

October 21, 2022

Ms. Trish Clary  
Senior Director Environmental Programs  
Union Pacific Railroad  
1400 Douglas Street, STOP 1030  
Omaha, Nebraska 68179  
[TRCLARY@up.com](mailto:TRCLARY@up.com)

Dear Ms. Clary,

The California Air Resources Board (CARB) received Union Pacific Railroad's (UPRR) 2021 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 UPRR complied with provisions of the 1998 Agreement for its operation in 2021.

Although UPRR's reported activity met the fleet average emissions standard in the South Coast Air Basin by utilizing ultra-low emitting locomotives (ULEL) credits, CARB continues to be concerned about the harmful diesel emissions from locomotives. The continued reliance on older technology for locomotive operations compared to other emission sources has been the driving force of the In-Use Locomotive Regulation (Proposed Regulation) CARB has presented over the last two years. The Proposed Regulation will address the impact of harmful emissions from locomotives and environmental justice concerns for communities. As a reminder, the Proposed Regulation includes a statewide reporting requirement, similar to the data submitted under this MOU Agreement, that is key to implementation. The reported information would be used to provide CARB and impacted communities with an accurate representation of locomotive activity and diesel emissions associated with the operation of locomotives throughout California. We would be happy to continue the conversation to help Union Pacific prepare for compliance with the reporting and recordkeeping requirement anticipated to begin in the 2023 timeframe.

### **Compliance Agreement under the 1998 MOU**

The 1998 Agreement requires that the annual locomotive final fleet average be under 5.5 grams per brake horsepower-hour (g/bhp-hr.) for oxides of nitrogen (NOx) for locomotive operations in the South Coast Air Basin. The 1998 Agreement allows UPRR to use fleet average credits, including credits procured from the use of ULEL in the South Coast Air Basin, to meet the locomotive final fleet average standard.

## Compliance Evaluation: Calendar Year 2021

UPRR's Compliance Report included the following:

1. UPRR's letter of certification: This letter is signed by UPRR and certifies that the information in this report is true, accurate, and complete.
2. UPRR's fleet summary information: This is information regarding the methodology used by UPRR to comply with the 1998 Agreement (Form F-S).
3. UPRR'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 UPRR's submittal of its Compliance Report, which included activity information (in megawatt-hours) and emission levels for over 4,900 locomotives in 2021. CARB staff determined that for calendar year 2021, UPRR's final fleet average of 6.0 g/bhp-hr met the NOx compliance level set forth in the 1998 Agreement after adjustments were made by utilizing 0.5 of their ULEL credits, bringing the final fleet average to 5.5 g/bhp-hr. Thank you for the resubmittal of the fleet average calculation forms correcting the ULEL credit error.

CARB will make the 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.

Should you have any questions or comments, please contact Ajay Mangat, Manager, Freight Systems Section at [ajay.mangat@arb.ca.gov](mailto:ajay.mangat@arb.ca.gov) or Jaskamal Kaur, Air Pollution Specialist, Freight Systems Section at [jaskamal.kaur@arb.ca.gov](mailto:jaskamal.kaur@arb.ca.gov).

Sincerely,



Cari Anderson, Branch Chief, Freight Transport Branch, Transportation and Toxics Division

cc: Melissa Schop, Senior Manager of Environmental Programs, Union Pacific Railroad  
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