



# Air Resources Board



**Matthew Rodriguez**  
Secretary for  
Environmental Protection

**Mary D. Nichols, Chairman**  
1001 I Street • P.O. Box 2815  
Sacramento, California 95812 • [www.arb.ca.gov](http://www.arb.ca.gov)

**Edmund G. Brown Jr.**  
Governor

June 23, 2014

Mr. Robert M. Grimalia  
Vice President  
Safety, Security, Environment and CSO  
Union Pacific Railroad  
1400 Douglas Street, STOP 1180  
Omaha, Nebraska 68179-1180

Dear Mr. Grimalia:

The Air Resources Board (ARB) received Union Pacific Railroad's (UP) 2013 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). ARB staff determined that UP fully complied with provisions of the 1998 Agreement for its operations in 2013.

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).

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 oxides of nitrogen (NOx) 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.

*The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption. For a list of simple ways you can reduce demand and cut your energy costs, see our website: <http://www.arb.ca.gov>.*

California Environmental Protection Agency

Mr. Robert Grimalia  
June 23, 2014  
Page 2

Staff reviewed UP's submittal of its Compliance Report, which included activity information (in megawatt-hours) and emission levels for over 5,700 individual locomotives in 2013. Staff also assessed the accuracy of UP's data by comparing it with extensive locomotive information collected from ARB field surveys, inspection reports, and locomotive inventories. After reviews were completed, ARB staff determined that, for calendar year 2013, UP had an initial fleet average NOx level of 5.9 g/bhp-hr before applying any credit.

UP had accumulated ULEL fleet average credits before 2013 by operating genset and battery-electric hybrid switch locomotives, which are 50 to 75 percent cleaner than required. These advanced technology locomotives provided the South Coast Air Basin with significant early emission reductions and public health benefits. For 2013, UP applied 0.4 g/bhp-hr of ULEL credit to its initial fleet average. Therefore, after the adjustment, we find that the final fleet average for 2013 meets the required 5.5 g/bhp-hr NOx compliance level set forth in the 1998 Agreement.

ARB will make all of 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 regarding UP's compliance with the 1998 Agreement, please contact me at (916) 322-8267 or [dito@arb.ca.gov](mailto:dito@arb.ca.gov) or Mr. Harold Holmes, Manager, Rail Strategies Section at (916) 324-8029 or [hholmes@arb.ca.gov](mailto:hholmes@arb.ca.gov).

Sincerely,



Douglas Ito, Chief  
Freight Transport Branch

cc: See next page.

Mr. Robert Grimalia  
June 23, 2014  
Page 3

cc: Mr. Robert Toy  
Director Environmental Sustainability  
Union Pacific Railroad  
1400 Douglas Street, STOP 1030  
Omaha, Nebraska 68179-1030

Mr. Victor Stone  
Union Pacific Railroad  
1400 Douglas Street, STOP 1030  
Omaha, Nebraska 68179-1030

Mr. Christopher Grundler  
Office Director  
U.S. Environmental Protection Agency  
Office of Transportation and Air Quality (6401A)  
1200 Pennsylvania Avenue, NW  
Washington, D.C. 20460

Mr. William Charmley  
Division Director  
U.S. Environmental Protection Agency  
Office of Transportation and Air Quality  
Assessment and Standards Division  
2000 Traverwood Drive  
Ann Arbor, Michigan 48105

Harold Holmes  
Manager  
Rail Strategies Section