



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

Edmund G. Brown Jr.
Governor

TO: Cynthia Marvin, Chief
Stationary Source Division

THROUGH: Jack Kitowski, Chief
Freight Transport Branch

FROM: Harold Holmes, Manager
Rail Strategies Section

DATE:

SUBJECT: FIELD SURVEY RESULTS OF NON-PREEMPTED LOCOMOTIVES IN
THE SOUTH COAST AIR BASIN

Air Resources Board (ARB) staff conducted unannounced locomotive field surveys in October 2011 and January 2012 at the four high-priority railyards in the South Coast Air Basin. Staff visited the Union Pacific Railroad (UP) Commerce and the UP ICTF/Dolores railyards, and the BNSF Railway (BNSF) Hobart, and the BNSF San Bernardino railyards to document the activity and operation of non-preempted (pre-tier 0) locomotives and ultra-low-emitting locomotives. A total of 189 locomotives were recorded at the four high-priority railyards over the two field surveys. For the fifth and sixth consecutive field surveys, since September 2010, no pre-tier 0 locomotives were observed at the four high-priority railyards.

Staff spent between one to two hours at each railyard observing and recording locomotives whose identification numbers were visible. Between 70 and 80 percent of all the locomotives observed at the four high priority railyards were able to be recorded. The summary of the recorded locomotives are as follows:

- 24 percent were Tier 0 locomotives.
- 19 percent were Tier 1 locomotives.
- 53 percent were Tier 2 locomotives.
- 4 percent were ULEL locomotives.

Locomotive counts at a railyard can vary hour-by-hour as trains arrive, depart, and pass through. The data presented in this memo is a snapshot and may or may not be representative of the locomotive fleet composition at a railyard on an annual basis. However, as shown in Figure 1 of Attachment A, field surveys completed in

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

Cynthia Marvin, Chief

Page 2

September 2010 also had a similar distribution of locomotives at the four high-priority railyards. Further, the results of the October 2011 and January 2012 field surveys are consistent with the most recent locomotive activity data (in megawatt-hours) submitted by the railroads for 1998 Agreement (see Figure 2 in Attachment A). We could expect to see a higher percentage of Tier 2 locomotives at the railyards because the 1998 Agreement data indicate that Tier 2 locomotives perform roughly two-thirds of the work (i.e. megawatt hours) in the South Coast Air Basin.

Field surveys were also conducted at the UP Colton, BNSF Watson, and BNSF Sheila railyards. Over the two field surveys, staff recorded a total of 184 locomotives at these three non-priority railyards. As with the results for the high-priority railyards, the locomotive distribution for the three non-high priority railyards was also comparable to the 1998 Agreement (see Figure 2 in Attachment A) locomotive activity.