DEPARTMENT OF TRANSPORTATION
FEDERAL RAILROAD ADMINISTRATION

FALSE PROCEED SIGNAL REPORT

DATE: 10/5/96

MAIL TO

Mr. Tom McFarlin
Signal & Train Control Specialist
Federal Railroad Administration
1100 Main Street, Suite 1130
Kansas City, MO 64105

REPORTING CARRIER (railroad & region or division)

Burlington Northern Santa Fe Railway
Pacific Division Bellingham Subdivision

REPORTING OFFICER (signature/title)

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 [X] TC	8/24/96	none involved	pso receiver	signal MP 48.6 near Silvana, WA
2 INTERLOCKING [ ] [ ] [ ] AUTOMATIC				
3 AUTOMATIC SYSTEMS [ ] ATS [ ] ATC [ ] ACS				
4 OTHER (specify)				

NATURE AND CAUSE OF FAILURE/CORRECTIVE ACTION TAKEN

Signal employees while performing signal test discovered that with switch at MP 49.8 in the open position the signal governing movement over the switch at MP 48.6 didn't display stop indication. Further investigation revealed that a PSO transmitter located 12,200' to the south was being coupled around the insulated joints by tunable joint couplers causing the receiver to remain energized. The PSO transmitter is the same frequency as the PSO used for the NWP circuit. The Switch at MP 49.8 was at the time spiked and clamped out of service due to the switch frog having been removed on August 28, 1996. On May 8th the signal maintainer had been called for a red signal at the signal governing movement over this switch and found a broken wire on the PSO transmitter used for the NWP circuit. The frequency of the PSO located south of the signal was changed to 1430 Hz. **ROOT CAUSE** -- The frequency of the PSO located 12,000' to the south had been changed 5 years ago from the original 1430 Hz to a 970 Hz due to a equipment failure. When the original equipment was repaired it was not reinstalled. With the dry conditions the PSO was coupled around the insulated joints causing the receiver to be energized. Under most conditions this was not happening as is demonstrated by the signal trouble in May of this year and the testing that was performed when the 970 Hz PSO was installed for the NWP circuit in March of '96.