

1 National Transportation Safety Board

2 Office of Railroad, Pipeline and Hazardous Materials

3 Washington, DC 20594

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**TRACK**

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Group Chair's Factual Report

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August 25, 2023

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## **A. ACCIDENT**

Location: Elliston, Virginia  
Date: July 6, 2023  
Time: 7:42 p.m. (EDT)  
11:42 p.m. (UTC)  
Train: 814V404

## **B. TRACKGROUP**

Group Chair                      Darius Mack  
National Transportation Safety Board  
Washington, DC

Group Member                  Robert Gordon  
National Transportation Safety Board  
Washington, DC

## **C. SUMMARY**

On July 6, 2023, at approximately 7:42 p.m. local time, eastbound Norfolk Southern Railway (NS) unit coal train 814V404 derailed 19 loaded gondola cars on a single main track of the NS Blue Ridge Division's Whitethorne District at milepost 263.6 near Elliston, Virginia. The derailed equipment remained upright and did not separate from other railcars in the train. There were no injuries, fatalities, fires, or release of coal. NS estimated damages to equipment and track infrastructure to be \$288,360. Visibility conditions at the time of the derailment were daylight and clear, and the temperature was 82°F with no precipitation.

## **D. TRACK DESCRIPTION**

The Whitethorne District extends 28.07 miles between milepost V279 in Blacksburg, VA to milepost V250.3 in Salem, VA. This segment is single main track and is designated as FRA class 3 track with a maximum authorized speed of 40 m.p.h. There are two passing sidings on this segment; North Fork (V270.6) to Fagg (V268.7) and Riverside (V259.8) to Kumis (V261.7). North Fork to Fagg Siding has a length of 9,169 ft and Kumis to Riverside Siding has a length of 9,292 ft.

The nearest hot bearing detector is located at Yellow Sulfur (milepost 276.3) which is 12.7 miles west of the point of derailment (milepost V263.6). There is one passing siding between North Fork (V270.6) and Fagg (V268.7) and one switch to a stub track at Ironto at the V265.9. Leading up to the POD, the train traversed 31 curves. The curve west of the POD between V263.7 and V263.8, is a 0.6-degree right-hand curve with 1 inch superelevation. The next curve west of the POD is between V264.2 and V263.3 and is a 1.8-degree right-hand curve with 1.5 inches of superelevation. The track grade leading into the POD was a slight descending grade between 0.34-0.68 %. The track consisted of wood crossties, double-shoulder tie plates and 136 lb rail (Bethlehem Steel, 1998). On average five trains operate daily over the Whitethorne District. The annual million gross tonnage is 26.45. This is not a passenger train route.

This segment of track is owned by the Virginia Passenger Rail Authority (VPRA) and is operated by Norfolk Southern. In 2019, the Commonwealth of Virginia and CSX Transportation entered an agreement in which the state of Virginia acquired 384 miles of CSXT right-of-way and 223 miles of track. In 2020, the Virginia General Assembly created the VPRA and acquired an additional 28.5 miles of track from Norfolk Southern to expand passenger rail service within the state of Virginia. NS retained operating authority and maintenance responsibilities of this segment of track on which the derailment occurred.

## **E. POINT OF DERAILMENT**

The point of derailment (POD) was determined to be located at M.P. 263.6. FRA identified the wheel marks on the north rail where the first wheel left the rail. NTSB investigators arrived on scene after the clean up and clearing operation had started. NTSB and NS personell verified the previously identified POD.



Figure 1. Photo of the point of derailment site. (source: NTSB)

## **F. NS TRACK INSPECTIONS/TESTING OF TRACK**

FRA regulations require that this track be inspected twice weekly with at least one calendar day interval between inspections. The last track inspection prior to the accident was conducted on July 4, 2023. This inspection recorded zero defective track conditions within the area of the derailment.

NS conducted two geometry car tests within 90 days of the derailment. NS-99 Track Geometry car tested the segment of track related to this accident, on April 11, 2023. This test recorded no track exceptions in the area of the derailment. An automated track geometry test was also conducted on June 21, 2023, and did not

record any defective track conditions in the derailment location. Data from these tests have been reviewed and no significant track surface deviations were identified.

#### **G. FRA POST-ACCIDENT INSPECTION**

On July 7, 2023, an FRA track inspector responded to the accident and conducted a post-accident inspection of the accident site. FRA recorded no defective track conditions at the point of derailment or within the limits of the inspection. Track measurements were taken by FRA at the determined point of derailment. The track gage at the POD, measured 56 3/8". The standard for track gage is 56 1/2" with a maximum gage of 57 3/4" for FRA Class 3 track.

Submitted by:

Darius Mack  
Railroad Accident Investigator