

March 22, 2021

Mr. Bob Toy, Senior Director Environmental Programs
Union Pacific Railroad
1400 Douglas Street, STOP 1030
Omaha, Nebraska 68179
BMTOY@up.com

Dear Mr. Toy:

Following Union Pacific Railroad's (UPRR) initial submittal of the Fleet Average Agreement Annual Compliance Report (Compliance Report) for the South Coast Locomotive Fleet Average Emissions Program (1998 Agreement), California Air Resources Board (CARB) staff sent a letter on April 29, 2020, notifying UPRR staff that the data appeared to be incomplete.

CARB staff have worked closely with UPRR throughout 2020, and on December 18, 2020, CARB received UPRR's updated CY 2018 and CY 2019 Compliance Reports. CARB staff have determined that UPRR complied with the fleet average requirement of the 1998 Agreement for its operations in CY 2018 and CY 2019.

Although UPRR's reported activity shows a slight improvement in overall fleet average emissions in the South Coast Air Basin, CARB continues to be concerned about the health effect of locomotive emissions. In recent years, CARB has noted the slow uptake of Tier 4 locomotives, and the practice of using older locomotives to meet demand. CARB is concerned about this persistent reliance on older, higher-polluting locomotives. This highlights the need for a new strategy to address line-haul locomotive emissions across the State.

As a reminder, CARB staff are developing a regulation to address the impact of harmful emissions from locomotives. This regulation will better address statewide pollution from locomotives and long-standing environmental justice concerns within communities near railyards.

Compliance Evaluation under the 1998 MOU

Starting in calendar year 2010, the 1998 Agreement requires that UPRR have an annual locomotive final fleet average of 5.5 grams per brake horsepower-hour (g/bhp-hr) for oxides of nitrogen (NO_x) for locomotive operations in the South Coast Air Basin. Additionally, the 1998 Agreement allows UPRR to use accumulated fleet

average credits, including credits accrued from the use of ultra-low emitting locomotives in the South Coast Air Basin, to meet the locomotive final fleet average.

Compliance Evaluation: Calendar Year 2018

UPRR's Compliance Report included the following:

1. UPRR'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. UPRR's fleet summary information: Information describing the methodology used by the railroad to comply with the 1998 Agreement (Form F-S).
3. UPRR's fleet average calculation: This 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 7,000 individual locomotives in 2018. CARB staff determined that, for calendar year 2018, UPRR's final fleet average of 6.3 g/bhp-hr, after adjustment with fleet average credits, meets the required NOx compliance level set forth in the 1998 Agreement.

Compliance Evaluation: Calendar Year 2019

UPRR's Compliance Report included the following:

1. UPRR'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. UPRR's fleet summary information: Information describing the methodology used by the railroad 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 6,000 individual locomotives in 2019. CARB staff determined that, for calendar year 2019, UPRR's final fleet average of 6.2 g/bhp-hr, after adjustment with fleet average credits, meets the required NOx compliance level set forth in the 1998 Agreement.

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.

Mr. Bob Toy
March 22, 2021
Page 3

Should you have any questions or comments, please contact Ajay Mangat, Manager, Freight Systems Section at ajay.mangat@arb.ca.gov or Jennifer Kozumplik, Air Pollution Specialist, Freight Systems Section at jennifer.kozumplik@arb.ca.gov.

Sincerely,

A handwritten signature in blue ink that reads "Cari Anderson". The signature is fluid and cursive, with the first name "Cari" and last name "Anderson" clearly legible.

Cari Anderson, Branch Chief, Transportation and Toxics Division

cc: Erica Montefusco, Senior Manager Environmental Programs Union Pacific Railroad
ericamontefusco@up.com

Joel Strafelda, General Director Environmental Management, Union Pacific Railroad
jrstrafe@up.com

Christopher Grundler, Office Director, U.S. Environmental Protection Agency
Grundler.Christopher@epa.gov

William Charmley, Division Director, U.S. Environmental Protection Agency
Charmley.William@epa.gov

Ajay Mangat, Air Resources Supervisor, Freight Transport Branch
Ajay.Mangat@arb.ca.gov

Jennifer Kozumplik, Air Pollution Specialist, Freight Transport Branch
Jennifer.Kozumplik@arb.ca.gov