DEPARTMENT OF TRANSPORTATION
FEDERAL RAILROAD ADMINISTRATION

FALSE PROCEED SIGNAL REPORT

DATE 12/29/2003

MAIL TO

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REPORTING CARRIER (railroad & region or division)

Burlington Northern Santa Fe Railway

Burlington Northern Santa Fe Railroad Kansas Division LaJunta Subdivision

REPORTING OFFICER (signature/title)

Supv Signals BNSF RR

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

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 ☒ AB ☐ APB ☐ TC	Dec 29 2003	Y-HUT-1011-29	Signal Circuit Design	Hutchinson KS
2 INTERLOCKING ☐ ☐ ☐ AUTO MATIC				
3 AUTOMATIC SYSTEMS ☐ ATS ☐ ATC ☐ ACS				
4 OTHER (specify)				

NATURE AND CAUSE OF FAILURE/CORRECTIVE ACTION TAKEN

The local, working between Dodge City KS & Newton KS noticed Intermediate signal 2221 displayed a clear aspect while the track circuit was occupied. Upon report, the signal system between stations was removed from service and signal personel were dispatched to the area.. Signal personel confirmed this aspect and proceeded to test circuitry. During testing it was noted that although the track relay de-energized with a .06 shunt the signal still displayed proceed. Tests were then made to determine why this did not show up during in-service testing in 1996. It was determined that this was a center feed track circuit with the relay on the west end of the circuit containing a line break but the relay on the east end did not. The track circuit was walked and several broken bonds were discovered between the east track relay and the battery feed point. A shunt placed between east track relay and the battery feed point would deenergize only the east track relay. after replaceing the bonds a shunt anywhere in the circuit would de-energize both track relays in this circuit. After consulting the engineering office a break of the line circuits was installed in the west track relay at intermediate signal 2221 and test were made de-energizing either relay of this circuit would set the signals governing movement over this track circuit to stop. Root cause was an inproper design with the in-service testing procedure being inadequate to determine the design error.

(If more space is required continue on reverse)

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