Transmittal

То	Amy Pederson	Page 1
CC	Aaron Silver	
Subject	Analysis of BP Train Traffic at Custer Spur	
From	Mark Sisson	
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The memo summarizes the potential impact of adding an additional train per day to the Custer Spur. The Custer Spur connects the main BNSF rail network to the BP refinery and other industrial sites near Cherry Point, WA. Figure 1 below shows the location of the project site. Note the location of Interstate 5 in the upper right corner.



Figure 1
Image of Custer Spur Location

AECOM

BNSF now runs one manifest train per day serving BP and other terminals which lie between BP and the dead end of the spur. These trains range from approximately one-half mile to one mile in length and travel at 10mph when loaded and 25mph when empty. The trains arrive with empty cars to be loaded at the BP refinery, as well as cargo loaded rail cars that are emptied at BP. BP is proposing to add one additional unit train per day. AECOM has analyzed the potential interference between the two trains (existing and proposed) and found it to be minimal.

Trains must travel approximately six miles on the Custer Spur between the BP mainline near I-5. The BP facility is located approximately six miles away from the intersection of the spur and the double track mainline. A loaded train will take approximately 42 minutes to travel that distance and clear the spur by pulling off into a dedicated storage track at the BP facility. An empty train will take approximately 17 minutes to depart from BP and travel the six miles to the double track mainline.

With a total of two trains per day, the potential for conflict could arise if one train is ready to depart and there is an incoming train occupying the single track spur. In this unlikely scenario, the empty train would not be released to depart if the arriving train is on the spur, or if the arriving train is expected to reach the spur before the empty train will clear the spur in the eastbound direction. This means that in each 24 hour period, there is approximately one hour that would be unavailable for train departures from the BP Cherry Point Refinery.

If train departures were not controlled, there would be approximately a 1/24 or 4.2% chance of a conflict. However, this is not the case. Train departures would be coordinated by BP and BNSF staff. As a result, AECOM assumes that the movement of the two trains can be coordinated to effectively avoid any conflict between trains on the Custer Spur. Therefore, with proper co-ordination, the existing Custer Spur infrastructure would be able to handle two trains per day.

As discussed above, train movement would also be coordinated by BP and BNSF to minimize potential vehicular traffic impacts. Therefore, trains would also be scheduled to avoid the AM and PM peak traffic hours.