

Appendix H

RFP, Quantitative Milestones, and Contingency



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H. RFP, QUANTITATIVE MILESTONES, AND CONTINGENCY

Pursuant to federal Clean Air Act (CAA) requirements, states are required to submit a state implementation plan (SIP) to EPA for areas designated nonattainment of National Ambient Air Quality Standards (NAAQS, or standards) for PM_{2.5}.¹ This appendix fulfills the following federal Clean Air Act requirements for PM_{2.5} nonattainment areas as identified in the CAA, codified in the code of federal regulations,² and clarified in the 2016 PM_{2.5} Implementation Rule:³

1. Reasonable Further Progress [CAA §172(c)(2)]
2. Quantitative Milestones [CAA §189(c)]
3. Contingency [CAA §172(c)(9)]

For standard-specific demonstrations of federal requirements refer to the following plan chapters:

- 1997 PM_{2.5} Standard Demonstration – Chapter 5
- 2006 PM_{2.5} Standard Demonstration – Chapter 6
- 2012 PM_{2.5} Standard Demonstration – Chapter 7

H.1 REASONABLE FURTHER PROGRESS (RFP)

The term “reasonable further progress” means such annual incremental reductions in emissions of the relevant air pollutant as are required for the purpose of ensuring attainment of the applicable NAAQS by the applicable date.⁴ Each attainment plan for a PM_{2.5} nonattainment area shall include an RFP plan that demonstrates that sources in the area will achieve such annual incremental reductions in emissions of PM_{2.5} and PM_{2.5} plan precursors as are necessary to ensure attainment of the applicable PM_{2.5} NAAQS as expeditiously as practicable. As demonstrated in this Plan (Appendices G and K), CARB modeling determined ammonia, VOCs, and SO_x do not contribute significantly to PM_{2.5} levels that exceed the 1997, 2006, or 2012 NAAQS in the Valley. As such, the demonstrations in this appendix appropriately address direct PM_{2.5} emissions and NO_x.

Regardless of whether a state is submitting a Moderate area plan, a Serious area plan, or a plan required pursuant to CAA §189(d) (5% Plan), to satisfy the statutory requirements for RFP at CAA §172(c)(2), a state must submit an RFP plan.

¹ Clean Air Act, Title 1, Part D Subpart 1 and CAA Title 1, Part D Subpart 4

² CFR part 51 – Requirements for preparation, adoption, and submittal of implementation Plans

³ Fine Particulate Matter National Ambient Air Quality Standards: State Implementation Plan Requirements; Final Rule. 81 Fed. Reg. 164, pp. 58010-58162. (2016, August 24). (to be codified at 40 CFR Parts 50, 51, and 93). <https://www.gpo.gov/fdsys/pkg/FR-2016-08-24/pdf/2016-18768.pdf>

⁴ Clean Air Act Section 171(1)

Linear emission reductions

Historically, EPA's interpretation of the RFP requirement has been "generally linear progress" from the base year to the attainment year, demonstrated at RFP milestone years.⁵

Stepwise emission reductions

In its most recent Implementation Rule, EPA clarified that RFP requirements may be satisfied through generally linear progress, or through a stepwise demonstration. Stepwise emissions reductions would be slower than "generally linear" reductions for certain periods, and then would decline sharply (due to implementation of a new emission reduction program, or new operation of control technology on one or more stationary sources).

For example, in one area new emission standards for mobile sources may achieve reductions in a generally linear manner over time, as a portion of the existing vehicle fleet is replaced each year with new vehicles meeting the more stringent standards. In another area, regulations to reduce emissions from certain stationary source sectors could have a single compliance date by which controls must be in place, which could result in a significant drop in emissions in a "stepwise" manner over a relatively short period. In the first case, the EPA expects that, so long as the attainment date is as expeditious as practicable, then generally linear progress toward attainment by that date would satisfy the RFP requirement. In the second case, where progress is slower than generally linear, the state is required to submit a clear rationale and supporting information to explain why generally linear progress is not appropriate (e.g., due to the nature of the nonattainment problem, the types of sources contributing to PM_{2.5} levels in the area and the implementation schedule for control requirements at such sources).

H.1.1 RFP PLAN REQUIREMENTS

Each attainment plan for a PM_{2.5} nonattainment area shall include an RFP plan that demonstrates that sources in the area will achieve such annual incremental reductions in emissions of direct PM_{2.5} and PM_{2.5} plan precursors as are necessary to ensure attainment of the applicable PM_{2.5} NAAQS as expeditiously as practicable.^{6,7}

The RFP plan shall include the following:⁸

1. A schedule describing the implementation of control measures during each year of the applicable attainment Plan.
2. RFP projected emissions for direct PM_{2.5} and NO_x for each applicable milestone year, based on the anticipated implementation schedule for control measures.
3. An analysis that presents the schedule of control measures and estimated emissions changes to be achieved by each milestone year, and that demonstrates that the control strategy will achieve RFP toward attainment

⁵ 72 FR 20633, codified at 40 CFR 51 Subpart Z §51.1000 (definitions)

⁶ 40 CFR §51.1012 Reasonable further progress requirements.

⁷ Clean Air Act Section 171(1)

⁸ 40 CFR §51.1012

between the base year and the attainment year. The analysis shall rely on information from the base year inventory and the attainment projected inventory for the nonattainment area, in addition to the RFP projected emissions required.

4. An analysis that demonstrates that by the end of the calendar year for each milestone date for the area, pollutant emissions will be at levels that reflect either generally linear progress or stepwise progress in reducing emissions on an annual basis between the base year and the attainment year. A demonstration of stepwise progress must be accompanied by appropriate justification for the selected implementation schedule.
5. At the state's election, an analysis that identifies air quality targets associated with the RFP projected emissions identified for the milestone years at the design value monitor locations.

H.1.2 DETERMINATION OF RFP YEARS

The baseline year for this Plan for all three PM2.5 standards is 2013. Analyses and modeling performed for this Plan demonstrate the following attainment dates to be the most expeditious attainment dates practicable:

- 1997 annual PM2.5 standard attainment year is 2020
- 2006 24-hour PM2.5 standard attainment year is 2024
- 2012 annual PM2.5 standard attainment year is 2025

RFP years for an attainment Plan for a particulate matter air quality standard shall be determined by the quantitative milestone deadlines.⁹ Refer to the Quantitative Milestone Requirements section below to see how milestone years were determined for each NAAQS.

Table H-1 Summary of Significant RFP and Quantitative Milestone Dates

Federal PM2.5 Standard	Base Year	Attainment Year	RFP and Quantitative Milestone Years
1997 PM2.5 NAAQS	2013	2020	2017, 2020, 2023*
2006 PM2.5 NAAQS	2013	2024	2017, 2020, 2023, 2026*
2012 PM2.5 NAAQS	2013	2025	2019, 2022, 2025, 2028*

* 2023, 2026, and 2028 are not RFP milestone years. They are Quantitative Milestone year only. All other dates are both RFP and Quantitative Milestone years.

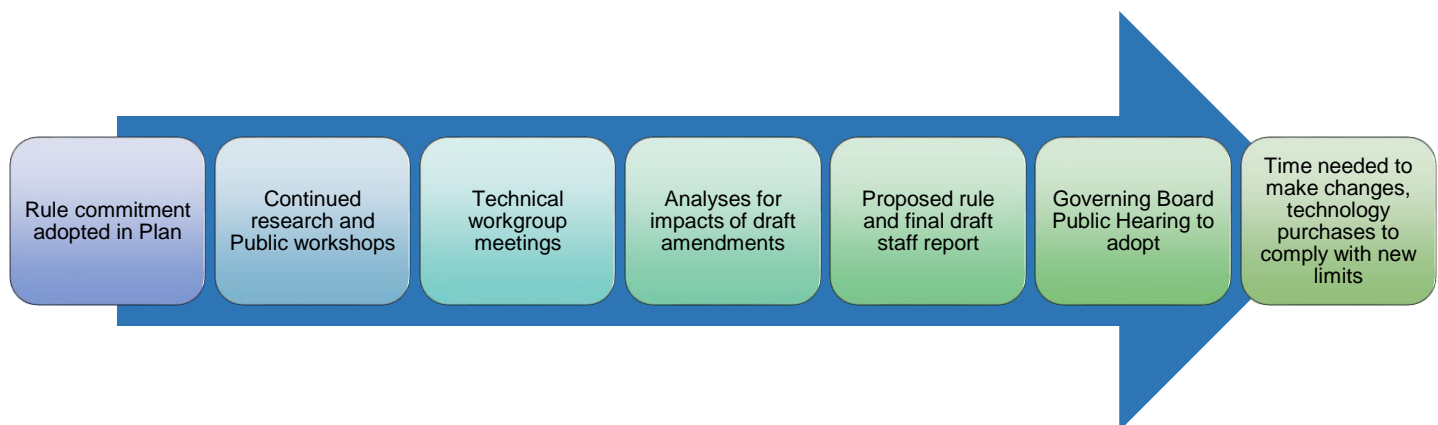
⁹ 40 CFR 51.1012(a)(4)

H.1.3 RFP MILESTONE REQUIREMENT TARGETS AND ATTAINMENT DEMONSTRATIONS

As previously stated, RFP means such annual incremental reductions in emissions of the relevant air pollutant as are required or may reasonably be required by EPA for the purpose of ensuring attainment of the applicable national ambient air quality standard by the applicable date. This section of this Plan demonstrates satisfaction of CAA RFP requirements. In concurrence with CAA requirements this demonstration concludes at the attainment year for each NAAQS. The following analysis demonstrates linear RFP for the 1997 PM2.5 standard and stepwise RFP for the 2006 and 2012 PM2.5 standards. The 2006 and 2012 PM2.5 RFP demonstration is stepwise due to the necessary time required by the District and CARB to go through the process necessary to amend rules, develop programs, and implement the emission reduction measures.

The regulatory measures need time to undergo a robust public rulemaking process and implementation after the Plan adoption. In these efforts, the District and CARB is committed to a transparent public process that includes stakeholder, industry, and other-agency input at every step possible. As illustrated in Figure H-1, the rule amendment process is a robust process that can take significant time, sometimes years, to complete and implement.

Figure H-1 Public Process of Rule Development and Implementation



For the incentive-based measures, the total emission reductions can only be achieved over multiple years due to availability of willing participants and significant funding required. Modeling demonstrates attainment occurs in the Valley as expeditiously as practicable.

H.1.4 RFP CALCULATION METHODOLOGY AND DEMONSTRATION

1. Determine the emissions inventory of the Valley with the Plan control strategy for the baseline year, the RFP years, and the attainment year.

Table H-2 Annual Average Emission Inventory (tpd) (see Appendix B)

Pollutant	2013	2017	2019	2020	2021	2022	2023	2024	2025
Direct PM2.5	62.5	58.9	59.2	59.0	58.5	58.4	58.3	58.3	58.3
NOx	317.2	233.3	214.5	203.3	191.0	179.8	153.6	148.9	143.7

2. Identify additional annual average emission reductions from Plan control measure commitments (see Chapter 4) between the Plan base year and the attainment year.

Table H-3 Annual Average Emissions Reduced from Control Measure Commitments (tpd)

Pollutant	2013	2017	2019	2020	2021	2022	2023	2024	2025
Direct PM2.5	0	0	0	0	0	0	0	1.30	1.30
NOx	0	0	0	0	0	0	0	33.88	33.88

3. Subtract the emission reductions from Plan control measure commitments (Table H-3) from the emission inventory (Table H-2) to determine the Plan inventory.

Table H-4 Projected Attainment Emissions Inventory after Control Measures (tpd)

Pollutant	2013	2017	2019	2020	2021	2022	2023	2024	2025
Direct PM2.5	62.5	58.9	59.2	59.0	58.5	58.4	58.3	57.0	57.0
NOx	317.2	233.3	214.5	203.3	191.0	179.8	153.6	115.0	109.8

4. Determine the total reductions from the 2013 baseline emission inventory that must be achieved to reach attainment by subtracting Plan base year (2013) emissions (Table H-2) from attainment year emissions after controls (Table H-4).

Table H-5 Total Reductions Necessary to Reach Attainment (tpd)

Pollutant	A	B	C	D	E	F	G
	2013 Plan Base Year Emissions	1997 NAAQS Attainment Emissions (2020)	1997 NAAQS Reductions Needed	2006 NAAQS Attainment Emissions (2024)	2006 NAAQS Reductions Needed	2012 NAAQS Attainment Emissions (2025)	2012 NAAQS Reductions Needed
	(Table H-2)	(Table H-4)	(A – B)	(Table H-4)	(A – D)	(Table H-4)	(A – F)
Direct PM2.5	62.53	59.00	3.53	57.02	5.51	57.04	5.49
NOx	317.21	203.25	113.96	148.87	168.34	109.82	207.39

5. Determine the fraction of reductions that are achieved in each RFP milestone year.

Where (milestone year – base year) / (attainment year – base year)

Table H-6 Milestone Year Fractions Achieved in Each Milestone Year

	Milestone Years		
	2017	2020	2023
1997 NAAQS	57.10%	100.00%	n/a
2006 NAAQS	36.40%	63.60%	90.90%
	2019	2022	2025
2012 NAAQS	50.00%	75.00%	100.00%

6. Determine the RFP target emissions levels using reduction fractions.

Table H-7 Target Emissions Levels for RFP Milestone Years (tons per day)

	A	B	C	D	E	F	G	H
			2017		2020		2023	
1997 NAAQS	2013 Base Year Emission Inventory	Reductions Needed To Attain NAAQS	Tons to be Reduced	RFP Target Emissions Level	Tons to be Reduced	RFP Target Emissions Level	Tons to be Reduced	RFP Target Emissions Level
	(Table H-2)	(Table H-5)	(B x Table H-6)	(A – C)	(B x Table H-6)	(A – E)	(B x Table H-6)	(A – G)
Direct PM2.5	62.53	3.53	2.02	60.51	3.53	59.00	n/a	n/a
NOx	317.21	113.96	65.07	252.14	113.96	203.25	n/a	n/a
2006 NAAQS								
Direct PM2.5	62.53	5.51	2.01	60.52	3.50	59.03	5.01	57.52
NOx	317.21	168.34	61.28	255.93	107.06	210.15	153.02	164.19
			2019		2022		2025	
2012 NAAQS	2013 Base Year Emission Inventory	Reductions Needed to Attain NAAQS	Tons to be Reduced	RFP Target Emissions level	Tons to be Reduced	RFP Target Emissions Level	Tons to be Reduced	RFP Target Emissions Level
	(Table H-2)	(Table H-5)	(B x Table H-6)	(A – C)	(B x Table H-6)	(A – E)	(B x Table H-6)	(A – G)
Direct PM2.5	62.53	5.49	2.75	59.79	4.12	58.41	5.49	57.04
NOx	317.21	207.39	103.70	213.52	155.54	161.67	207.39	109.82

7. Compare RFP target emissions level to the projected emissions inventory to demonstrate RFP.

Table H-8 Demonstration of Compliance with Linear RFP Targets for 1997 NAAQS

1997 NAAQS	2017			2020		
	RFP target emissions level	Attainment Emissions Inventory	Linear RFP target met?	RFP target emissions level	Attainment Emissions Inventory	Linear RFP target met?
	(Table H-7)	(Table H-2)		(Table H-7)	(Table H-2)	
Direct PM2.5	60.51	58.93	YES	59.00	59.00	YES
NOx	252.14	233.31	YES	203.25	203.25	YES

Table H-9 Demonstration of Compliance with Stepwise RFP Targets for 2006 NAAQS

2006 NAAQS	2017			2020			2023		
	RFP target emissions level	Attainment Emissions Inventory	Stepwise RFP target met?	RFP target emissions level	Attainment Emissions Inventory	Stepwise RFP target met?	RFP target emissions level	Attainment Emissions Inventory	Stepwise RFP target met?
	(Table H-7)	(Table H-2)		(Table H-7)	(Table H-2)		(Table H-7)	(Table H-2)	
Direct PM2.5	60.29	58.93	YES	59.03	59.03	YES	58.27	58.27	YES
NOx	255.93	233.31	YES	210.15	203.25	YES	164.19	153.63	YES

Table H-10 Demonstration of Compliance with Stepwise RFP Targets for 2012 NAAQS

2012 NAAQS	2019			2022			2025		
	RFP target emissions level	Attainment Emissions Inventory	Stepwise RFP target met?	RFP target emissions level	Attainment Emissions Inventory	Stepwise RFP target met?	RFP target emissions level	Attainment Emissions Inventory	Stepwise RFP target met?
	(Table H-7)	(Table H-2)		(Table H-7)	(Table H-2)		(Table H-7)	(Table H-2)	
Direct PM2.5	59.79	59.18	YES	58.42	58.42	YES	57.04	57.04	YES
NOx	214.45	214.45	YES	179.75	179.75	YES	109.82	109.82	YES

H.2 QUANTITATIVE MILESTONES

Consistent with CAA §189(c)(1), the state must submit in each attainment Plan for a PM2.5 nonattainment area specific quantitative milestones that demonstrate reasonable further progress toward attainment of the applicable PM2.5 NAAQS in the area.

H.2.1 QUANTITATIVE MILESTONE REQUIREMENTS

Quantitative milestones in a State Implementation Plan shall meet the following requirements:¹⁰

1. Nonattainment areas initially classified as Moderate

- a. Milestones achieved no later than a milestone date of 4.5 years and 7.5 years from the date of designation of the area.
- b. Milestones that provide for objective evaluation of reasonable further progress toward timely attainment of the applicable PM2.5 NAAQS in the area. At a minimum, each quantitative milestone Plan must include a milestone for tracking progress achieved in implementing the SIP control measures, including RACM and RACT, by each milestone date.

2. Areas reclassified as Serious

- a. For areas that can attain the NAAQS by the end of the tenth calendar year following the effective date of designation, milestone dates of 7.5 years and 10.5 years respectively, from the date of designation of the area
- b. For areas that cannot attain the NAAQS by the end of the tenth calendar year following the effective date of designation, milestone dates of 7.5 years, 10.5 years, and 13.5 years from the date of designation. If the attainment date is beyond 13.5 years from the date of designation, such Plan shall also contain a quantitative milestone to be achieved no later than milestones dates of 16.5 years, respectively from the date of designation of the area.
- c. Milestones that provide for objective evaluation of RFP toward timely attainment of the NAAQS in the area. At a minimum each quantitative milestone Plan must include a milestone for tracking progress achieved in implementing SIP control measures, including BACM and BACT by each milestone date.

3. Serious areas that fail to attain by the applicable Serious area attainment date

- a. If the attainment Plan is due prior to a date 13.5 years from designation of the area, then the Plan shall contain milestones to be achieved by no later than a milestone date of 13.5 years from the date of designation of the area, and every three years thereafter, until the milestone date that falls within three years *after* the applicable attainment date.
- b. If the attainment Plan is due later than a date 13.5 years from designation, then the Plan shall contain milestones to be achieved by no later than a milestone date of 16.5 years from the date of designation of the area, and

¹⁰ 40 CFR §51.1013 Quantitative milestone requirements.

- every three years thereafter, until the milestone date that falls within three years *after* the applicable attainment date.
- c. Milestones that provide for objective evaluation of RFP toward timely attainment of the NAAQS. At a minimum, each quantitative milestone Plan must include a milestone for tracking progress achieved in implementing the SIP control measures by each milestone date.

4. Areas designated for 1997 and/or 2006 PM2.5 NAAQS before January 15, 2015

- a. Each attainment Plan submission for an area designated nonattainment for the 1997 and/or 2006 PM2.5 NAAQS before January 15, 2015, shall contain quantitative milestone to be achieved no later than 3 years after December 31, 2014, and every three years thereafter until the milestone date that falls within three years *after* the applicable attainment date.

H.2.1.1 1997 NAAQS

As discussed throughout this Plan, EPA designated the Valley for the 1997 NAAQS on January 5, 2005 (see Chapter 1 for a timeline). Additionally, the Valley failed to attain by the applicable Serious area attainment date. As such, the quantitative milestones for this Plan are guided by requirement 3.c and 4 above. The Valley will attain the 1997 NAAQS in 2020. See Table H-11 for milestone years. Table H-1

H.2.1.2 2006 NAAQS

As discussed throughout this Plan, EPA designated the Valley for the 2006 NAAQS on November 13, 2009 (see Chapter 1 for a timeline). The Valley is designated Serious nonattainment for this standard. As such, the quantitative milestones for this Plan are guided by requirement 2.c and 4 above. The Valley will attain the 2006 NAAQS in 2024. See Table H-11 for milestone years.

H.2.1.3 2012 NAAQS

The Valley is currently designated Moderate for this NAAQS. Moderate area requirements and request for reclassification requirements were satisfied through the District's *2015 Plan for the 1997 PM2.5 Standard*, adopted and submitted to CARB in 2016. The District is proactively satisfying Serious area requirements for this NAAQS in this Plan. The quantitative milestones for this Plan are guided by requirements 1 and 2 above. The Valley will attain the 2012 NAAQS in 2025. See Table H-11 for quantitative milestone years.

Table H-11 Quantitative Milestone Dates and Deadlines

NAAQS	Quantitative Milestone Dates	Milestone Report Due Date
1997	December 31: 2017, 2020, 2023	March 31: 2018, 2021, 2024
2006	December 31: 2017, 2020, 2023, 2026	March 31: 2018, 2021, 2024, 2027
2012	October 15: 2019, 2022, 2025, 2028	January 15: 2020, 2023, 2026, 2029

H.2.3 STATIONARY SOURCES QUANTITATIVE MILESTONE COMMITMENTS

The District will report on milestones for implementation of stationary source reductions set forth in District Board-adopted attainment Plans as well as this 2018 PM_{2.5} Plan.

H.2.3.1 1997 NAAQS Quantitative Milestones

The 1997 65 µg/m³ 24-hour and 15 µg/m³ annual standards have quantitative milestone years in 2017, 2020, and 2023.

2017

For the 2018 milestone report for the 2017 milestone, the District is reporting on the following milestones (see Attachment B):

- Implementation of amendments to the District's residential wood burning program from 2014 through 2017 that required lower No Burn thresholds for high polluting wood burning heaters and fireplaces and enhancements to the District Burn Cleaner incentive program;
- Implementation of Rule 4308 (Boilers, Steam Generators, and Process Heaters (0.075 to <2 MMBtu/hr)) regulation requirements from 2015 through 2017 that required lower NO_x emission limits for instantaneous water heaters with a rated heat input of 0.075 to 0.4 MMBtu/hr;
- Implementation of Rule 4354 (Glass Melting Furnaces) regulation requirements from 2013 through 2017 that required lower emission limits for NO_x, SO_x, and PM₁₀ on glass melting furnaces in the Valley;
- Implementation of Rule 4702 (Internal Combustion Engines) regulation requirements from 2013 through 2017 that required lower NO_x and SO_x emission limits for various types of engines;
- Implementation of Rule 4902 (Residential Water Heaters) regulation requirements from 2013 through 2017 that required lower NO_x emission limits for new residential natural gas-fired water heaters; and
- Implementation of Rule 4905 (Reduction of NO_x Emissions from Natural Gas-Fired, Fan-Type Central Furnaces) regulation requirements from 2015 through 2017 that required lower NO_x emission limits for natural gas-fired, fan-type, central furnaces.

2020

For the 2020 milestone year, the District is reporting on the following milestones:

- The status of SIP measures adopted between 2017 and 2020 as per the schedule included in the adopted Plan.

2023

For the 2023 milestone year, the District is reporting on the following milestones:

- The status of SIP measures adopted between 2017 and 2020 as per the schedule included in the adopted Plan.

H.2.3.2 2006 NAAQS Quantitative Milestones

The 2006 35 µg/m³ 24-hour standard has quantitative milestone years in 2017, 2020, 2023, and 2026.

2017

For the 2017 milestone year, the District is reporting on the following milestones (see Attachment B to this Plan):

- Implementation of amendments to the District's residential wood burning program from 2014 through 2017 that required lower No Burn thresholds for high polluting wood burning heaters and fireplaces and enhancements to the District Burn Cleaner incentive program;
- Implementation of Rule 4308 (Boilers, Steam Generators, and Process Heaters (0.075 to <2 MMBtu/hr)) regulation requirements from 2015 through 2017 that required lower NO_x emission limits for instantaneous water heaters with a rated heat input of 0.075 to 0.4 MMBtu/hr;
- Implementation of Rule 4354 (Glass Melting Furnaces) regulation requirements from 2013 through 2017 that required lower emission limits for NO_x, SO_x, and PM₁₀ on glass melting furnaces in the Valley;
- Implementation of Rule 4702 (Internal Combustion Engines) regulation requirements from 2013 through 2017 that required lower NO_x and SO_x emission limits for various types of engines;
- Implementation of Rule 4902 (Residential Water Heaters) regulation requirements from 2013 through 2017 that required lower NO_x emission limits for new residential natural gas-fired water heaters; and
- Implementation of Rule 4905 (Reduction of NO_x Emissions from Natural Gas-Fired, Fan-Type Central Furnaces) regulation requirements from 2015 through 2017 that required lower NO_x emission limits for natural gas-fired, fan-type, central furnaces.

2020

For the 2020 milestone year, the District is reporting on the following milestones:

- The status of SIP measures adopted between 2017 and 2020 as per the schedule included in the adopted Plan, including *Residential Wood Burning Strategy* and *Commercial Under-Fired Charbroiler* incentive-based strategy.

2023

For the 2023 milestone year, the District is reporting on the following milestones:

- The status of SIP measures adopted between 2020 and 2023 as per the schedule included in the adopted Plan, including *Residential Wood Burning Strategy* and *Commercial Under-Fired Charbroiler* incentive-based strategy.

2026

For the 2026 milestone year, the District is reporting on the following milestones:

- Implementation of amendments to *Residential Wood Burning Strategy*, including any regulatory amendments and enhancements to the District Burn Cleaner incentive program;
- Implementation of amendments to the *Commercial Under-Fired Strategy*, including any regulatory amendments and implementation of related incentive-based strategy
- The status of SIP measures adopted between 2023 and 2026 as per the schedule included in the adopted Plan.

H.2.3.3 2012 NAAQS Quantitative Milestones

The 2012 12 $\mu\text{g}/\text{m}^3$ annual standard has quantitative milestone years in 2019, 2022, 2025, and 2028.

2019

For the 2019 milestone year, the District is reporting on the following milestones:

- The status of SIP measures adopted between 2017 and 2019 as per the schedule included in the adopted Plan, including *Residential Wood Burning Strategy* and *Commercial Under-Fired Charbroiler* incentive-based strategy.

2022

For the 2022 milestone year, the District is reporting on the following milestones:

- The status of SIP measures adopted between 2019 and 2022 as per the schedule included in the adopted Plan, including *Residential Wood Burning Strategy* and *Commercial Under-Fired Charbroiler* incentive-based strategy.

2025

For the 2025 milestone year, the District is reporting on the following milestones:

- Implementation of amendments to *Residential Wood Burning Strategy*, including any regulatory amendments and enhancements to the District Burn Cleaner incentive program;
- Implementation of amendments to the *Commercial Under-Fired Strategy*, including any regulatory amendments and implementation of related incentive-based strategy

- The status of SIP measures adopted between 2022 and 2025 as per the schedule included in the adopted Plan.

2028

For the 2028 milestone year, the District is reporting on the following milestones:

- Implementation of amendments to *Residential Wood Burning Strategy*, including any regulatory amendments and enhancements to the District Burn Cleaner incentive program;
- Implementation of amendments to the *Commercial Under-Fired Strategy*, including any regulatory amendments and implementation of related incentive-based strategy
- The status of SIP measures adopted between 2023 and 2026 as per the schedule included in the adopted Plan.

H.2.4 MOBILE SOURCES QUANTITATIVE MILESTONE COMMITMENTS

[This section provided by the California Air Resources Board]

Mobile Source Quantitative Milestones for the San Joaquin Valley

CARB will report on milestones for implementation of mobile source reductions set forth in the *2016 State Strategy for the State Implementation Plan* (State SIP Strategy) and new measures in the *Proposed San Joaquin Valley Supplement to the 2016 State Strategy for the State Implementation Plan* (Valley State SIP Strategy).

The 1997 **65** µg/m³ 24-hour and **15** µg/m³ annual standards have quantitative milestone years in **2017**, **2020**, and **2023**.

2017

For the 2017 milestone year, CARB is reporting on the following three milestones:

1. Implementation of the *On-Road Heavy-Duty Diesel Vehicles (In-Use) Regulation* (the Truck and Bus Regulation) between 2012 and 2017 that required particulate filters and cleaner engine standards on existing California heavy-duty diesel trucks and buses;
2. Implementation of the *Advanced Clean Cars Program* (the ACC Program) between 2014 and 2017 that required manufacturers of new light-duty passenger vehicles sold in California to limit emissions; and
3. Implementation of *In-Use Off-Road Diesel-Fueled Fleets Regulation* (the Off-Road Regulation) that began in 2014 for large fleets and in 2017 for medium fleets and limited emissions from existing off-road diesel vehicles operated in California.

2020

For the 2020 milestone year, CARB is reporting on the following two milestones:

1. Implementation of the *On-Road Heavy-Duty Diesel Vehicles (In-Use) Regulation* (the Truck and Bus Regulation) between 2017 and 2020 that required particulate

filters and cleaner engine standards on existing California heavy-duty diesel trucks and buses; and

2. The status of SIP measures adopted between 2017 and 2020, including *Advanced Clean Cars 2* and the *Heavy-Duty Vehicle Inspection and Maintenance Program* as part of the *Lower In-Use Emission Performance Level* measure.

2023

For the 2023 milestone year, CARB is reporting on the following two milestones:

1. Implementation of the *On-Road Heavy-Duty Diesel Vehicles (In-Use) Regulation* (the Truck and Bus Regulation) between 2020 and 2023 that required particulate filters and cleaner engine standards on existing California heavy-duty diesel trucks and buses; and
2. Implementation of the California *Low-NO_x Engine Standard* for new on-road heavy-duty engines used in medium- and heavy-duty trucks purchased in California.

The 2006 **35** µg/m³ 24-hour standard has quantitative milestone years in **2017**, **2020**, **2023**, and **2026**.

2017

For the 2017 milestone year, CARB is reporting on the following three milestones:

1. Implementation of the *On-Road Heavy-Duty Diesel Vehicles (In-Use) Regulation* (the Truck and Bus Regulation) between 2012 and 2017 that required particulate filters and cleaner engine standards on existing California heavy-duty diesel trucks and buses;
2. Implementation of the *Advanced Clean Cars Program* (the ACC Program) between 2014 and 2017 that required manufacturers of new light-duty passenger vehicles sold in California to limit emissions; and
3. Implementation of *In-Use Off-Road Diesel-Fueled Fleets Regulation* (the Off-Road Regulation) that began in 2014 for large fleets and in 2017 for medium fleets and limited emissions from existing off-road diesel vehicles operated in California.

2020

For the 2020 milestone year, CARB is reporting on the following two milestones:

1. Implementation of the *On-Road Heavy-Duty Diesel Vehicles (In-Use) Regulation* (the Truck and Bus Regulation) between 2017 and 2020 that required particulate filters and cleaner engine standards on existing California heavy-duty diesel trucks and buses; and
2. The status of SIP measures adopted between 2017 and 2020, including *Advanced Clean Cars 2* and the *Heavy-Duty Vehicle Inspection and Maintenance Program*.

2023

For the 2023 milestone year, CARB is reporting on the following two milestones:

1. Implementation of the *On-Road Heavy-Duty Diesel Vehicles (In-Use) Regulation* (the Truck and Bus Regulation) between 2020 and 2023 that required particulate filters and cleaner engine standards on existing California heavy-duty diesel trucks and buses; and

2. Implementation of the California *Low-NO_x Engine Standard* for new on-road heavy-duty engines used in medium- and heavy-duty trucks purchased in California.

2026

For the 2026 milestone year, CARB is reporting on the following two milestones:

1. Identify the number of pieces of agricultural equipment turned over to Tier 4 Final due to the *Accelerated Turnover of Agricultural Tractors Measure* through 2026; and
2. Identify the number of trucks and buses turned over to a low-NO_x engine or cleaner due to the *Accelerated Turnover of Trucks and Buses Measure* through 2026.

The 2012 12 µg/m³ annual standard has quantitative milestone years in **2019**, **2022**, **2025**, and **2028**.

2019

For the 2019 milestone year, CARB is reporting on the following three milestones:

1. Implementation of the *On-Road Heavy-Duty Diesel Vehicles (In-Use) Regulation* (the Truck and Bus Regulation) between 2017 and 2019 that required particulate filters and cleaner engine standards on existing California heavy-duty diesel trucks and buses;
2. Implementation of *In-Use Off-Road Diesel-Fueled Fleets Regulation* (the Off-Road Regulation) that began in 2014 for large fleets and in 2017 for medium fleets and limited emissions from existing off-road diesel vehicles operated in California.
3. The status of SIP measures adopted between 2017 and 2019, including the California *Low-NO_x Engine Standard* for new on-road heavy-duty engines used in medium- and heavy-duty trucks purchased in California.

2022

For the 2022 milestone year, CARB is reporting on the following two milestones:

1. Implementation of the *On-Road Heavy-Duty Diesel Vehicles (In-Use) Regulation* (the Truck and Bus Regulation) between 2019 and 2022 that required particulate filters and cleaner engine standards on existing California heavy-duty diesel trucks and buses;
2. The status of SIP measures adopted between 2019 and 2022, including *Advanced Clean Cars 2* and the *Heavy-Duty Vehicle Inspection and Maintenance Program*.

2025

For the 2025 milestone year, CARB is reporting on the following three milestones:

1. Identify the number of pieces of agricultural equipment turned over to Tier 4 Final due to the *Accelerated Turnover of Agricultural Tractors Measure* through 2025;
2. Identify the number of trucks and buses turned over to a low-NO_x engine or cleaner due to the *Accelerated Turnover of Trucks and Buses Measure* through 2025; and
3. The status of SIP measures adopted between 2022 and 2025, including the proposed *Cleaner In-Use Agricultural Equipment Measure* to incentivize the penetration of cleaner agricultural equipment used in California.

2028

For the 2028 milestone year, CARB is reporting on the following milestone:

1. Implementation of the *Advanced Clean Cars 2* requirements between 2026 and 2028.

H.3 CONTINGENCY MEASURES

Pursuant to CAA §172(c)(9) and 40 CFR § 51.1014, all PM2.5 attainment plans must contain contingency measures. Contingency measures are additional control measures to be implemented in the event that EPA issues final rulemaking that the Valley failed to meet a regulatory requirement necessitating implementation of a contingency measure.

Pursuant to the Clean Air Act (Act) §172(c)(9), contingency measures must be fully adopted rules or control measures that are ready to be implemented quickly upon a determination by the EPA that a failure occurred. Contingency measures take effect without significant additional action by the state or local agency or by EPA.

Requirements are codified in the code of federal regulations 51 CFR §51.1014.

Pursuant to §51.1014(b), contingencies must meet the following requirements:

- The contingency measures shall consist of control measures that are not otherwise included in the control strategy or that achieve emissions reductions not otherwise relied upon in the control strategy for the area,
- Each contingency measure shall specify the timeframe within which its requirements become effective following a determination by EPA,
- The attainment plan submission shall contain a description of any specific trigger mechanisms for the contingency measures and specify a schedule for implementation.

In addition to the above-mentioned requirements, a recent court case, *Bahr v. EPA* (Bahr), has provided further interpretation of implementation requirements. EPA staff has interpreted the decision in Bahr to mean that contingency measures must include a future action that that would be activated (“triggered”) should EPA issue a final rulemaking that the Valley failed to meet a regulatory requirement necessitating implementation of a contingency measure.

Areas like the Valley that have significant nonattainment challenges have developed several generations of aggressive and far-reaching emission reduction measures to meet various Clean Air Act requirements. When viable emission reductions are identified, they are implemented to contribute to expeditious attainment. Reductions are not usually held in reserve to be used only if an area fails to meet a milestone. As a result, developing contingency measures for District attainment plans is a significant challenge. From extensive analyses and discussions, the District and CARB developed the following contingency commitments for this Plan.

District Contingency Commitment

The District will amend District Rule 4901 (Wood Burning Fireplaces and Wood Burning Heaters) to include a requirement in the rule with a trigger that that would be activated should EPA issue a final rulemaking that the Valley failed to meet a regulatory requirement necessitating implementation of a contingency measure. Effective 60 days after the EPA final action, the trigger would impose lower residential wood burning curtailment levels in any county that has failed to meet the regulatory requirement necessitating implementation of contingency to the following:

Consistent with the proposed Rule 4901 enhancements in hot-spot areas, impose the following requirements:

- No Burn for non-registered units at or above 12 $\mu\text{g}/\text{m}^3$
- No burn for all devices above 35 $\mu\text{g}/\text{m}^3$

CARB Contingency Commitment

[This section provided by the California Air Resources Board]

Basic requirements for contingency measures are defined in the Clean Air Act (Act). The Act's General Preamble and U.S. EPA guidance also provide a framework for implementing this provision of the Act. In addition, a recent court case, *Bahr v. U.S. EPA (Bahr)*, has provided further interpretation of implementation requirements. U.S. EPA staff has interpreted the decision in *Bahr* to mean that contingency measures must include a future action triggered by a failure to attain or failure to make reasonable further progress.

Contingency measures are required for all federal PM_{2.5} standards. CARB approved a contingency measure for the 65 $\mu\text{g}/\text{m}^3$ 24-hour and 15 $\mu\text{g}/\text{m}^3$ annual PM_{2.5} standards as a revision to the SIP on September 28, 2017 (Resolution 17-27). The contingency measure included complementary elements that addressed the contingency measure requirements of the Act as interpreted in *Bahr*, namely a trigger mechanism directing the CARB Executive Officer to allocate resources and enhance enforcement activities in the San Joaquin Valley to provide additional NO_x reductions in the event that U.S. EPA determines the San Joaquin Valley failed to attain in 2020, and new NO_x emission reductions that provide for approximately one year's worth of progress that will be achieved through ongoing implementation of CARB's mobile source program.

The *2018 Updates to the California State Implementation Plan* (2018 SIP Update, released by CARB September 21, 2018) addresses the contingency measure requirements of the Act as interpreted by U.S. EPA in response to *Bahr* for the 35 $\mu\text{g}/\text{m}^3$ 24-hour and 12 $\mu\text{g}/\text{m}^3$ annual standards in a similar way to the adopted contingency measure mentioned above. The 2018 SIP Update includes a trigger mechanism directing the CARB Executive Officer to allocate resources and enhance enforcement activities in nonattainment areas in the State, including the Valley, to provide additional NO_x reductions in the event that U.S. EPA determines the area failed to meet an RFP

milestone or failed to attain the 35 $\mu\text{g}/\text{m}^3$ 24-hour and/or 12 $\mu\text{g}/\text{m}^3$ annual PM2.5 standards.

Additional NOx emission reductions that are expected to occur due to ongoing State mobile source control programs, together with emission reductions from the Enhanced Enforcement Activities contingency measures and district contingency measures, provide emissions reductions for attainment contingency. Table H-12 below demonstrates the emission reductions that occur after the attainment year for each applicable standard due to implementation of California's Mobile Source Program to be used for contingency purposes.

Table H-12 San Joaquin Valley Attainment Contingency Reductions

1997 65 $\mu\text{g}/\text{m}^3$ and 15 $\mu\text{g}/\text{m}^3$ standard (tpd, reductions calculated on annual planning inventory)	2020 Emissions	2021 Emissions	2020 to 2021 Emission Reductions
Mobile Source Direct PM2.5	8.5	8.2	0.3
Mobile Source NOx	166.8	154.7	12.1
2006 35 $\mu\text{g}/\text{m}^3$ standard (tpd, reductions calculated on winter planning inventory)	2024 Emissions	2025 Emissions	2024 to 2025 Emission Reductions
Mobile Source Direct PM2.5	6.8	6.7	0.1
Mobile Source NOx	101.6	97.4	4.2
2012 12 $\mu\text{g}/\text{m}^3$ standard (tpd, reductions calculated on annual planning inventory)	2025 Emissions	2026 Emissions	2025 to 2026 Emission Reductions
Mobile Source Direct PM2.5	7.5	7.4	0.1
Mobile Source NOx	108.6	104.5	4.1