

BNSF San Bernardino Yard Emissions

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Risk Assessment, OEHHA

A Guide To Risk Management

Risk managers are responsible for protecting human health, but they must also consider public acceptance as well as technological, economic, social and political factors when arriving at their decisions.



San Bernardino 2005 baseline

San Bernardino Railyard encompasses about 168 acres includes an Intermodal facility, an automotive operation, and some classification tracks.

The railyard is divided into two distinct sections

“A” yard aligned in an East – West direction

“B” yard aligned roughly in a North – South direction

The “A” yard includes the intermodal facility. 554,904 lifts in 2005

The “B” yard includes an automotive operation



San Bernardino



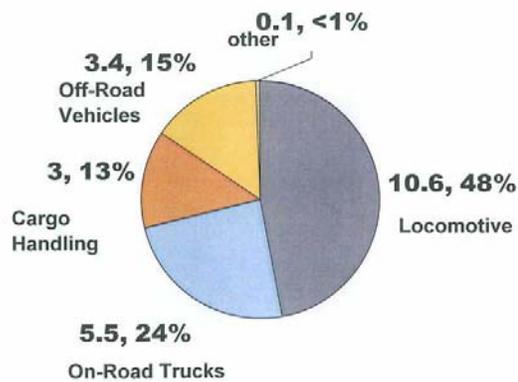
Sources of Emissions (2005)

Diesel PM Emission Sources	BNSF Railyard		Off-Site Emissions	
	Tons/yr	%	Tons/yr	%
Locomotives	10.6	47%		
-Line Haul Locomotives	6.1	27%		
-Switching	4.1	18%		
-Refueling	0.4	2%		
On-road Trucks and Vehicles	5.5	24%		
Cargo Handling Equipment	3.0	13%		
Off-Road Vehicles and Equipment, mostly TRU's	3.4	15%		
Other Sources	0.1	<1%		
Off-Site Mobile			10.6	98%
Off-Site Stationary			0.2	2%
Total	22.4	100%	10.8	100%

Numbers & Percentages do not add precisely due to rounding



San Bernardino Emission Sources

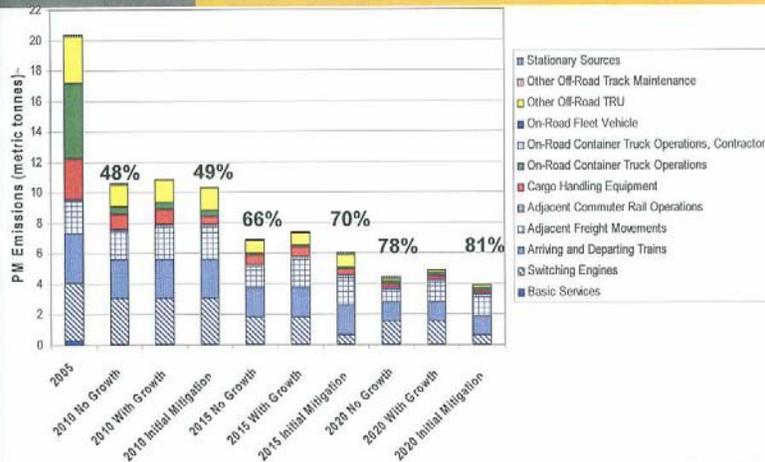


Emission Reductions

- Truck drayage fleet turnover for intermodal facilities (by others)
- RR accelerated compliance with CARB cargo handling eqpt rules
- RR use of 15 ppm sulfur fuel (ULSD) for purchases in California
- RR compliance with the 1998 MOU (the Locomotive Fleet Average Agreement for the LA Basin) for nitrogen oxides
- RR low emission switch engines by 2015
- RR 30% reduction in switch engine idling due to 2005 MOU
- RR reduced idling of current locomotives with idle control devices
- Truck idle reduction at gates because of RR shutdown rules
- Compliance with CARB rules for refrigerated units (by others)
- RR compliance with CARB rules for off-road equipment
- RR compliance with USEPA final rules for locomotive emissions which CARB comments accelerated Tier 4



BNSF San Bernardino emissions summary



Additional Work

- Capture real drayage truck engine operating information.
- Instrument a drayage truck
- Operate over the routes near the railyard
- Operate under typical 2005 conditions
- Operate under today's conditions
- Operate as if new check-in kiosks were operational
- Operate as if the gate area was moved further west



Summary

- The railroads recognize there are air quality concerns, both for ozone and for particulate matter in Southern California.
- There are a number of programs in place that are driving down emissions. We will be reviewing additional opportunities to reduce emissions and risk.
- Diesel emissions from rail yards are going down. Projections for San Bernardino from 2005 to 2020 show an 81% reduction.
- Some additional work would be helpful in considering moving the gate area further west.

