

THE FEVR FLASH

A PUBLICATION OF THE NEBRASKA RAILROAD MUSEUM

1835 N. SOMERS, FREMONT, NE 68025, AUGUST, 2013

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BACK ISSUES:

Back issues of the FLASH and links to numerous railroad related sites may be viewed at www.FremontRailroad.com.

BOARD OF DIRECTORS:

(Note: the following is not the official meeting report. Only the approved meeting minutes sent to NRM members is the official report.)

The NRM Board of Directors met at the NRM Depot in Fremont on August 7, 2013, for the regular monthly meeting and again at the same location on August 17 to address new business needing expedited attention. Executive Director **Wallen** participated by speaker phone at both meetings. Treasurer **Angermund** was present at the August 7 meeting with one director absent because of illness. All Directors were present at the August 17 meeting. There were no guests at either meeting.

Topics on the **agendas** for one or both meetings and the resolutions thereof included:

1- Locks at both the Fremont Depot and at the Hooper Facility will be **changed** and the distribution of keys for them will be very limited.

2- The NRM office connection to the **Internet** will be followed up to completion.

3- The Jackson track ballast tamper currently located in Hooper will be **disposed** of as surplus property.

4- As mentioned in the July FLASH, a crew from Railroad Materials Salvage (a company of Mike **Williams**, the owner of the former FEVR track) mowed the line to Hooper in late July. There has apparently been no further **activity** on the track since.

5- It was decided not to pursue the **return** of the Hooper property at this time.

6- The liability insurance carrier will be changed to one specializing in the type of insurance needed by NRM. There will be a substantial saving in premium costs.

7- Executive Director **Wallen** reported on a conversation with Mike **Williams**, owner of the right-of-way, track, and locomotives. Mr. Williams told

of **pressure** from BNSF to remove the diamond where the former FEVR line crosses the BNSF track. *(Editor: Apparently that removal will provide a substantial cost reduction for the installation of Positive Train Control (PTC) which BNSF has in progress.)*

Mr. **Williams** suggested NRM excursion operations from Hooper. However, this would not be **acceptable** to NRM because of the remote location and condition of track and bridges. NRM would find operation up to the diamond from Fremont a more acceptable solution.

8- Because of liability issues, the **responsibility** of maintenance of the signal systems along the track has been given over to Williams. NRM member Mel **Cunningham** was recognized for having had that responsibility for over 25 years with exceptional performance.

QUEBEC TRAIN ACCIDENT:

The consequences of the derailment of oil carrying tank cars in Lac-Mégantic, Quebec, July 6, continue to unfold. Numerous lawsuits on behalf of casualties have been filed, undoubtedly bringing the Montreal, Maine, and Atlantic short line into bankruptcy. Operating rules for trains carrying hazardous materials will change and future tank car construction will be affected.

(See the July FLASH, various posts on the Internet, and extensive detailed coverage in the October issue of TRAINS magazine.)

RR HISTORY - THE BIG BLOWS:

This was the everyday term applied to several generations of gas turbine powered electric drive (**GTEL**) locomotives used by the Union Pacific in the 1960's time frame. The descriptive term arose from the sound they produced. Trackside people said that the sound of their horns was most welcome during a thunderstorm – verifying that it was a “big blow” – not an approaching tornado!

Turbine power units have been in wide use since the beginning of the last century. They all operate upon the principle of the **reaction** upon the blades of a rotating member from a flow of a gas (steam or combustion gases) or a liquid (water). Many new autos use them today as part of a turbocharger to obtain greater engine output. Diesel applications have used turbochargers routinely.

Turbines are used widely in steam and water power **electric** generation. But

very large diesel engines are replacing steam turbines in ship propulsion. A turbine drives the “fan” in “fanjet” aircraft engines.

Turbines have some common **characteristics**: They are most efficient at full load capacity, but much less so at part load. They have high rotation speeds. An experimental Chrysler car in 1963 was powered by a turbine that had an idle speed of **23,000 rpm!** This makes turbine power sensitive to mechanical shock. With proper design, they can use almost any combustible fuel, but certain types of emission problems arise.

They are built to run with only one **rotation** direction whereas piston based engines can be modified fairly easily to rotate in either direction. Large marine two stroke diesels are connected directly by shafts to propellers and are routinely reversed to change propulsion direction.

In addition to the “big blows”, which were quite successful, Union Pacific had other experimental **turbine** driven locomotives, all with electric drive. Two in the late 1930's used steam boilers and steam turbine driven generators. Another in the 1960's used finely pulverized coal which was burned and the combustion gases fed directly into a turbine. This was not very successful as the ash eroded the turbine blades quickly.

The “big blows” third generation units had a rating of **8,500** horsepower. But as railroads turned toward lower horsepower motive power (diesels of 4000+ hp), preferring to provide only enough power to move a train and adding more power units if needed, the turbine era ended. The horsepower trend, along with the unique turbine maintenance needs, hastened the demise.

Some other US railroads made limited experiments with turbines and there was some use in other countries. Since turbines operated with steam condensers, they adapted well to arid areas where water was scarce. Some installations used a **mechanical** connection to the drive wheels, but these maximized the problems of irreversibility and poor part throttle performance.

There is more information on railroad turbines on the Internet (*Wikipedia for this article*) and in an out-of-print book - *Turbines Westward* – available at used book dealers.