

**EMERGENCY ORDER
No. 22**

**DEPARTMENT OF TRANSPORTATION
Federal Railroad Administration**

**[FRA Emergency Order No. 22,
Notice No. 1]**

Oregon Pacific Railroad;

**Emergency Order to Prevent
Operation of Trains on the Railroad Bridge
Crossing Johnson Creek in the City of Milwaukie, Oregon**

The Federal Railroad Administration (FRA) of the United States Department of Transportation (DOT) has determined that public safety compels issuance of this Emergency Order requiring the Oregon Pacific Railroad Company (OPR) to discontinue operation of trains or any railroad on-track equipment on a railroad bridge it owns spanning Johnson Creek (hereinafter designated as the "Johnson Creek Bridge") in the City of Milwaukie, Oregon. The bridge shall remain out of service until it has been properly repaired and its capacity determined by a registered professional engineer licensed to practice in the State of Oregon and who is technically proficient in the field of timber railroad bridge engineering.

Authority

Authority to enforce Federal railroad safety laws has been delegated by the Secretary of Transportation to the Federal Railroad Administrator. 49 CFR Sec. 1.49. Railroads are subject to FRA's safety jurisdiction under the Federal railroad safety laws, 49 U.S.C. Secs. 20101, 20103.

FRA is authorized to issue emergency orders where an unsafe condition or practice "causes an emergency situation involving a hazard of death or personal injury." 49 U.S.C. Sec. 20104. These orders may impose such "restrictions and prohibitions. . .that may be necessary to abate the situation." (Ibid.)

Background

The Oregon Pacific Railroad Company, a common carrier, is a part of the general railroad system of transportation and operates two principal segments of track. The segment in which the Johnson Creek Bridge is located consists of 4.28 miles of main track and 2.11 miles of secondary or yard trackage, or a total trackage of 6.39 miles, extending from milepost 0.26 (at its connection with Union Pacific Railroad Company's Portland-Eugene mainline at UP MP 769) at or near East Portland, Oregon, to milepost 4.54 at Milwaukie, all of which is located in Clackamas County, Oregon. The Oregon Pacific Railroad acquired this segment from East Portland Traction Company on January 1, 1997, and commenced railroad operation on that date.

The other segment of railroad operated by the Oregon Pacific Railroad is not contiguous with the first. It extends 9.93 miles from Canby to Molalla, Oregon, and includes a total of 11.38 miles of trackage. The Oregon Pacific Railroad likewise commenced railroad operations on that segment on January 1, 1997.

The President, Chief Executive Officer and General Manager of the Oregon Pacific Railroad is Mr. Richard A. Samuels, whose office mailing address is Oregon Pacific Railroad Company, P. O. Box 22548, Portland, Oregon 97269. Mr. Samuels is also the principal stockholder of the company.

The Oregon Pacific Railroad crosses Johnson Creek in Milwaukie, Oregon, on a timber

trestle bridge not identified by number and located approximately one-half mile upstream from the point where Johnson Creek empties into the Willamette River. The location is also approximately 300 feet west of S.E. McLoughlin Boulevard (Oregon State Highway 99E) between its intersections with S.E. Harrison Street and S.E. Jackson Street. Geographic coordinates are 45°26'41" North latitude and 122°38'38" West longitude. There is no commercial water traffic on Johnson Creek.

The Oregon Pacific Railroad crosses the bridge to serve one shipper, AmeriCold Logistics, located south of the bridge. AmeriCold Logistics transports frozen food products in mechanical refrigerator cars at a rate of about two cars per week, typically hauled in one train. Each refrigerator car has a gross weight of 220,000 pounds. The Oregon Pacific Railroad uses a small locomotive whose weight is undetermined.

Condition of the bridge

The bridge is 127 feet long and consists of a nine-span open-deck timber trestle carrying a single track in a twelve-degree curve to the west. For reference in this emergency order and other documents relating to this emergency order, the bridge components are numbered from north to south and from east to west, with the north dump bent or abutment numbered as 0.

Intermediate bents one through seven nominally consist of four driven timber piles. Bent 8 is framed on a mud sill. Caps measure 14 inches by 14 inches by 12 feet on bents 1 through 5, and bent 8. Caps in bents 6 and 7 are 14 inches by 13 inches by 12 feet, with the large side horizontal. Each span has eight stringers, with four stringers essentially centered under each rail, 8 inches by 18 inches by 32 feet, with stringer joints alternating between bents. The clear space under the bridge is approximately six feet above the water level of the stream.

Track ties of 7 inches by 9 inches by 9 feet rest directly on top of the stringers, and support in turn tie plates and the two running rails, 75 pounds per yard, one 75-pound-per-yard guard rail connected to the west running rail, and two 55-pound-per-yard inner guard rails. The track is of conventional bolted rail construction.

Bent 5 is missing piles 1 and 2, and is supported by only piles 3 and 4, both under its west side. An outrigger beam has been placed under span 5, under the stringers and directly against the north face of the cap of bent 5. This beam consists of several timbers, 8 inches by 16 inches in cross section, placed vertically. These timbers are packed in four plies. Plies 1 and 3 each consist of two 16-foot timbers butt joined at the center of the beam. Plies 2 and 4 each consist of one 30-foot timber and one 2-foot timber, butt joined two feet from the west end of the beam, nearest the bridge. The beam is oriented with its individual plies placed on their short edges.

The outrigger beam is supported on its east end by a track tie resting on the ground on the south bank of Johnson Creek where the creek makes a sharp bend to the north on the east side of the bridge. The outrigger beam is supported on its west end by a 3/8-inch diameter chain wrapped once around two track ties. Wooden blocks and wedges are placed between the bottoms of the stringers and the top of the outrigger beam. The east, or "free" end of the cap of bent 5 has settled approximately five inches from the bottoms of stringers 1 through 4.

Stringer 1 over spans 5 and 6 has essentially failed, with a deep shear crack near its neutral axis for its full length. The cap of bent 6 is demonstrating severe crushing over piles 3 and 4. The bridge shows signs of heavy vertical deflection under load on the east side.

On December 1, 1999, a track safety inspector and a bridge inspector from the Oregon Department of Transportation (ODOT), and a track safety specialist from FRA inspected the

bridge. On December 2, 1999, they advised Mr. Samuels of the unsafe condition of the bridge. Mr. Samuels verbally agreed to immediately remove the bridge from service until it could be properly repaired. This discussion and agreement were memorialized in a letter dated December 6, 1999, to Mr. Samuels from FRA's regional administrator for Region 8, Dick L. Clairmont. Subsequent investigation by FRA has revealed, however, that the Oregon Pacific Railroad did not take the bridge out of service, but instead placed more blocking and wedges between the stringers and the top of the outrigger beam and continued to operate railroad rolling stock over the bridge.

The ODOT inspectors, along with an FRA inspector who has received specialized training in timber bridge inspection, then performed a more detailed measurement of the components of the bridge which are summarized in the paragraphs above. Using those measurements, FRA has determined that the Johnson Creek Bridge is in danger of imminent, catastrophic failure at any time that a railroad load passes over the bridge. The configuration of the outrigger beam arrangement overly stresses the stringers, caps, and piles of piers 4, 5 and 6 far beyond their normal capacity, and even the outrigger beam itself could fail at any time. Depending on the amount and direction of deflection of the bridge components, the 3/8-inch diameter chain which secures the west end of the outrigger beam also may become stressed far beyond its ultimate capacity. Merely replacing or reinforcing the chain would not correct the unstable condition created by the lack of piles 1 and 2 in bent 5.

Failure of the bridge under load could have very serious consequences. The bridge failure could cause the train to fall into Johnson Creek, killing or injuring any railroad crew members operating rolling stock, killing or injuring any innocent bystanders using Johnson Creek or its

banks, and possibly blocking the creek resulting in widespread flooding in the immediate area. Locomotive diesel fuel and/or fuel and contents of a mechanical refrigerator car could cause severe environmental damage to Johnson Creek and the nearby Willamette River.

Finding and Order

FRA has concluded that any future railroad use of the Johnson Creek Bridge on the Oregon Pacific Railroad poses an imminent and unacceptable threat to public and employee safety. The past failure of the Oregon Pacific Railroad to voluntarily remove the bridge from service and perform proper repairs persuades FRA that the agency cannot rely upon the cooperation of the railroad to protect public safety in relation to the Johnson Creek Bridge. I find that these unsafe conditions create an emergency situation involving a hazard of death or injury to persons.

Accordingly, pursuant to the authority of 49 U.S.C. Sec. 20104 delegated to me by the Secretary of Transportation (49 CFR Sec. 1.49), it is ordered that the Oregon Pacific Railroad Company shall discontinue, and shall not permit, the operation of trains or any railroad on-track equipment over the Johnson Creek Bridge while this Emergency Order remains in effect.

Relief

The Oregon Pacific Railroad Company may obtain relief from this Emergency Order by providing the Federal Railroad Administrator with a report of inspection and evaluation of repairs, indicating to FRA's satisfaction that the Johnson Creek Bridge has been acceptably repaired. The report shall be prepared and sealed by a registered professional engineer who is licensed to practice in the State of Oregon and is technically proficient in the field of timber railroad bridge engineering. The report shall state that the capacity of the bridge to carry safely

railroad cars and locomotives has been restored. The configuration and weights of the loads for which the determination has been made shall be stated in the report, together with all calculations upon which that determination is based. The original of the engineer's report, bearing the embossed imprint of the seal of the engineer, shall be provided to the regional administrator of FRA's Region 8 before the report will be considered by FRA. Upon FRA's approval of the engineer's assessment of the bridge restoration, and following an inspection by FRA in which the agency finds the bridge properly repaired to safe condition, the Administrator will rescind this Emergency Order.

Penalties

Any violation of this order shall subject the person committing the violation to a civil penalty of up to \$22,000. 49 U.S.C. Sec. 21301. FRA may, through the Attorney General, also seek injunctive relief to enforce this order. 49 U.S.C. Sec. 20112.

Effective Date and Notice to Affected Persons

This Emergency Order shall take effect at 12:01 a.m. (PST) on December 17, 1999 and apply to all operations of trains or railroad on-track equipment on the Johnson Creek Bridge on or after that time. Notice of this Emergency Order will be provided by publishing it in the Federal Register. Copies of this Emergency Order will be sent by mail or facsimile prior to publication to Mr. Richard A. Samuels, President, Chief Executive Officer and General Manager, Oregon Pacific Railroad Company, P. O. Box 22548, Portland, Oregon 97269; the Union Pacific Railroad Company; the City of Milwaukie, Oregon; AmeriCold Logistics; Oregon Department of Transportation; the Association of American Railroads; and the American Short Line and Regional Railroad Association

Review

Opportunity for formal review of this Emergency Order will be provided in accordance with 49 U.S.C. Sec. 20104(b) and section 554 of Title 5 of the United States Code.

Administrative procedures governing such review are found at 49 CFR part 211. See 49 CFR Secs. 211.47, 211.71, 211.73, 211.75, and 211.77.

Issued in Washington, D.C. on December 16, 1999

A handwritten signature in black ink that reads "Jolene M. Molitoris". The signature is written in a cursive style with a large, stylized initial "J".

Jolene M. Molitoris,
Administrator.