

Appendix C EPA Methodology Tabulation
Gasoline Equipment Review Technical Report

Variable	Description	Value	Comments
niuSII	Stage II Control Efficiency	71.4%	CARB 2013 Stage II Emission Factors
QSII	Fraction hwy gasoline throughput controlled by Stage II VRS	98.0%	July 2023 database query- assumes all stations at or below 200k are conventional and all stations at or below 200k have annual throughput of 200k
QSIIva	Fraction of hwy gasoline throughput through ORVR incompatible vacuum assist Stage	7.9%	July 2023 database query
Cfi	compatibility factor in given year i	varies	0.077 x QORVRi
QORVRi	Fraction of annual gallons of hwy motor gasoline dispensed to ORVR equipped vehicles	varies	2023 Department of Licensing dataset; assumes that each vehicle is an equal share of gasoline throughput
niuORVR_EPA	control efficiency of ORVR	0.98	EPA recommended value
niuORVR_PSCAA	control efficiency of ORVR	0.95	PSCAA 2014 value
Gci	projected gasoline consumption	varies	calculated below
	EF (ton/gal)	9.30E-06	2014 analysis calculation - confirmed calculation using EPA inputs for average values

Appendix C EPA Methodology Tabulation
Gasoline Equipment Review Technical Report

Lower End Throughput

Year	QORVri	Cfi	GCI	Increment	Delta (EPA)	Delta (PSCAA)	VOC Tons increase from Stage II removal
2024	87%	0.07	942000444	8.2%	-16.3%	-13.7%	721.26
2025	89%	0.07	942000444	7.4%	-17.4%	-14.8%	649.01
2026	90%	0.07	942000444	6.6%	-18.6%	-15.9%	576.77
2027	91%	0.07	942000444	5.8%	-19.7%	-17.0%	504.53
2028	92%	0.07	942000444	4.9%	-20.9%	-18.1%	432.29
2029	93%	0.07	942000444	4.1%	-22.1%	-19.3%	360.05
2030	94%	0.07	942000444	3.3%	-23.2%	-20.4%	287.81
2031	96%	0.07	942000444	2.5%	-24.4%	-21.5%	215.57
2032	97%	0.07	942000444	1.6%	-25.5%	-22.6%	143.32
2033	98%	0.08	942000444	0.8%	-26.7%	-23.7%	71.08
2034	99%	0.08	942000444	0.0%	-27.8%	-24.8%	-1.16
2035	100%	0.08	942000444	-0.6%	-28.6%	-25.6%	-53.53
2036	100%	0.08	942000444	-0.6%	-28.6%	-25.6%	-53.53
2037	100%	0.08	942000444	-0.6%	-28.6%	-25.6%	-53.53
2038	100%	0.08	942000444	-0.6%	-28.6%	-25.6%	-53.53
2039	100%	0.08	942000444	-0.6%	-28.6%	-25.6%	-53.53
2040	100%	0.08	942000444	-0.6%	-28.6%	-25.6%	-53.53

Appendix C EPA Methodology Tabulation
Gasoline Equipment Review Technical Report

Upper End Throughput

Year	QORVri	Cfi	GCi	Increment	Delta (EPA)	Delta (PSCAA)	VOC Tons increase from Stage II removal
2024	87%	0.07	2553880000	8.2%	-16.3%	-13.7%	1955.41
2025	89%	0.07	2553880000	7.4%	-17.4%	-14.8%	1759.56
2026	90%	0.07	2553880000	6.6%	-18.6%	-15.9%	1563.70
2027	91%	0.07	2553880000	5.8%	-19.7%	-17.0%	1367.85
2028	92%	0.07	2553880000	4.9%	-20.9%	-18.1%	1171.99
2029	93%	0.07	2553880000	4.1%	-22.1%	-19.3%	976.14
2030	94%	0.07	2553880000	3.3%	-23.2%	-20.4%	780.28
2031	96%	0.07	2553880000	2.5%	-24.4%	-21.5%	584.42
2032	97%	0.07	2553880000	1.6%	-25.5%	-22.6%	388.57
2033	98%	0.08	2553880000	0.8%	-26.7%	-23.7%	192.71
2034	99%	0.08	2553880000	0.0%	-27.8%	-24.8%	-3.14
2035	100%	0.08	2553880000	-0.6%	-28.6%	-25.6%	-145.14
2036	100%	0.08	2553880000	-0.6%	-28.6%	-25.6%	-145.14
2037	100%	0.08	2553880000	-0.6%	-28.6%	-25.6%	-145.14
2038	100%	0.08	2553880000	-0.6%	-28.6%	-25.6%	-145.14
2039	100%	0.08	2553880000	-0.6%	-28.6%	-25.6%	-145.14
2040	100%	0.08	2553880000	-0.6%	-28.6%	-25.6%	-145.14