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| DEPARTMENT OF TRANSPORTATION FEDERAL RAILROAD ADMINISTRATION | |
| FALSE PROCEED SIGNAL REPORT (ALLEGED) | DATE: 07/23/03 |
| MAIL TO Mr. James Drake Signal & Train Control Specialist Federal Railroad Administration 901 Locust Street - Suite 464 Kansas City, MO 64106 <u>james.drake@fra.dot.gov</u> | REPORTING CARRIER (railroad & region or division) Burlington Northern Santa Fe Railway |
| | REPORTING OFFICER (signature/title) Assistant Vice President Signals |

A failure should not be counted more than one time in items 1, 2, 3, and 4; the failure should be classified under the basic system or appliance of which it forms an essential part. E.g.: assume grounds cause a block signal to indicate a false proceed causing corresponding indications of a cab signal system on each train approaching this point, such failure should be included in Item 1. Block System

A false proceed failure is a failure of a system device or appliance to indicate or function as intended which results in less restriction than intended.

- The following abbreviations may be used in the report
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|--------------------------------|-----------------------|
| A -Automatic | EM -Electromechanical |
| AB -Automatic block | EP -Electropneumatic |
| ACS -Automatic cab signal | FP -False proceed |
| APB -Absolute permissive block | MP -Manual block |
| ATC -Automatic train control | M -Mechanical |
| ATS -Automatic train stop | P -Pneumatic |
| CL -Color light | PL -Position light |
| CPL- Color position light | SA -Semiautomatic |
| E -Electric | TC -Traffic Control |

| TYPE OF SYSTEM | DATE | LOCOMOTIVE OR TRAIN NUMBER | DEVICE THAT FAILED | LOCATION (City and State) |
|--|---------|----------------------------|--------------------|---------------------------|
| 1 BLOCK SYSTEMS <input type="checkbox"/> AB <input type="checkbox"/> APB <input checked="" type="checkbox"/> TC | 7/13/03 | X GATRED9 13 | None | Somerville, Tx |
| 2 INTERLOCKING <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> AUTO MATIC | | | | |
| 3 AUTOMATIC SYSTEMS <input type="checkbox"/> ATS <input type="checkbox"/> ATC <input type="checkbox"/> ACS | | | | |
| 4 OTHER (specify) | | | | |

NATURE AND CAUSE OF FAILURE/CORRECTIVE ACTION TAKEN:

Alleged

As a northbound train was departing the yard at North Somerville Yard control point. A second northbound train, the X GATRED9-13 approached the control point on the mainline from the south. The northbound train on the mainline was to follow the northbound train departing the yard. The mainline train received a yellow aspect at the approach signal and a red aspect at the absolute NB mainline signal at North Somerville Yard control point. While stopped, and as the train departing the yard was occupying the OS track circuit, the engineer on the mainline train glanced up at the absolute NB mainline signal and noticed that it appeared to be displaying a yellow aspect. The engineer reported the occurrence to the dispatching center, however, did not take the signal.

Signal and Operating Department personnel were dispatched to investigate and determined that the signal system was working as intended. It was found that light colored rock (white marble/limestone), recently spread on an access road adjacent to the absolute NB mainline signal, reflected sunlight into the H2 signal head causing the red aspect to appear yellow when viewed from the locomotive. The investigation team further verified the cause to be reflected sunlight when the aspect was observed red with the sun behind the clouds and yellow when the sun came out from behind the clouds.

The phantom signal was resolved by removing the white rock and replacing it with darker colored rock (absorbs, not reflects sunlight). In addition

(If more space is required continue on reverse)

FRA F6180-14