

Agenda Date: March 12, 2004  
Item Number: B2 through B13

**Docket:** TR-030559, TR-030560, TR-030561, TR-030562, TR-040347,  
TR-040348, TR-040349, TR-040350, TR-040351, TR-040357,  
TR-040358, TR-040359

Company Name: Tacoma Rail

Staff: Mike Rowswell, Rail Safety Manager

**Recommendation:**

Issue Orders in Dockets TR-030559 through TR-030562, TR-040347 through TR-040351, and TR-040357 through TR-040359, granting Tacoma Rail's petitions for changes in traffic control procedures on conditions recommended by Staff with the exception of the request to flag crossings using vehicles. The latter request should be denied.

**Background:**

The dockets covered by this memorandum were either reopened or filed to implement lessons learned from an accident investigation. On June 2, 2003, a car traveling at 50 mph struck a Tacoma Rail freight train that was traveling through the Tilley Road crossing located in Thurston County. Although no one was seriously injured, the accident raised questions about traffic control procedures at the crossing. As those questions were explored, complaints and direct observations led Commission Staff to review traffic control procedures at eleven other crossings.

**Discussion:**

The crossing where the accident occurred only has flashing signals. The circuitry for the signals has deteriorated to the point where trains must stop within a short distance of the crossing to activate the signals. Federal Railroad Administration rules and Tacoma Rail orders require the crew to stop the train short of the crossing, ensure the signals are working and that all approaching traffic is stopped before proceeding through the crossing. The accident occurred after the crew failed to stop and wait for approaching traffic to stop. The signals worked and the approaching car had plenty of time to stop; however, the train would not have been occupying the crossing if the train crew had stopped and waited for the car to stop or go through the crossing. Thus, the accident would not have occurred if the stated procedures had been followed. Despite the failures of the rail crew, it was unclear whether enforceable rules had been violated.

The failure to abide by standard procedures does not appear to be an isolated incident. At each of eleven other crossings, Tacoma Rail must flag traffic to a stop before using the crossing, or voluntarily does so. Commission Staff have observed at least one other incident in which flagging procedures were not followed properly. Several unverified complaints along similar lines have also been received. In some of these situations, it was clear that there was no enforcement mechanism to correct a potentially dangerous practice.

A review of pertinent orders and flagging procedures revealed the following:

1. Procedures at different crossings were not consistent with one another.
2. Requirements in orders were not consistent with requirements in other orders affecting different crossings.
3. Orders on State Routes 161 and 7 entered in the early 1980's contained expensive and unnecessary procedures. Specifically, the orders required two flaggers, which is no longer a standard industry practice nor a practice required by any federal or state rules.

It is important to have standard flagging practices. Railroad crews need constant procedures so that they are easily remembered and followed. The public also needs to be presented with consistent procedures so that the appropriate action can be determined easily. The railroad needs to be treated fairly with modern, economical practices.

The following are the standard flagging practices recommended at all crossings where stop and protect requirements are in place and when signals fail to activate at a crossing where a stop and proceed requirement is in place:

1. Each train must stop before entering the crossing to permit a railroad employee to flag highway traffic to a stop. The train may proceed through the crossing only when the flagger determines that it is safe to do so.
2. Flaggers shall communicate with the train crew by radio or cell phone.
3. A flagger shall wear a hard hat and reflective vest or other reflective outerwear.
4. Flaggers shall use STOP/STOP paddles to flag traffic. Fuses shall be placed on both sides of the crossing at night or during conditions of poor visibility.
5. If a uniformed police officer flags the crossing, trains need not stop; however, train crews must confirm that prior arrangements have been made with a police officer to flag the crossing and that he or she is present at the crossing.

It is recommended that all crossings except Tilley Road (TR-040347) have a stop and protect requirement. This means that trains must come to a full stop, and a flagger must flag traffic to a stop before the train may continue its move through the crossing. Tilley Road is the only crossing that has active warning devices. As a result, a stop and protect order and flagging procedures are not needed if the signals work. However, because of the deterioration of the circuitry at the crossing, a stop and proceed requirement is appropriate. This means that the train must stop, ensure that the signals are working, and that all approaching traffic clears the crossing or stops before continuing its move through the crossing. If the signals fail to activate, the flagging procedures required at other crossings should also be used at Tilley Road. The following recommended provision for that crossing details a "stop and proceed" procedure:

Each train must stop before entering the crossing. The train may proceed through the crossing only after the crew ensures that the flashing lights are working and all approaching traffic has stopped. If the flashing lights are not working, a railroad employee shall flag highway traffic to a stop. The train may proceed through the crossing only when the flagger determines that it is safe to do so.

It is important for all train crews to be reminded of flagging requirements on an ongoing basis. To that end, it is recommended that the following procedures be required:

1. Tacoma Rail must issue instructions or orders to all train crews using the crossing, stating that the active warning devices at the crossing are not in service and that a “stop and protect” order is in effect.
2. The railroad shall develop a report that details the procedures for the crossing. The reports shall be maintained in each locomotive that operates over the crossing.
3. Job briefings shall include the proper flagging procedure for the crossing if the train will cross it. An operations supervisor will also review the applicable bulletin and general order with the crew during the briefing and document the review.

Train traffic over the crossings is sporadic. It is difficult for Staff to inspect for compliance with flagging procedures unless they are informed of when train moves are likely to be made. Staff recommends that the following requirement be imposed:

Tacoma Rail shall notify Commission Staff each day whether trains operated by any railroad will run across each crossing. The requirement may be fulfilled by Tacoma Rail informing Staff of all areas trains will operate on the Mountain Division during a particular day. Notification shall include whether a train move will occur during nighttime hours.

It is important for the railroad to be clear about what the Commission approves if the recommendations are adopted. General Orders and Bulletins issued by Tacoma Rail can include subjects in addition to those included in the flagging procedures. To ensure clarity, Staff recommends that the following provision be included:

Tacoma Rail General Orders and Bulletins affected by the order are not approved except to the extent that they comply with the order.

Another possible source of confusion lies in the requirements in Federal rules for certain actions to be followed at crossings where potential signal malfunctions are known. In order to eliminate any potential confusion, the following provision is recommended:

Nothing in the order eliminates the requirements of 49 CFR 234 regarding known rusty rail problems.

Nighttime moves can be more dangerous than daytime moves where lighting is poor. Each of the crossings in Centralia has overhead illumination. Additionally, the requirement that flaggers use fusees at night significantly reduces the problem. At other crossings that do not have overhead illumination, the use of fusees and the reflective clothing of flaggers are sufficient to eliminate the danger. Nighttime moves should be allowed.

Tacoma Rail requested that flaggers be allowed to flag from inside vehicles. This is not a standard practice in the industry. Also, Washington State Department of Transportation officials informed Commission Staff that it is not a practice approved for use by DOT personnel and has not been analyzed for effectiveness or safety. Accordingly, Staff recommends that this request be denied.

**Recommendation:**

Issue orders that will require consistent and efficient flagging procedures by approving the requested changes to existing flagging requirements, and establishing flagging procedures at crossings where requirements are not currently imposed. The orders should also impose reporting, job briefing and other requirements to ensure consistent and proper use of the procedures, to provide Staff with the information to ensure compliance, and to eliminate possible sources of confusion. Approve the request to allow nighttime moves. Deny the request to allow railroad employees to flag traffic from inside vehicles.