AN OVERVIEW OF THE CALIFORNIA LOW EMISSIONS VEHICLE AND CLEAN FUELS PROGRAM

PRESENTED TO THE PENNSYLVANIA HOUSE TRANSPORTATION SUBCOMMITTEE ON TRANSPORTATION SAFETY

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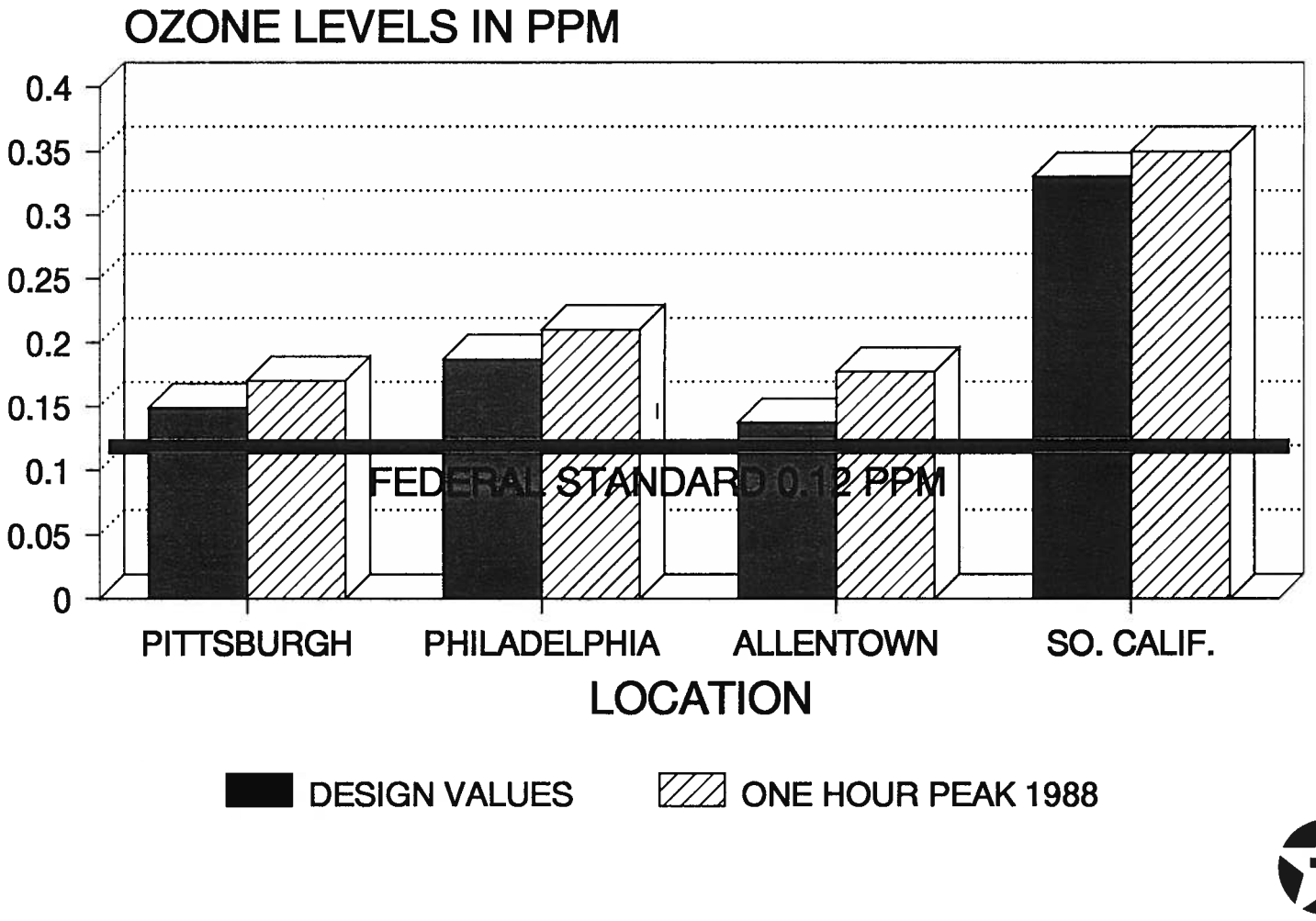
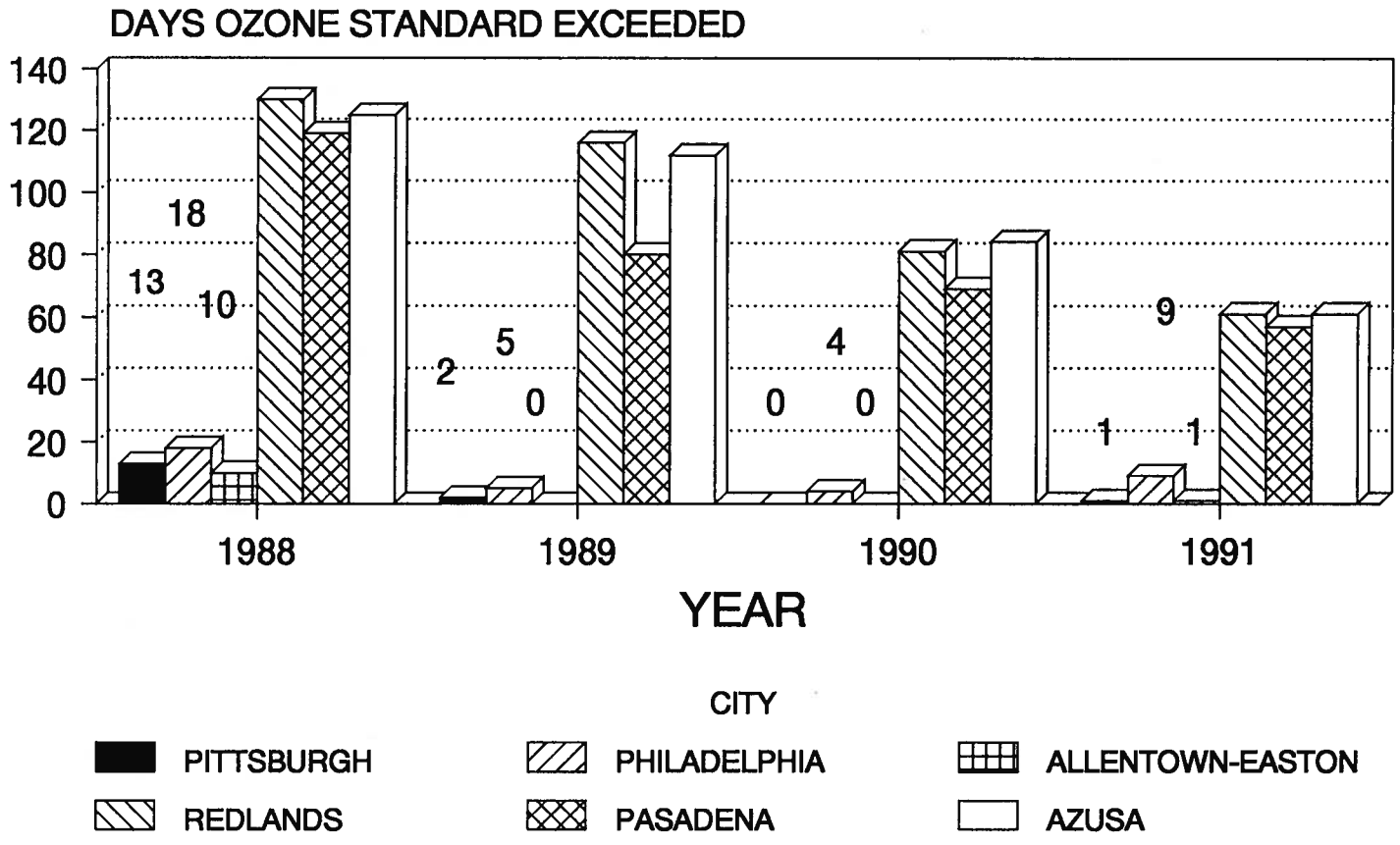
OZONE DESIGN & PEAK VALUES
PENNSYLVANIA VS SO. CALIFORNIA

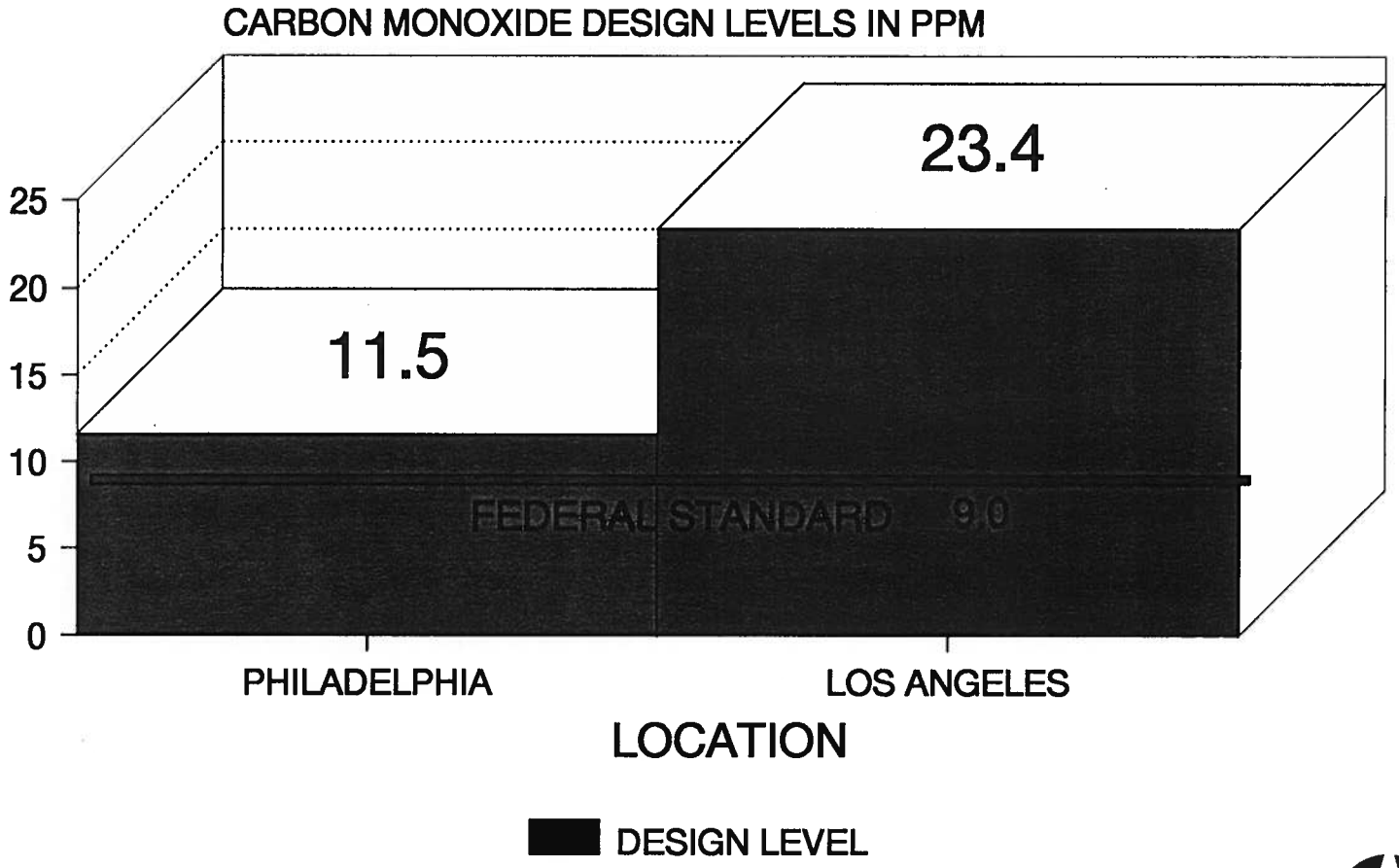


FEDERAL OZONE STANDARD VIOLATIONS
PENNSYLVANIA VS. SOUTHERN CALIFORNIA



1991 Quarters 1 thru 3 only

FEDERAL CARBON MONOXIDE STANDARDS
PHILIDELPHIA VS. LOS ANGELES



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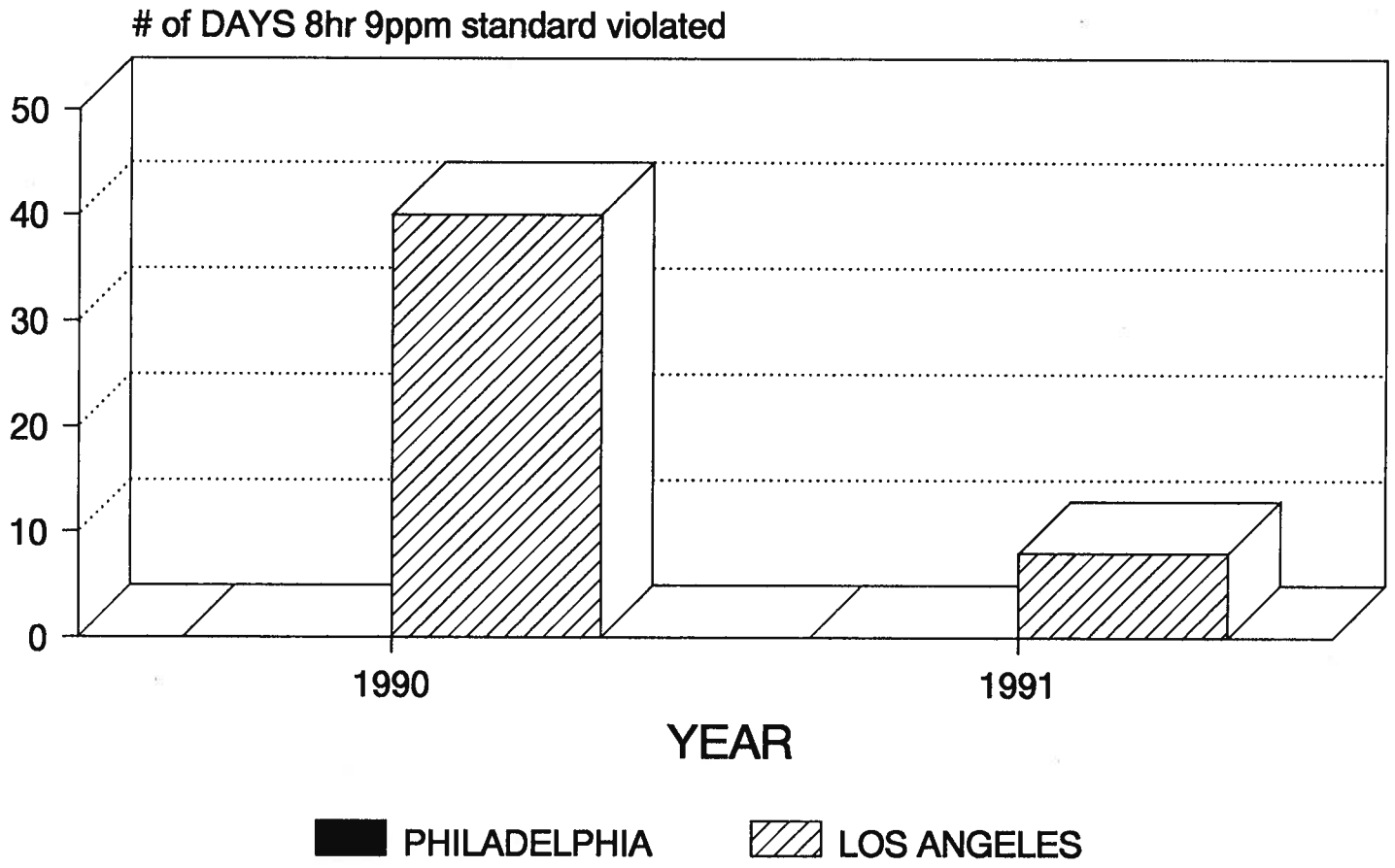
FEDERAL CARBON MONOXIDE LEVEL VIOLATION' PHILADELPHIA VS. LOS ANGELES



1991 quarters 1 thru 3 only

Overview of California Fuels & Vehicles Emissions Control Program

CALIFORNIA PROGRAM CONSISTS OF FOUR RELATED COMPONENTS:

1. Motor Vehicle Fleet Average Performance Standards

2. Reactivity Adjustment Factor Credits

3. Reformulated Gasoline Regulations

4. Alternative Fueled Vehicle Program Requirements

3/92

CA Motor Vehicle Standards
in grams per mile

Effective Date:		NMHC	CO	NOx	PM
Current		0.39	3.4	0.4	0.08
1993+		0.25	3.4	0.4	0.08
		NMOG			
1994+	TLEV's	0.125	3.4	0.4	0.08
	LEV's	0.075	3.4	0.2	0.08
	ULEV's	0.040	1.7	0.2	0.04
1997+	ZEV's	-----	---	---	---

NMOG adjusted for alternative fuels exhaust reactivity
ZEV's are mandated starting in 1997 at 2% of sales

10/91

CA Reactivity Adjustment Factors
Concept Adopted 09/90

Reactivity adjustment factors are based on the ozone forming potential of motor vehicle emissions. These adjustments are made to the mass emissions of reactive organic gas from the motor vehicle exhaust.

ARB has adopted these factors using conventional gasoline as the baseline equal to 1.

These factors are used by the motor vehicle manufacturers to certify vehicles meeting the fleet emissions performance standards.

ARB adopted factors the following factors: M85 = 0.41; LPG = TBD; CNG =TBD;

No factors have been proposed for RFG to date

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CA Reformulated Gasoline Regulations
Phase 1 & 2

Phase 1: Effective January 1, 1992

- Summer RVP = 7.8 PSI
- Deposit Control Additive required
- Unleaded gasoline only

Phase 2: Effective March 1, 1996 (adopted 11/91)

RVP	7.0 PSI
Sulfur	40 wt.ppm/30 ppm avg with 80ppm cap
Olefins	6.0% flat/4.0% avg./10% cap by volume
Aromatics	25% flat/22% avg./30% cap by volume
T-90	300 degF flat/290 deg.avg./310 deg. cap
T-50	210 degF flat/200 deg.avg./220 deg. cap
Oxygenate	1.8 to 2.2 percent
Benzene	1.0% flat/0.8% average/1.2% cap by volume
Predictive model	To be adopted by 7/92 as an alternate

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CA Alternative Fueled Vehicle Program

Starting 1994 for the South Coast Air Basin
1997 for the rest of California unless early opt-in

Program Elements:
Auto Manufacturers Certify vehicles on alternative fuels to meet the reactivity adjusted standards.

ARB initial forecast of the number of alt. fuel vehicles to be sold in California in the next 18 months due 6/92.

If 20,000 vehicles are expected for a liquid designated clean fuel then retail outlets are required to make it available as follows.

1st year 90 or more outlets
2nd year 200 or more outlets
3rd year 400 outlets if vehicles exceed 200,000

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