SECTION 10 LOOKING FORWARD

Port-related mobile source emissions have continued to decrease due to the implementation of the CAAP and regulatory programs. There was an 11% increase in throughput in 2013 over 2012 and the 2013 throughput was similar to the 2005 throughput (0.3%). In 2014, the TEU throughput may increase from the previous year as evidenced from the TEU throughput levels in the fiscal year to date comparison of 2014 to 2013. The 2014 EI will reflect the Port’s actual throughput level in 2014 and the net emissions benefits associated with the implementation of CAAP measures and regulatory programs. In addition, consistent with the Port’s EI development process, the latest available emission factors and methods will be incorporated into the 2014 EI.

The following is a brief description of the anticipated impacts of control programs and measures for each source category, which will result in further reduction of emissions from these port-related sources in 2014:

**Ocean-Going Vessels**
Continued implementation of CAAP measures, including the use of shore power for vessels at berth and the Port’s vessel speed reduction program, will result in significant emission benefits. In 2014, CARB’s marine fuel regulation requiring the use of lower sulfur fuel in main and auxiliary engines and auxiliary boilers will lower the limit to 0.1% S fuel resulting in additional reductions. Also starting January 1, 2014, CARB’s ships at berth regulation commences, although it is expected to have a slow start as vessel fleets and terminals may not be ready to shore power at the beginning of 2014. This at berth regulation will have an impact as the year progresses and in future years.

**Harbor Craft**
Under the CARB regulation for commercial harbor craft, in-use, newly purchased, or replacement engines in crew boats, commercial fishing vessels, ferries, excursion vessels, tug boats, pilot boats, workboats, and tow boats must meet EPA’s most stringent emission standards per a compliance schedule set by CARB for in-use engines and for new engines at the time of purchase. For harbor craft with home ports in the SoCAB, the compliance schedule for in-use engine replacements will continue in a phased-in approach.

**Cargo Handling Equipment**
The continued implementation of the CAAP measure and CARB’s in-use regulation for cargo handling equipment will result in emissions benefits due to the replacement of existing older equipment with newer and cleaner equipment powered by on-road engines or the cleanest engine available.
**Locomotives**
The 1998 memorandum of understanding (MOU) among the Class 1 railroads (UP and BNSF), CARB, and EPA requires the accelerated introduction of cleaner locomotives in SoCAB. Specifically, the MOU required BNSF and UP to achieve fleet-wide average NOx emission rates meeting EPA’s Tier 2 line haul emission standard for their locomotives operating in SoCAB by 2010, a goal that the railroads have met. Additional reductions in subsequent years will be slower now that the MOU is in force but further reductions will occur as the railroads continue to turn over their nation-wide fleets. The switching fleet is now composed almost entirely of ultra-low emission locomotives.

**Heavy-Duty Vehicles**
Implementation of the Clean Trucks Program has resulted in significant emission reductions due to replacement of older trucks with newer ones that meet more stringent emission standards. The final ban, which restricted pre-2007 trucks, came into effect January 1, 2012. In future years, the Port will continue the efforts to increase the population of alternatively powered trucks serving the Port, which will reduce emissions of DPM and, depending on the fuel source or technology employed, may reduce emissions of other pollutants.