

South Coast Locomotive Fleet Average Emission Program

ANNUAL COMPLIANCE REPORT  
FOR  
CALENDAR YEAR  
2011

Submitted by a Participating Railroad  
to the  
California Air Resources Board  
in Accordance with the  
Memorandum of Mutual Understanding and Agreements  
Dated  
2-Jul-98

Participating Railroad: BNSF  
Date Submitted: March 27, 2012  
Updated: November 6, 2012

**Form F-S**

**Summary Information**

I.	If the Participating Railroad is filing this report only to document FAC from ULELs created in a year prior to 2010, please check here and go directly to Section D.	_____
II.	If the Participating Railroad is filing this report to document its fleet average for a year prior to 2010 in order to create FAC, please check here. GO directly to Section A and, if applicable, Section D.	_____
III.	If the Participating Railroad is filing this report for the year 2010 or later in order to demonstrate whether it is in compliance with its annual obligation under paragraph III.A.1 of the Memorandum of Mutual Understandings and Agreements (Memorandum), check A, B, or C below to indicate which method is being used to demonstrate compliance.	_____ X _____
A.	Calculation of Final FA, beginning with the formula for calculating FA in paragraph III.B.1 of the Memorandum	_____ X _____
B.	Exclusive Use of locomotives with CLs at or below the Fleet Average Target, as defined in Section II of the Memorandum	_____
C.	Calculation of Final FA, beginning with the formula for calculating FA in paragraph III.B.3 of the Memorandum	_____

	If III.A is checked above, complete Section A below and, if applicable, Section D.
	If III.B is checked above, complete Section B below and, if applicable, Section D.
	If III.C is checked above, complete Section C below and, if applicable, Section D.

2011 BNSF Railway South Coast Fleet Average Summary

(1) Line No.	(2) Count of Locomotives	Sum of MWhrs	(3)CL (g/bhphr)	(4) Average Adj. to CL (g/bhphr)	(5) EL (g/bhphr)	(6) Average MW/hr per Loco	(7) Total Weighted MW/hr	Tier	% MWhrs by Tier
1	4	39.05	2.8	0	2.8	9.8	109.3	ULEL	18.9%
2	87	36922.1	3.8	0	3.8	424.4	140303.9		
3	911	114083.0	5.0	0	5.0	125.2	570415.1	2	58.4%
4	2	2.2	5.1	0	5.1	1.1	11.3		
5	4	167.4	5.3	0	5.3	41.9	887.4		
6	3	0.1	5.5	0	5.5	0.0	0.4		
7	8	8.0	6.8	0	6.8	1.0	54.2	1	19.0%
8	1	0.0	7.2	0	7.2	0.0	0.2		
9	466	37139.8	7.4	0	7.4	79.7	274834.4		
10	7	359.1	5.1	0	5.1	51.3	1831.5	0	3.6%
11	1	0.5	7.5	0	7.5	0.5	3.9		
12	2	0.7	7.6	0	7.6	0.3	5.1		
13	82	5792.8	7.8	0	7.8	70.6	45183.7		
14	8	892.7	8.1	0	8.1	111.6	7231.2		
15	1	1.7	8.6	0	8.6	1.7	14.4		
16	1	0.1	8.9	0	8.9	0.1	0.5		
17	11	62.1	9.0	0	9.0	5.6	558.9		
18	1	0.0	9.1	0	9.1	0.0	0.3		
19	4	2.3	9.3	0	9.3	0.6	21.8		
20	1	0.04	13	0	13	0.0	0.5	Pre-Tier 0	0.0%
<b>1,605</b>		<b>195,474</b>			<b>Total</b>		<b>1,041,468</b>		<b>100%</b>

\*7 BNSF locomotives at CL 5.1 meet the NOx Emission Level of Tier 2 locomotives, but are certified as Tier 0.

III.

		(1)	(2)	
		MWHr (or Gal of Fuel)	EL x MWHr	
A	Total Locomotive Data (Totals from Columns 6 & 7 - Part 1)	195,474	1,041,468	
B	Total Estimated Data (Totals from Columns 6 & 7 - Part 2)	-	-	
C	Sum of lines A and B	195,474	1,041,468	
D	FA in g/bhpr			5.33

**Form F-A-2**

**Calculation of Final FA in accordance with Subsection III.D of Memorandum**

A. Enter the value shown on Line D of Part III of Form F-A-1	5.33
B. Enter the total of all adjustments made to FA in accordance with paragraph III.D.1 of the Memorandum. If any adjustment is made to FA, complete Part II of Form F-A-3.	0.0
C. Calculate adjusted FA (Line A - Line B)	5.33
D. If Line C is less than or equal to Fleet Average Target, or if this report is for a year prior to 2010, enter zero. Otherwise, enter any correction made to account for atmospheric conditions in accordance with paragraph III.D.2 of the Memorandum. Do not enter more than the difference between Line C and Fleet Average Target. If a correction is made to account for atmospheric conditions, complete Part III of Form F-A-3. 3	0.0
E. Calculate Adjusted/Corrected FA (Line C - Line D); Round to nearest 0.1 g/bhphr (see Appendix C of Memorandum)	5.3
F. FAC from ULELs in g/bhphr (the smaller of Line B or Line E; round to the nearest 0.1 g/bhphr)	0.0
G. Calculate Final FA in g/bhphr (Line E - Line F)	5.3

**Form F-A-3**

Form F-A-3 is related to adjustment of the locomotive CL, FA and correction to FA - Not Applicable

**Form F-A-4**

**Factors to Convert between Gallons of Fuel and MWhr**

<p align="right">Locomotive Type:</p>	<p>See Whitepaper for details on how conversions were made for each model including conversion factors utilized.</p>
<p>A. Indicate whether original data for the locomotive were collected in gallons of fuel or MWhr.</p>	<p align="center">Both</p>
<p>B. What conversion factor was used?</p>	<p align="center">See conversion factors for locomotives in Whitepaper Appendix A.</p>
<p>C. Has the methodology used to develop the conversion factor been accepted previously by California Air Resources Board (ARB) in accordance with the terms of Appendix D of the Memorandum?</p>	<p align="center">Previously Discussed with ARB</p>
<p>D. If Line C Is Yes, enter date.</p>	
<p>E. Show below, in detail, how the conversion factor was calculated. Attach all supporting data and evidence. This information will be used by ARB to determine whether to accept the conversion factor. If Line C is No, it will also be used to determine whether to accept the methodology. See paragraphs IV.C.4, IV.C.5 and Appendix B of the Memorandum.</p>	<p align="center">See Whitepaper</p>

**Form F-A-5**

**Estimation of Missing Locomotives - Not applicable**



**Form F-A-6**

**Summary of FAC Transactions (in g/bhphr)**

I.	(1)	(2)	(3)
	Created Pre-2010	Created Post-2009	Total
A. Ending FAC balance -- last annual report	0.9	1.0	1.9
B. FAC acquired for Other Participating Railroad since last annual report, if any	0.0	0.0	0.0
C. FAC created from ULELs during the year, if any (Line F of Form F-D-2)	0.0	0.6	0.6
D. FAC transferred to Other Participating Railroad or others since last annual report, if any	0.0	0.0	0.0
E. Total FAC available for use in this annual report -- subject to restrictions on pre-2010 FAC noted in subparagraph III.D.3.a of Memorandum (Line A + Line B + Line C - Line D)	0.9	1.60	2.50
F. FAC used in this annual report, if any (included in total emissions reductions shown on Line F of Form F-A-2)	0.0	0.0	0.0
G. FAC created during the year other than Line C, if any (Fleet Average Target # - Final FA shown on Line G of Form F-A-2, provided Fleet Average Target # exceeds Final FA)	0.0	0.2	0.2
H. Ending FAC balance -- this annual report (Line E-LineF+LineG)	0.9	1.8	2.7

**II. Emissions Reductions Other than FAC**

List the amount of emissions reductions other than FAC, if any, shown on Line F of Form F-A-2 (in g/bhphr). In accordance with subparagraph III.D.3.a of the Memorandum, this amount cannot exceed 0.3 g/bhphr. In addition, the sum of (1) the amount shown here, and (2) the pre-2010 FAC included on Line F of Form F-A-2 (and shown on Line F, column 1 of Part I of this Form F-A-6 cannot exceed 1.3 g/bhphr.	0
Attach documentation for the above emissions reductions other than FAC, including a description of the reductions, how acquired, date acquired, and amount acquired. Note that subparagraph III.D.3.a and Appendix E of the Memorandum stipulate a fixed conversion rate from tons to g/bhphr.	None

**III. Reconciliation of Line F of Form F-A-2**

A. Show amount from Line F, column 3 of Part I of this Form F-A-6.	0.0
B. Show amount from Part II of this Form F-A-6.	0.0
C. Line A + Line B (should equal line F from Form F-A-2)	0.0