

August 3, 2020

Mr. Bob Toy  
Senior Director Environmental Programs  
Union Pacific Railroad  
1400 Douglas Street, STOP 1180  
Omaha, Nebraska 68179

Dear Mr. Toy:

In reference to data submitted pursuant to the 1998 Memorandum of Mutual Understandings and Agreements (Agreement), between the California Air Resources Board (CARB) and Union Pacific Railroad Company (UP): We appreciate the time and resources UP has devoted to addressing the CARB staff questions concerning the UP 2019 fleet average emissions report for the South Coast Nonattainment Area. We have attached a chronology describing the specific communications our teams have had regarding the initial data submittal.

This letter is to notify UP that the MOU data analysis period (with a 90-day extension to accommodate UP staff furloughs) ends on August 20, 2020. At this time, CARB staff have not received sufficient evidence to explain the substantial decrease in Megawatt hours reported for calendar year (CY) 2019. In an effort to resolve this issue, CARB staff have identified additional actions that UP may take to resolve remaining questions concerning the UP report.

Mr. Bob Toy  
August 3, 2020  
Page 2

On March 30, 2020, UP provided CARB with fleet data from calendar year 2019, pursuant to the Agreement. The data showed a 60 percent reduction in locomotive activity, measured in Megawatt-hours (MWhrs) within the South Coast Air Basin (SCAB), when measured against CY 2018 data. The data are also significantly out of trend with all previous years of data collection under the Agreement.

Using estimates that recognize all the changes identified by UP staff, CARB staff would expect a reduction in MWhrs between 5 and 10 percent. This would be primarily due to the 5 percent reduction in gross ton-miles (GTM) in the SCAB. A 5 to 10 percent reduction in MWhrs is also consistent with the reported fuel use decrease of 11 percent, when combined with UP's reported reduced dwell times. CARB staff also considered potential reductions from reducing dead weight locomotives, but locomotives account for a consistent proportion of total GTM in 2018 and 2019. Ultimately, UP staff are unable to show how UP can pull 95 percent of the prior year's freight (by weight\*distance) using 40 percent of the prior year's tractive work.

CARB would like to examine more detailed SCAB-specific data, both to substantiate the UP reduction in MWhrs, and to rule out the possibility of an error in the reporting mechanisms. CARB is requesting the data listed below by August 20, 2020 to substantiate the CY 2019 data report:

1. Total GTM in the SCAB for each year from 2010-2019
  - Requested so that staff can establish whether UP's regional GTM data trends with historically reported MWhrs, or if it is not an effective surrogate.

2. All UP container volumes at Port of Long Beach, and the Port of Los Angeles for each year from 2010-2019.
  - Requested as a second surrogate to partially substantiate the reported data, especially if GTM does not trend with reported MWhrs.
3. Total miles travelled in the SCAB by all locomotives for each year from 2010-2019.
  - Requested as a companion to container volume data, to partially substantiate the reported data, especially if GTM does not trend with reported MWhrs.
4. Raw data and any database queries used to obtain GTM and MWhr data for each year from 2010-2019.
  - Requested in order to investigate the source of any errors introduced through collecting, aggregating, or filtering the data.
5. Any calculators, formulas, unit conversion factors, or methodologies used to describe the data reported per the Agreement for years 2010-2019.
  - Requested in order to investigate the source of any errors introduced through collection, calculation or conversion.
6. List of locomotives travelling into and out of the SCAB and their reader passage data: date, time, and reader location, and list of all notifications of reader malfunctions, from 2010-2019.
  - Requested in order to investigate whether the source of error is a group of faulty reader triggers or readings.

Absent additional information that validates the initial submittal, the next step in the MOU is for CARB to find the UP report incomplete, and as a consequence, may determine that UP did not satisfy its reporting obligation for calendar year 2019.

Mr. Bob Toy  
August 3, 2020  
Page 4

The subsequent step per the MOU is to begin the selection process for an administrative Appeals Panel as provided under section IV(C)(e)(a)(ii) of the Agreement. Please provide the requested additional data to CARB via email no later than August 20, 2020. Thank you for your time and attention. If you have any questions, do not hesitate to contact me.

Sincerely,

A handwritten signature in blue ink that reads "Cari Anderson". The signature is written in a cursive style with a large initial "C".

Cari Anderson, Chief  
Freight Transport Branch  
Transportation and Toxics Division

cc: See next page

Mr. Bob Toy  
August 3, 2020  
Page 5

cc: Ms. Erica Montefusco  
Senior Manager Environmental Programs  
Union Pacific Railroad  
1400 Douglas Street, STOP 1030  
Omaha, Nebraska 68179-1030

Heather Arias, Chief  
Transportation and Toxics Division

Ajay Mangat, Manager  
Freight Transport Branch  
Transportation and Toxics Division

Jennifer Kozumplik  
Air Pollution Specialist  
Freight Transport Branch  
Transportation and Toxics Division

## **Attachment: Chronology of CARB and Union Pacific Communications Regarding the CY 2019 Data Submittal for the 1998 MOU**

- **3/30/2020 Submittal:** on-time submittal
  - CARB staff preliminary review showed a similar number of locomotives, but a 60% drop in total megawatt-hours.
- **4/10/20:** CARB email to UP staff asking them to verify the data set was complete
- **4/17/20:** UP staff email states - the drop in MWhrs is due to implementation of Precision Scheduled Railroading, this included:
  - Reduction in the use of low horsepower locomotives
  - Improvements in dwell time
  - Longer trains
  - Business mix changes
  - Consolidation of operations
  - Storage of less efficient locomotives
  - Reduced volumes
  - Reduced California origins (9 percent), and terminating volume (3 percent).
  - Localized changes (example: Commerce saw a 30 percent reduction in volume)
- **4/29/20 Notice of incompleteness:** CARB concluded the reasons given were not sufficient, especially considering the nationwide fuel consumption change of -11%, and issued a notice of incompleteness (pursuant to section IV(C)(3)(a)(ii) of the agreement).
- **5/08/20:** CARB staff/UP staff call. UP staff maintained that the data is complete.
  - UP requested an extension of the mandated 30-day deadline (60-90 days after receiving CARB staff's additional questions) to accommodate

UP staff, who are furloughing 25% of their hours. Consistent with section IV(C)(3)(a)(ii), CARB granted the extension via email on May 8, 2020.

- **5/22/20:** CARB staff sent questions to confirm the data (per the extension request, extension is now set to expire no days later: in August 20, 2020).
- **5/28/20:** CARB staff call with UP staff. Nothing sufficient was uncovered. As a follow-up, CARB staff requested (business data exclusive to the South Coast Air Basin, port data, and fuel consumption data).
- **7/2/2020:** CARB staff/UP staff call. UP staff provided gross ton-miles and fuel dispensing data within the SCAB for 2018. The data indicated, from 2018 to 2019, a SCAB GTM reduction of 5%, and a local fuel dispensing increase of 2%. After examining this data and considering UP's proposed explanation, CARB staff have determined that although these changes may have brought financial and operational efficiencies, they do not explain a 60 percent drop in MWhrs.