

Chapter 10

Reasonable Further Progress

This page intentionally blank.

CHAPTER 10: REASONABLE FURTHER PROGRESS

10.1 INTRODUCTION

This chapter explains and demonstrates reasonable further progress (RFP) and quantitative milestones that are required until the SJVAB reaches attainment of the federal 8-hour ozone air quality standard. The data in this chapter is based on information that has been provided in other chapters and appendices of this plan. The information and conclusions presented here are based on the best available information as of January 2007, but are subject to change.

10.2 REASONABLE FURTHER PROGRESS REQUIREMENTS

RFP requirements for 8-hour ozone are outlined in EPA's Phase 2 rule implementing the 8-hour ozone standard (70 *FR* 71631-71652). Nonattainment areas for 8-hour ozone that have already met the 15% VOC emission reduction requirement for the 1-hour ozone standard are subject to the RFP requirement¹ to obtain an average of 3% annual reductions of VOC and/or NO_x emissions reductions for the first 6 years after the baseline year and every subsequent 3 years out to the attainment date. EPA approved the SJVAB's 1994 *Ozone Attainment Demonstration Plan* and its 15% rate of progress (ROP) demonstration in the Federal Register on January 8, 1997, effective February 7, 1997 (62 *FR* 1172). The District has submitted periodic Milestone Compliance Demonstrations (the most recent of which was submitted to ARB in March 2006) to show retrospectively that the emissions reductions required through ROP have occurred in the SJVAB. Therefore, the SJVAB has met the initial 15% VOC reduction requirement.

The SJVAB must now obtain an average of 3% annual reductions of VOC or NO_x emissions for the first 6 years after the baseline year and every subsequent 3-year period until the attainment year. The baseline year is 2002 (70 *FR* 71631), so the six-year milestone is 2008. The 3-year milestone years are 2011, 2014, 2017, 2020, and 2023. The year 2023 is also the expected actual attainment year for extreme areas.

¹ In CAA section 172(2) and the final 8-hour ozone rule (70 *FR* 71612-71705)

10.3 REASONABLE FURTHER PROGRESS CALCULATIONS

The CAA specifies the “baseline” from which each milestone’s emission reduction is calculated [Title I, Part D, Section (b)(1)(C) and (D)]. Previous requirements were revised by the EPA’s *Final Rule to Implement the 8-Hour Ozone National Ambient Air Quality Standard; Final Rule*. Under the new rule, RACT, I/M, and RVP adjustments to the RFP inventories are no longer required since each was completely in place by 1996 and, therefore, already accounted for in the 2002 baseline. Though emissions eliminated by the federal motor vehicle control program (FMVCP) must be subtracted from the actual emissions occurring in the 2002 baseyear and in future year milestones, ARB’s analysis indicates that FMVCP is zero for all years.

The RFP calculation starts with emissions inventory adjustments. Since the official emissions inventories developed for this plan (see Appendix B) only include District rules adopted through May 2005, the reductions being achieved by rules adopted between May 2005 and December 2006 are subtracted from the initial baseline. Also, the District’s control measure development process revealed source categories that required emissions inventory revisions. The initial baseline inventories are adjusted by this amount also. These source category adjustments and the adjustments for the District’s adopted rules are in Table B-1.

ARB also proposed as series of adjustments for measures already adopted, and these are summarized in Table B-2. Table 10-1 shows the emissions inventory adjustments for VOC and NO_x.

Table 10-1 Adjusted Emissions Inventory (in tons per day)

Description	2002	2008	2011	2014	2017	2020	2023
VOC							
<i>O3SIP Inventory</i> (Table B-4)	419.6	381.5	370.6	361.7	357.7	358.1	363.1
Subtract District Adjustments (Table B-1) ¹	-55.1	-51.5	-42.6	-48.2	-48.7	-50.1	-51.6
Subtract ARB Adjustments (Table B-2)	0.8	2.4	2.5	2.6	2.6	2.7	2.7
<i>Adjusted VOC Inventory Before Plan Control Strategy</i>	474	431	411	407	404	406	412
NO_x							
<i>O3SIP Inventory</i> (Table B-3)	638.3	597.8	531.4	458.2	396.9	351.9	322.1
Subtract District Adjustments (Table B-1)	-5.5	6.7	14.8	17.1	15.7	13.1	10.4
Subtract ARB Adjustments (Table B-2)	1.5	23.3	23.1	21.6	19.2	17.1	16.7
<i>Adjusted Inventory Before Plan Control Strategy</i>	642	568	494	420	362	322	295

¹ Note that subtracting a negative value is equivalent to adding. For example, the District has determined that 55.1 tpd of VOC emissions should be **added** to the 2002 baseline.

Adjusted inventories are then used to determine whether RFP has been met. For each milestone year, the percent reduction from the 2002 adjusted baseyear emissions inventory is calculated for both VOC and NO_x. If the sum of these percents is greater than or equal to the RFP requirement, then RFP has been met for that milestone. Table

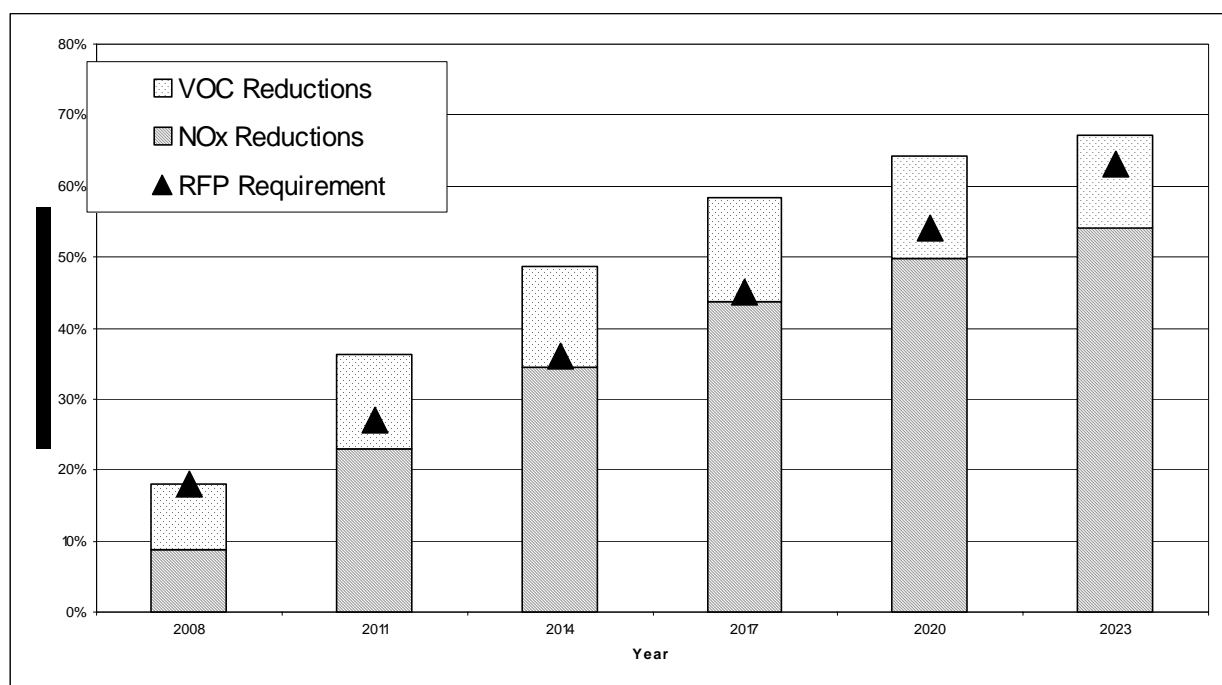
10-2 shows the percent calculations (based on the adjusted inventories from Table 10-1). The data is shown graphically in Figure 10-1. Since the combined percent reduction surpasses the RFP requirement, the SJVAB meets RFP.

Table 10-2 RFP Demonstration: Percent of Emissions Reductions from Base Year

Year	VOC		NOx		VOC % Reduced + NOx % Reduced	Required RFP%	RFP met?
	Adjusted Emissions (tpd) before Strategy ^a	Percent reductions from 2002	Adjusted Emissions (tpd) before Strategy ^a	Percent reductions from 2002			
2002	474		642				
2008	431	9%	568	12%	21%	18%	Yes
2011	411	13%	495	23%	36%	27%	Yes
2014	407	14%	421	35%	49%	36%	Yes
2017	404	15%	363	44%	59%	45%	Yes
2020	406	14%	322	50%	64%	54%	Yes
2023	412	13%	295	54%	67%	63%	Yes

^a From Table 10-1

Figure 10-1 Reductions Surpassing RFP Milestone Requirements



10.4 REDUCTIONS BEYOND RFP FOR CONTINGENCY

As discussed further in Chapter 11, EPA suggests that attainment plans provide the equivalent of one year of reasonable further progress reductions, which is 3% of the baseyear for ozone plans, to be set aside each year to satisfy the contingency measure requirement. Table 10-3 shows that sufficient emissions reductions are being achieved in the baseline to satisfy both RFP and the 3% contingency requirement.

Table 10-3 Contingency Measure Demonstration

Column 1: VOC % Reduced + NOx % Reduced (Table 10-2)	Column 2: Required RFP%	Percent beyond RFP available as Contingency reductions (Column 1-Column 2)	3% Contingency met?
21%	18%	3%	Yes
36%	27%	9%	Yes
49%	36%	13%	Yes
59%	45%	14%	Yes
64%	54%	10%	Yes
67%	63%	4%	Yes