the event:

1. Trained general forepersons, crew leaders, and crew members on the importance of identifying and ensuring an employee can safely perform the task at hand and encouraged personnel to come forward when they are not focused on the task at hand without fear of penalty.
2. Modified its tree felling guidelines to require anyone less than a journeyman/top trimmer to have direct supervision by a foreperson.
3. Communicated the importance of time-pressure considerations and mitigation of potential time pressures with all employees on our company footprint.
4. Increased job-behavior observations to better understand at-risk tree felling behaviors.
5. Provided chainsaw maintenance training to field employees.
6. Shared this incident and lessons learned during training sessions at annual safety meeting.

Our company:

1. Communicated with all VM contractors how employees have an opportunity to practice tree felling to ensure the skill is thoroughly mastered.
2. Communicated the expectation that activities should be clearly outlined by risk levels (higher and lower), noting what type of experience is necessary and when supervision is required.
3. Used the annual safety meeting event to encourage employees to reach out or speak up if they are feeling time pressure and reinforce the company’s commitment to their safety.

Extent of Condition

Our company union safety liaison increased tree-felling observations across the footprint, which has helped focus company safety messaging. The VM contractor involved in the event found opportunities for improvement within its processes and procedures as a result of the event. The incident is being shared with all VM contractors on the company footprint, so they can review for any improvements with their current policies.