

Incident Review: Uncontrolled Movement of Train 116-01, while being assisted by Train 199-30

Date: January 2nd, 2007

Time: 1040K MST

Location: Mile 73.2 to Mile 69.9 Mountain Sub

Overview of Incident:

Train 116-01, consisted of 3 locomotives (2 + 1) the CP 9837, CP 9119 and tail end remote CP 8622, 66 loads, 2 empties, an EGT of 5563 and train length of 6638 feet. Previous to this incident, the locomotive engineer of Train 116-01 had made a conscious effort to condition the brakes at Albert Canyon and was subsequently stopped at that location for an hour and a half. The train continued on the Connaught Track until it stalled approximately 15 car lengths east of the west switch at Glacier, on an ascending mountain grade. The weather conditions at the time of the incident did contribute to the stalling of Train 116-01 as it ascended the grade from Albert Canyon to Glacier. There was heavy snow and the visibility was limited.

As there were no other trains in the vicinity, it was decided that Train 199-30, would cut off its train at Fraine, and be brought over the Connaught Track with its 2 locomotives for the purpose of tying on to the head end of Train 116-01 and assisting to pull the stalled train up and over the heavy mountain grade.

Upon the arrival of Train 199-30's power, the two train crews had a job briefing, and they discussed the following:

- 1) When tying on, not to cut the air into the train between the two locomotive consists due to the fact that 3 point protection could not be afforded as a result of holding the train on the grade with the throttle open;

- 2) Use caution when lifting the train to avoid breaking a knuckle and having the train run back down the grade;
- 3) Keeping the assisting locomotives on the train right through to Fraine;
- 4) The assisting locomotives could use DB to assist if required; and,
- 5) Conditioning of the train brakes while going through the Connaught Tunnel.

Upon lifting the train, the two locomotive engineers kept in communication with each other via the radio. Prior to descending the heavy grade, a minimum brake application was made and the speed of the train dropped to 17.7 mph (16.4 mph on CP 8815) over the Stoney Creek bridge.

As the train continued down the heavy grade the maximum permissible speed of 25 mph for the train was reached, and as the speed of the train continued to rise, additional supplemental brake applications were made in attempts to slow the train down. Also, the Dynamic Brake on the train was applied to full DB at a speed of 28.8 mph. A third additional supplemental brake application was made, and the train had slowed down to a speed of 26.7 mph, however the speed of the train started to again pickup. The speed of the train increased to 32.0 mph. As the train continued down then a 4th supplemental brake application was made. The speed then dropped to 29.0 mph, however as the train continued on, the speed continued to rise while in full DB with a 20 lb brake into the train. Two additional supplemental brake applications were made, bringing the brake application to full service. As the speed continued to rise over 30 mph, the train was placed into emergency at 30.1 mph. The train continued to pick up speed as it descended the grade, reaching a speed of 36.1 mph over a 20 mph curve. The highest speed reached by the train while in emergency was 38.2 mph. The train took 3.37 miles, or 17,830 feet to stop once it was placed into emergency. Once the DB on the assisting locomotives was placed on line, almost immediately the speed of the train start to slow down, and the train stopped within a mile of the location where the DB became enabled. Once the train was stopped, it was secured with handbrakes, and the locomotives were brought down to Fraine where the crews were relieved. While the train was being secured, the snow around the train was

almost waist deep, and it was noted that the truck sides and braking components on the train were heavily coated with snow and ice.

Communication to RTE's:

A Footboard Safety Meeting commenced on January 6th, 2007 and ran for a period of 10 days. The purpose of this meeting was to discuss the following train handling practices:

- Assisting Locomotives
- Conditioning Brake Shoes
- Operating Down Heavy Grades



BCI-ISA-007-07
Foot Board Safe...

Additionally, the following bulletins have been issued to RTE's pertaining to operating locomotives in winter conditions:



BCO-ISA-021-07
Assisting Locom...



BCO-ISA-020-07
Fuel Conservati...

Upcoming Events:

A full ISROP investigation will take place with all the employees involved in this incident, as well as H&S Reps, Local Chairperson(s), Field Safety Advisor and a Field Specialist Investigator focusing on human factors. Once this separate investigation is completed, the findings will be thoroughly communicated to all employees.