

ATTACHMENT A - “EVERY FEASIBLE MEASURE” ANALYSIS

Proposed Control Measures

Rule	Description	Feasible Measure Based On ¹
360	Boilers, Water Heaters, and Process Heaters (0.075 - 2 MMBtu/hr) Revisions to reduce the NOx limits to 20 ppmv at 3% oxygen for newly installed natural gas fired units.	South Coast Rule 1146.2 (2006) San Joaquin Rule 4308 (2013) Sac-Metro Rule 414 (2010) Bay Area Rule 9-6 (2007) Ventura Rule 74.15.1 (2015)
361	Boilers, Steam Generators, and Process Heaters (2 - 5 MMBtu/hr) Revisions to reduce the NOx limits to 9 or 12 ppmv at 3% oxygen for newly installed natural gas fired units. Higher limits for alternative fuels.	South Coast Rule 1146.1 (2013) San Joaquin Rule 4307 (2011) Ventura Rule 74.15.1 (2015)
342	Boilers, Steam Generators, and Process Heaters (5+ MMBtu/hr) Revisions to reduce the NOx limits to 9 or 15 ppmv at 3% oxygen for newly installed natural gas fired units. Higher limits for alternative fuels.	South Coast Rule 1146 (2013) San Joaquin Rule 4306 & 4320 (2008) Sac-Metro Rule 411 (2007) Bay Area Rule 9-7 (2011)
321	Solvent Cleaning Machines and Solvent Cleaning Revisions to lower the general cleaning ROC limit from 50 grams per liter to 25 g/L.	South Coast Rule 1171 (2009) San Joaquin Rule 4663 (2007) Sac-Metro Rule 466 (2010) Ventura Rule 74.6 (2003) Yolo-Solano Rule 2.31 (2013)
351	Surface Coating of Wood Products Revisions to include solvent cleaning provisions at 25 g/L.	San Joaquin Rule 4606 (2008) Sac-Metro Rule 463 (2008) Bay Area Rule 8-32 (2009) Ventura Rule 74.30 (2006) Yolo-Solano Rule 2.39 (2008)
354	Graphic Arts Revisions to include solvent cleaning provisions at 25 – 100 g/L and additional requirements for Rotogravure, Flexographic, Lithographic, Letterpress, and Screen Printing operations. Existing facilities would have to be permitted to enforce the rule.	South Coast Rule 1130 (2014) San Joaquin Rule 4607 (2008) Sac-Metro Rule 450 (2008) Bay Area Rule 8-20 (2008) Ventura Rule 74.19 (2011)

¹ All rules listed represent the most recent rule version from the corresponding Air District. The similar feasible measure may have been incorporated into an earlier version of the rule.

Further Study Control Measures

Rule	Description	Feasible Measure Based On ²
325 326 343 344	Crude Oil Production and Separation; Storage of ROC Liquids; Petroleum Tank Degassing; and Petroleum Sumps, Pits and Well Cellars Revisions to include solvent cleaning provisions.	San Joaquin Rule 4623 (2005)
316	Storage and Transfer of Gasoline Delete the exemption for agricultural operations from vapor recovery system requirements if more than 50 percent of the annual throughput is used to fuel implements of husbandry. The District will also need to consider permitting or registering these agricultural gasoline tanks.	South Coast Rule 461 (2012)
—	Organic Material Composting Operations The composting measure would limit emissions of reactive organic compounds from commercial composting operations by requiring management practices for small facilities and control devices for larger facilities.	San Joaquin Rule 4566 (2011)

² All rules listed represent the most recent rule version from the corresponding Air District. The similar feasible measure may have been incorporated into an earlier version of the rule.

ATTACHMENT B – PROJECTED EMISSION IMPACTS FOR RECENTLY ADOPTED AND PROPOSED CONTROL MEASURES

The following tables show the projected emission impacts for the recently adopted and proposed rules as they relate to the Plan’s base year (2013) and two planning years (2025 and 2035). The impacts are assessed by comparing:

- a) The emissions of the source category *before the control measure* is adopted;
- b) The *reductions achieved* by the control measure; and
- c) The emissions of the source category *after the control measure* is adopted.

Rule 323.1 – Architectural Coatings			Adopted in 2014			
ROC Inventory	2013		2025		2035	
	Tons/Day	Tons/Year	Tons/Day	Tons/Year	Tons/Day	Tons/Year
Before Control Measure	1.38	504.24	1.52	556.37	1.64	600.25
Reductions Achieved	---	---	0.28	103.15	0.30	111.29
After Control Measure	---	---	1.24	453.22	1.34	488.97

Rule 360 – Boilers (0.075 – 2 MMBTU/hr)			Scheduled for 2016 - 2017			
NOx Inventory	2013		2025		2035	
	Tons/Day	Tons/Year	Tons/Day	Tons/Year	Tons/Day	Tons/Year
Before Control Measure	0.12	42.30	0.14	50.54	0.15	54.97
Reductions Achieved	---	---	0.02	8.28	0.06	21.87
After Control Measure	---	---	0.12	42.26	0.09	33.10

Rule 361 – Boilers (2 – 5 MMBTU/hr)			Scheduled for 2017			
NOx Inventory ¹	2013		2025		2035	
	Tons/Day	Tons/Year	Tons/Day	Tons/Year	Tons/Day	Tons/Year
Before Control Measure	0.11	40.91	0.06	20.54	0.06	22.34
Reductions Achieved	---	---	0.01	4.15	0.04	13.54
After Control Measure	---	---	0.04	16.39	0.02	8.80

¹ The Rule 361 inventory includes the currently adopted compliance schedule for existing units, which reduces emissions in 2020.

Rules 342 – Boilers (5+ MMBTU/hr)			Scheduled for 2017			
NOx Inventory	2013		2025		2035	
	Tons/Day	Tons/Year	Tons/Day	Tons/Year	Tons/Day	Tons/Year
Before Control Measure	0.04	14.40	0.04	15.90	0.04	15.90
Reductions Achieved	---	---	0.01	2.34	0.02	7.02
After Control Measure	---	---	0.04	13.56	0.02	8.88

Rule 321 – Solvent Cleaning			Scheduled for 2018			
ROC Inventory ²	2013		2025		2035	
	Tons/Day	Tons/Year	Tons/Day	Tons/Year	Tons/Day	Tons/Year
Before Control Measure	0.53	195.03	0.59	215.41	0.59	215.41
Reductions Achieved	---	---	0.02	7.01	0.02	7.01
After Control Measure	---	---	0.57	208.39	0.57	208.39

Rule 351 – Wood Coating Operations			Scheduled for 2018			
ROC Inventory ³	2013		2025		2035	
	Tons/Day	Tons/Year	Tons/Day	Tons/Year	Tons/Day	Tons/Year
Before Control Measure	0.04	16.25	0.05	17.95	0.05	17.95
Reductions Achieved	---	---	0.001	0.46	0.001	0.46
After Control Measure	---	---	0.05	17.48	0.05	17.48

Rule 354 – Graphic Arts			Scheduled for 2019			
ROC Inventory	2013		2025		2035	
	Tons/Day	Tons/Year	Tons/Day	Tons/Year	Tons/Day	Tons/Year
Before Control Measure	0.49	178.56	0.54	197.02	0.58	212.56
Reductions Achieved	---	---	0.30	108.36	0.32	116.91
After Control Measure	---	---	0.24	88.66	0.26	95.65

² The Rule 321 inventory consists of all solvents for degreasing and wipe cleaning. It does not include those solvents associated with coating operations.

³ The Rule 351 inventory consists of all coatings and solvents associated with commercial wood coating operations.