

November 15, 2019

Mr. Mark Lutz
AVP Fuel and Environmental Management
Union Pacific Railroad
1400 Douglas Street, STOP 1030
Omaha, Nebraska 68179

Dear Mr. Lutz:

The California Air Resources Board (CARB) received Union Pacific Railroad's (UP) 2018 Fleet Average Agreement Annual Compliance Report (Compliance Report) pursuant to Section IV.B. of the 1998 Memorandum of Mutual Understanding and Agreements, South Coast Locomotive Fleet Average Emissions Program (1998 Agreement). CARB staff determined that UP complied with provisions of the 1998 Agreement for its operations.

In 2018, UP reported an increase in the level of locomotive activity in the South Coast Air Basin, with a corresponding increase in average oxides of nitrogen (NO_x) emissions. Based on the reported data, the NO_x increase is due to a greater utilization of Tier 1 locomotives, and decreases in usage of Tier 2 and Tier 3 locomotives. We are concerned about the reliance on older, dirtier locomotives to meet growth in demand. This highlights the need for a new strategy to address interstate line-haul locomotive emissions across the State.

CARB staff are developing concepts to address the impact of harmful emissions from locomotives and railyard activity. These concepts could be implemented at the State and/or the Air District level, and provide an opportunity for the railroads to better address regional pollution for rail operations and long-standing environmental justice concerns with communities near railyards. CARB's first public workshop to discuss these concepts will be held November 20, 2019 in Los Angeles. For more details, visit our website at <https://ww2.arb.ca.gov/our-work/programs/reducing-rail-emissions-california/locomotives-and-railyards-meetings-workshops>.

Starting in calendar year 2010, the 1998 Agreement requires that UP have an annual locomotive final fleet average of 5.5 grams per brake horsepower per hour (g/bhp-hr) for NO_x for locomotive operations in the South Coast Air Basin. Additionally, the 1998 Agreement allows UP to use accumulated fleet average credits, including credits accrued from the use of ultra-low emitting locomotives (ULEL) in the South Coast Air Basin, in order to meet the locomotive final fleet average.

Compliance Evaluation

UP's Compliance Report included the following:

1. UP's letter of certification: This letter is signed by the railroad and certifies that the information in this report is true, accurate and complete.
2. UP's fleet summary information: This is information regarding the methodology used by the railroad to comply with the 1998 Agreement (Form F-S).
3. UP's fleet average calculation: This information includes individual locomotive megawatt-hours and emission levels, as well as calculations and any necessary adjustments (Form F A-1 through Form F-A-6).

Staff reviewed UP's submittal of its Compliance Report, which included activity information (in megawatt-hours) and emission levels for over 7,100 individual locomotives in 2018. CARB staff determined that, for calendar year 2018, UP's final fleet average of 6.3 g/bhp-hr meets the required NO_x compliance level set forth in the 1998 Agreement, after the application of credits.

For 2018, UP applied 0.8 g/bhp-hr of ULEL credit to its initial fleet average. Therefore, after the adjustment, we find that the final fleet average for 2018 meets the required 5.5 g/bhp-hr NO_x compliance level set forth in the 1998 Agreement.

CARB will make all of the submitted MOU information publicly available except for individual locomotive activity levels, which are business confidential according to California Government Code Section 6254.7. The activity data will be aggregated by tier and emission level.

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Should you have any questions or comments regarding UP's compliance with the 1998 Agreement, please contact Ajay Mangat, Manager, Freight Systems Section at (916) 324-2718 or ajay.mangat@arb.ca.gov or Jennifer Kozumplik, Air Pollution Specialist, Freight Systems Section, at (916) 322-6019 or jennifer.kozumplik@arb.ca.gov.

Sincerely,



Cari Anderson, Chief
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