

Suggestions to CARB Air Quality Task Force
for
Next Steps

November 9, 2007

Introduction:

The San Joaquin Valley Air Pollution Control District released a proposed Ozone SIP for its area of responsibility in February, 2007. This SIP demonstrated attainment in 2024 and asked for the SJV to be designated as an “Extreme” non-attainment area, which brings with it a federal attainment date of 2024. This initial SIP was modified to recognize CARB proposed mobile source control measures and then reviewed by the California Air Resources Board in June, 2007. In September, 2007 CARB modified the mobile source control strategies proposed in the state portion of the SIP to accelerate future emission reductions from mobile sources. At this same meeting, CARB created a taskforce to look for ways to accelerate the attainment date in the SJV. The taskforce met from September to November 2007 and CARB presented an initial report on taskforce activities on November 7.

The possibility of attainment by 2017 has been a key component of the SJV SIP debate. Figure 1 shows the projected daily 2017 NO_x emissions at each stage of the SIP development process from the pre-SIP stage until release of the CARB taskforce report.

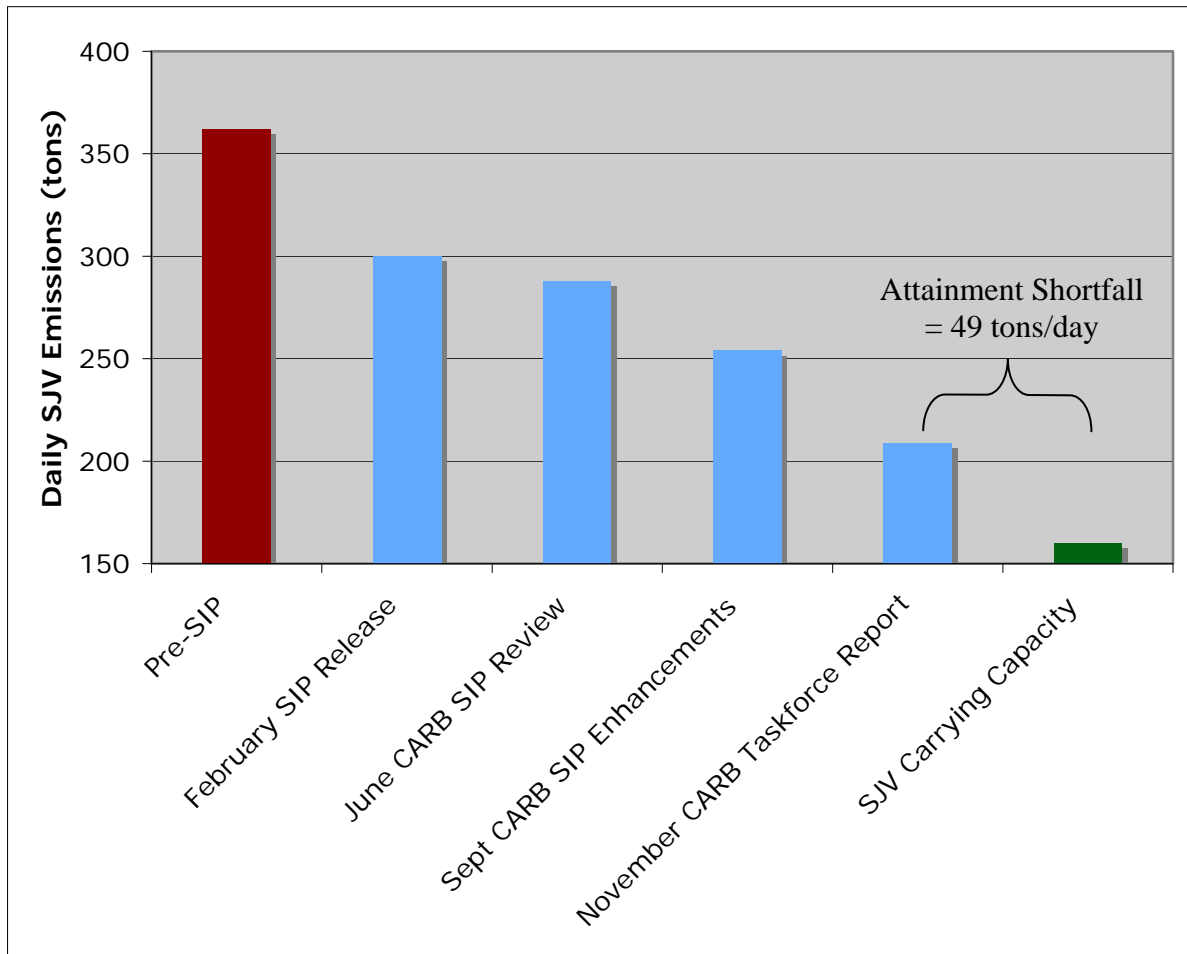


Figure 1: Projected 2017 Daily SJV NO_x Emissions

As can be seen, from Figure 1, the emission difference between the projected 2017 emission rate and the attainment emission rate (carrying capacity) has gone from 202 tons per day to 49 tons per day as a result of the activities of the taskforce and SIP development community during this time. As a result the Valley is now very close to a potential 2017 attainment. In response to these changes, the SJVAPCD director and the Central Valley Partnership Air Quality Working Group director have both declared that they expect the region to attain federal air quality standards by 2017.

Our comments below are meant to respond to the following basic question:

Can the San Joaquin Valley attain federal ozone standards by 2017?

Yes. ISSRC continues to believe that it is possible to submit an EPA approvable Ozone SIP for the SJV with a 2017 attainment date. This will require additional corrections to the SJV emissions inventory and the addition of control measures based on available and likely advancements in available control technologies.

The purpose of the comments provided in the rest of this document is to identify additional control opportunities that are appropriate to be included in the SJV Ozone SIP in order to provide a 2017 demonstration attainment, which everyone is working toward.

Adjusting for Inventory and Already Committed Reductions:

The CARB taskforce process identified several inventory adjustments that support an earlier attainment date. There are additional inventory adjustments that should be made in the SJV emission inventory that can help get us closer to a 2017 attainment date. These corrections are documented in Table 1.

Table 1: Adjustments to 2017 Inventory

Item	Approximate Emission Reduction Amount (tons/day)
Emissions from Open Burning, Smoke Management for Hazardous Materials reductions, and Space Heating, which is included in the Summer air quality emission inventory	5
Reduced emissions from the recent adoption by the SJVAPCD of a tighter NOx regulation, which are predicted by the SJVAPCD	1.6
Innovative strategy trip reduction program in the SJVAPCD Ozone plan, Table 8-1 and table 11-1 with District known incentives, table 11-1 (interpolated)	1.5
Total Reductions in 2017	8.1

The emissions from open burning, smoke management, and space heating should be removed from the inventory since burning is not allowed on high pollution summer days and residential

space heating does not occur on summer high pollution days since they tend to be the hotter days during the summer.

The SJVAPCD adopted a new rule addressing turbine emissions, which to our knowledge was not included in the CARB taskforce inventory adjustments. The emissions reductions from this enhanced rule should be included in the Valley’s Ozone SIP commitment.

There are likely additional adjustments beyond those suggested above that can be quickly identified so that the inventory will more likely reflect reality. One member of the CARB air quality taskforce argued that many dryers and dehydrators are operated outside of the summer season and that the present summer emission inventory does not reflect this operational parameter, which would reduce the summer inventory. This inventory adjustment should be considered. The same member of the CARB taskforce also argued that more IC engines had been converted to electricity than is presently accounted for in the SIP emission inventory. These potential SIP emission inventory adjustments should be reviewed and included in the SJV SIP if appropriate.

Additional Control Opportunities:

There are potential control measures that could be added to the SIP to demonstrate an earlier attainment date. The taskforce has not had the opportunity to discuss the potential viability and emissions reductions expected from the stationary source control measures in meetings to date. As one of the primary objectives of the taskforce, these control measures should be reviewed by the taskforce to determine the emission reduction potential that could be achieved by 2017. The major items that would be fruitful to discuss further are listed in Table 2, along with the potential emissions reductions outlined by ISSRC.

Table 2: Potential Additional SIP Control Measures

Potential Control Measure	Comment	Potential Emission Reduction Amount (tons/day)*
Further NOx Control at Glass Production Facilities	SCR is presently being applied to at least one glass production facility. The potential for NOx reduction using SCR at all of these facilities should be considered for addition to the SJV SIP.	5.0
Further NOx Control at Dryers and Dehydrators	The South Coast Air Quality Management District has included a control measure for dryers (CMB-1) that if applied to these dryers and dehydrators could produce significant emission reductions.	7.4
Further NOx Control for Stationary IC Engines	Higher emission rates are allowed for agricultural engines in the SJV. If all IC engines are forced to meet the same standards as South Coast Rule 1110.2, which can be achieved with Tier 4 or SCR retrofits, then significant additional emission reductions can be achieved. Ongoing electrification and pump efficiency improvement programs are already achieving emission reductions, which are not reflected in District inventories.	11.7
Further NOx Control for Small Boilers	District Rule 4308 should be improved to reflect improved limits and forced attrition compliance of South Coast Rule 1146.2.	?
Further NOx Control for Solid Fuel-fired Boilers	District Rule 4352 should be improved to reflect emission limits in Sacramento Metropolitan AQMD Rule 411, which has a NOx	1.6

	limit of 70 ppmvd @ 12% CO when firing on biomass fuels.	
Further VOC Reductions at Agricultural Facilities	There are a number of advantages to controlling VOC emissions from agricultural operations including reduction of greenhouse gases, odor reduction, toxic air containment reduction, and reduced ozone.	5**
Add SOON Incentive Based Control Program to SIP	The SOON program is an opt-in program for construction equipment which uses incentives to replace old equipment. It is listed in the Sept. CARB Summary of Strengthened SIP Strategies as an additional action to be taken by the ARB/District in the amount of reductions indicated here, but was not discussed or cited in the taskforce report.	4
Clean Air Days	Clean air days provide a valuable component to the clean air process in the SJV. Requirements can be set that poorly controlled sources (IC engines, off-road engines, and such) not be allowed to operate on potential high pollution days. There might be as few as 20 high pollution days in the SJV by 2017 with present adopted control measures.	6-12***
	Total Possible Additional Emission Reductions by 2017	40.7 to 46.7

*These emission reductions are estimated based on the present summer emissions inventory for these sources and will vary depending upon adjustments to the inventory and analysis of present control status at the sources.

**The emission shown here is the equivalent increase in NOx carrying capacity that might occur with control of these facilities.

***The achievable emission reductions depend upon control measures put into place and the range of sources included in the clean air days.

Action Item/Request to Board:

To date, the value of the taskforce has been of great consequence. However, one of the primary goals of the taskforce is identification of additional measures for reducing future emissions from stationary sources. This task has not been completed. Thus far, a comparison of rules relative to other districts has been completed. The next step is to evaluate potential additional measures and quantify possible benefits. It is recommended that the taskforce take a few weeks for technical review of at least the items in Table 1 and 2 in an open process, and to provide an analysis of the range of emissions reductions and feasibility of these measures.

Conclusion:

It appears that with corrections to the SJV emissions inventory and the addition of control measures based on available and likely advancements in available control technologies that it is possible to submit an EPA approvable SIP for the SJV with a 2017 attainment date.