

SUMMARY OF EPA EMISSION TEST METHODS
Title 40
Office of Air Quality Planning and Standards

<u>Method</u>	<u>Reference</u>		<u>Description</u>
<u>Part 51, Appendix M</u>			
201	55 FR 14246	4/17/1990	PM-10 (EGR procedure)
201	55 FR 37606	9/12/1990	Correction of equations
201A	55 FR 14246	4/17/1990	PM-10 (CSR procedure)
201A	55 FR 24687	6/18/1990	Correction of equations
201A	P 74 FR 12970	3/25/2009	Revisions
201A	75 FR 80118	12/21/2010	Filterable PM ₁₀ and PM _{2.5} (CSR procedure)
202	56 FR 65433	12/17/1991	Condensable PM
202	P 74 FR 12970	3/25/2009	Revisions
202	75 FR 80118	12/21/2010	Condensable PM
203	P 57 FR 46114	10/7/1992	COMS QA for compliance. (See Part 60, App F, Proc 3)
203A	P 58 FR 61640	11/22/1993	Visible Emissions - 2-6 min avg
203A	71 FR 55119	9/21/2006	Visible Emissions - 2-6 min avg
203B	P 58 FR 61640	11/22/1993	Visible Emissions - time exceptions
203B	71 FR 55119	9/21/2006	Visible Emissions - time exceptions
203C	P 58 FR 61640	11/22/1993	Visible Emissions - instantaneous
203C	71 FR 55119	9/21/2006	Visible Emissions - instantaneous
204	62 FR 32500	6/16/1997	VOC Capture Efficiency
204A	62 FR 32500	6/16/1997	VOC Capture Efficiency
204B	62 FR 32500	6/16/1997	VOC Capture Efficiency
204C	62 FR 32500	6/16/1997	VOC Capture Efficiency
204D	62 FR 32500	6/16/1997	VOC Capture Efficiency
204E	62 FR 32500	6/16/1997	VOC Capture Efficiency
204F	62 FR 32500	6/16/1997	VOC Capture Efficiency
205	59 FR 19590	5/30/1994	Dilution calibration verification
206	(Now CTM-027)		Ammonia (NH ₃)
207	P 62 FR 64532	12/8/1997	Isocyanates (never finalized)
207	73 FR 30775	5/29/2008	Presurvey procedure for corn wet-milling
208	Tentative		VOC from Hot Mix Asphalt Dryers
<u>Part 60, Appendix A</u>			
1-8	42 FR 41754	8/18/1977	Velocity, Orsat, PM, SO ₂ , NO _x , etc
1-8	43 FR 11984	3/23/1978	Corr. and amend. to M1 thru 8
1-24	52 FR 34639	9/14/1987	Technical corrections
1-24	52 FR 42061	11/2/1987	Corrections
2-25	55 FR 47471	11/14/1990	Technical amendments
1-29	P 62 FR 45639	8/27/1997	Reformat and revise methods
1-29	65 FR 61744	10/17/2000	Reformat and revise methods

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1		48 FR 45034	9/30/1983	Reduction of number of traverse points
1		51 FR 20286	6/4/1986	Alternative procedure for site selection
1A		54 FR 12621	3/28/1989	Traverse points in small ducts
2A		48 FR 37592	8/18/1983	Flow rate in small ducts - vol. meters
2B		48 FR 37594	8/18/1983	Flow rate - stoichiometry
2C		54 FR 12621	3/28/1989	Flow rate in small ducts - std. pitot
2D		54 FR 12621	3/28/1989	Flow rate in small ducts - rate meters
2E		61 FR 9929	3/12/1996	Flow rate from landfill wells
2F		64 FR 26484	5/14/1999	3D pitot for velocity
2G		64 FR 26484	5/14/1999	2D pitot for velocity
2H		64 FR 26484	5/14/1999	Velocity decay near the stack wall
2H	P	74 FR 42819	8/25/2009	Revisions
3		55 FR 05211	2/14/1990	Molecular weight
3/3B		55 FR 18876	5/7/1990	Method 3B applicability
3A		51 FR 21164	6/11/1986	Instrumental method for O ₂ and CO ₂
3A	P	68 FR 58838	10/10/2003	Proposed revisions
3A		71 FR 28082	5/15/2006	Promulgated revisions
3A		73 FR 29691	5/22/2008	Final technical corrections
3B		55 FR 05211	2/14/1990	Orsat for correction factors and excess air
3C		61 FR 9929	3/12/1996	Gas composition from landfill gases
3		48 FR 49458	10/25/1983	Addition of QA/QC
4		48 FR 55670	12/14/1983	Addition of QA/QC
5		48 FR 55670	12/14/1983	Addition of QA/QC
5		45 FR 66752	10/7/1980	Filter specification change
5		48 FR 39010	8/26/1983	DGM revision
5		50 FR 01164	1/9/1985	Incorp. DGM and probe cal. Procedures
5		52 FR 09657	3/26/1987	Use of critical orifices as cal stds
5		52 FR 22888	6/16/1987	Corrections
5A		47 FR 34137	8/6/1982	PM from asphalt roofing (Prop. as M26)
5A		51 FR 32454	9/12/1986	Addition of QA/QC
5B		51 FR 42839	11/26/1986	Nonsulfuric acid PM
5C		Tentative		PM from small ducts
5D		49 FR 43847	10/31/1984	PM from fabric filters
5D		51 FR 32454	9/12/1986	Addition of QA/QC
5E		50 FR 07701	2/25/1985	PM from fiberglass plants
5F		51 FR 42839	11/26/1986	PM from FCCU
5F		53 FR 29681	8/8/1988	Barium titration procedure
5G		53 FR 05860	2/26/1988	PM from wood stove - dilution tunnel

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5H	53 FR 05860	2/26/1988	PM from wood stove - stack
5I	64 FR 53027	9/30/1999	PM for RATA of PM CEMS
6	49 FR 26522	6/27/1984	Addition of QA/QC
6	48 FR 39010	8/26/1983	DGM revision
6	52 FR 41423	10/28/1987	Use of critical orifices for FR/vol meas
6A	47 FR 54073	12/1/1982	SO ₂ /CO ₂ - manual method
6B	47 FR 54073	12/1/1982	Auto SO ₂ /CO ₂
6A/B	49 FR 09684	3/14/1984	Incorp. coll. test changes
6A/B	51 FR 32454	9/12/1986	Addition of QA/QC
6C	51 FR 21164	6/11/1986	Instrumental method for SO ₂
6C	52 FR 18797	5/27/1987	Corrections
6C	P 68 FR 58838	10/10/2003	Proposed revisions
6C	71 FR 28082	5/15/2006	Promulgated revisions
6C	73 FR 29691	5/22/2008	Final technical corrections
7	49 FR 26522	6/27/1984	Addition of QA/QC
7A	48 FR 55072	12/8/1983	Ion chromatograph NO _x analysis
7A	53 FR 20139	6/2/1988	ANPRM
7A	55 FR 21752	5/29/1990	Revisions
7B	50 FR 15893	4/23/1985	UV NO _x analysis for nitric acid plants
7A/B	Tentative		High SO ₂ interference
7C	49 FR 38232	9/27/1984	Alkaline permanganate/colorimetric for Nox
7D	49 FR 38232	9/27/1984	Alkaline permanganate/IC for Nox
7E	51 FR 21164	6/11/1986	Instrumental method for Nox
7E	P 68 FR 58838	10/10/2003	Proposed revisions
7E	71 FR 28082	5/15/2006	Promulgated revisions
7E	73 FR 29691	5/22/2008	Final technical corrections
8	36 FR 24876	12/23/1971	Sulfuric acid mist and SO ₂
8	42 FR 41754	8/18/1977	Addition of particulate and moisture
8	43 FR 11984	3/23/1978	Miscellaneous corrections
9	39 FR 39872	11/12/1974	Opacity
9A	46 FR 53144	10/28/1981	LIDAR opacity; called Alternative 1
10	39 FR 09319	3/8/1978	CO
10	53 FR 41333	10/21/1988	Alternative trap
10	P 68 FR 58838	10/10/2003	Proposed revisions
10	71 FR 28082	5/15/2006	Promulgated revisions
10	73 FR 29691	5/22/2008	Final technical corrections
10A	52 FR 30674	8/17/1987	Colorimetric method for PS-4
10A	52 FR 33316	9/2/1987	Correction notice
10B	53 FR 41333	10/21/1988	GC method for PS-4

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11	43 FR 01494	1/10/1978	H ₂ S
12	47 FR 16564	4/16/1982	Pb
12	49 FR 33842	8/24/1984	Incorp. method of additions
13A	45 FR 41852	6/20/1980	F - colorimetric method
13B	45 FR 41852	6/20/1980	F - SIE method
13A/B	45 FR 85016	12/24/1980	Corr. to M13A and M13B
14	45 FR 44202	6/30/1980	F from roof monitors
14A	62 FR 52383	10/7/1997	F from roof monitors- Alcan cassettes
15	43 FR 10866	3/15/1978	TRS from petroleum refineries
15	54 FR 46236	11/2/1989	Revisions
15	54 FR 51550	12/15/1989	Correction notice
15A	52 FR 20391	6/1/1987	TRS alternative/oxidation
16	43 FR 07568	2/23/1978	TRS from kraft pulp mills
16	43 FR 34784	8/7/1978	Amend. to M16, H ₂ S loss after filters
16	44 FR 02578	1/12/1979	Amend. to M16, SO ₂ scrubber added
16	54 FR 46236	11/2/1989	Revisions
16	55 FR 21752	5/29/1990	Correction of figure (±10%)
16A	50 FR 09578	3/8/1985	TRS alternative
16A	52 FR 36408	9/29/1987	Cylinder gas analysis alternative method
16B	52 FR 36408	9/29/1987	TRS alternative/GC analysis of SO ₂
16A/B	53 FR 02914	2/2/1988	Correction 16A/B
16C	77 FR 44488	7/30/2012	TRS emissions/real-time
17	43 FR 07568	2/23/1978	PM, in-stack
18	48 FR 48344	10/18/1983	VOC, general GC method
18	49 FR 22608	5/30/1984	Corrections to M18
18	52 FR 51105	2/19/1987	Revisions to improve method
18	52 FR 10852	4/3/1987	Corrections
18	59 FR 19308	4/22/1994	Revisions to improve QA/QC
19	44 FR 33580	6/11/1979	F-factor, coal sampling
19	52 FR 47826	12/16/1987	M19A incorp, into M19
19	48 FR 49460	10/25/1983	Corr. to F factor equations and F _c value
20	44 FR 52792	9/10/1979	NO _x from gas turbines
20	47 FR 30480	7/14/1982	Corrections and amendments
20	51 FR 32454	9/12/1986	Clarifications
20	P 68 FR 58838	10/10/2003	Proposed revisions
20	71 FR 28082	5/15/2006	Promulgated revisions

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20	73 FR 29691	5/22/2008	Final technical corrections
21	48 FR 37598	8/18/1983	VOC leaks
21	49 FR 56580	12/22/1983	Corrections to Method 21
21	55 FR 25602	6/22/1990	Clarifying revisions
22	47 FR 34137	8/6/1982	Fugitive VE
22	48 FR 48360	10/18/1983	Add smoke emission from flares
23	56 FR 5758	2/13/1991	Dioxin/dibenzo furan
23	P 60 FR 28378	5/31/1995	Revisions and corrections
24	45 FR 65956	10/3/1980	Solvent in surface coatings
24A	47 FR 50644	11/8/1982	Solvent in ink (Prop. as M29)
24	Tentative		Solvent in water-borne coatings
24	57 FR 30654	7/10/1992	Multicomponent coatings
24	60 FR 47095	9/11/1995	Radiation-cured coatings
25	45 FR 65956	10/3/1980	TGNMO
25	53 FR 04140	2/12/1988	Revisions to improve method
25	53 FR 11590	4/7/1988	Correction notice
25A	48 FR 37595	8/18/1983	TOC/FID
25B	48 FR 37597	8/18/1983	TOC/NDIR
25C	61 FR 9929	3/12/1996	VOC from landfills
25D	59 FR 19311	4/22/1994	VO from TSDf - purge procedure
25E	59 FR 62896	12/6/1994	VO from TSDf - vapor pressure procedure
26	56 FR 5758	2/13/1991	HCl
26	57 FR 24550	6/10/1992	Corrections to Method 26
26	59 FR 19309	4/22/1994	Additions to M26 of halogens, other hydrogen halides
26A	59 FR 19309	4/22/1994	Isokinetic HCl, halogens, hydrogen halides
27	48 FR 37597	8/18/1983	Tank truck leaks
28	53 FR 05860	2/26/1988	Wood stove certification
28A	53 FR 05860	2/26/1988	Air to fuel ratio
29	61 FR 18262	4/25/1996	Multiple metals
29	63 FR 06493	2/9/1998	Amends promulgation dates
30A	72 FR 51494	9/7/2007	Instrumental method for vapor phase mercury
30B	72 FR 51494	9/7/2007	Sorbent trap method for vapor phase mercury
30A/B	72 FR 55278	9/28/2007	Corrections to M30A/B
<u>Part 60, Appendix B</u>			
PS-1	48 FR 13322	3/30/1983	Opacity
PS-1	P 59 FR 60585	11/25/1994	Revisions

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PS-1		65 FR 48914	8/10/2000	Revisions, final rule
PS 1-5		55 FR 47471	11/14/1990	Technical amendments
PS-2		48 FR 23608	5/25/1983	SO ₂ and Nox
PS-2		71FR 55119	9/21/2006	Add RATA criteria for low SO ₂ standards
PS-2 - 9	P	62 FR 45639	8/27/1997	Reformat and revise performance specs
PS-2 - 9		65 FR 61744	10/17/2000	Reformat and revise performance specs
PS-3		48 FR 23608	5/25/1983	CO ₂ and O ₂
PS-4		50 FR 31700	8/5/1985	CO
PS-4A		56 FR 5526	2/11/1991	CO for MWC
PS-4B	P	61 FR 17495	4/19/1996	CO and O ₂ for HWI (BIF rules)
PS-4B		64 FR 53032	9/30/1999	CO and O ₂ for HWI (BIF rules)
PS-5		48 FR 32984	7/20/1983	TRS
PS-6		53 FR 07514	3/9/1988	Velocity and mass emission rate
PS-7		55 FR 40171	10/2/1990	H ₂ S
PS-8		59 FR 64580	12/15/1994	VOC CEMS
PS-8A	P	61 FR 17495	4/19/1996	VOC CEMS for HWC MACT
PS-8A		64 FR 53033	9/30/1999	VOC CEMS for HWC MACT
PS-9		59 FR 64580	12/15/1994	GC CEMS
PS-10	P	61 FR 17495	4/19/1996	Metals CEMS (HWC MACT)
PS-11		69 FR 1786	1/12/2004	PM CEMS
PS-11		74 FR 12575	3/25/2009	Corrections/Clarifications
PS-11A	P	61 FR 17495	4/19/1996	PM CEMS (HWC MACT)
PS-12	P	61 FR 17495	4/19/1996	Hg CEMS (HWC MACT)
PS-12A		70 FR 28606	5/18/2005	Hg CEMS (Coal-fired Boilers) - vacated
PS-12A	P	74 FR 21136	5/6/2009	Hg CEMS
PS-12A		75 FR 54970	9/9/2010	Hg CEMS
PS-12B	P	74 FR 21136	5/6/2009	Sorbent trap Hg monitoring
PS-12B		75 FR 54970	9/9/2010	Sorbent trap Hg monitoring
PS-13	P	61 FR 17495	4/19/1996	HCl CEMS (HWC MACT)
PS-14	P	61 FR 17495	4/19/1996	Cl CEMS (HWC MACT)
PS-15	P	62 FR 45372	8/27/1997	FTIR CEMS
PS-15		65 FR 61744	10/17/2000	FTIR CEMS
PS-16	P	70 FR 45608	8/8/2005	Predictive Emissions Monitoring Systems (PEMS)
PS-16		74 FR 12575	3/25/2009	PEMS
PS-17	P	73 FR 59956	10/9/2008	Parameter monitoring
PS-18	P	Tentative		HCl CEMS

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<u>Part 60, Appendix F</u>				
Proc 1		52 FR 21003	6/4/1987	Quality assurance for CEMS
Proc 1		56 FR 5527	2/11/1991	Revision
Proc 1		74 FR 12575	3/25/2009	Corrections/Clarifications
Proc 2		69 FR 1768	1/12/2004	QA for PM CEMS
Proc 2		74 FR 12575	3/25/2009	Corrections/Clarifications
Proc 3	P	68 FR 24692	5/8/2003	QA for COMS
Proc 3	P	77 FR 8160	2/14/2012	QA for COMS
Proc 3		Pending		QA for COMS
Proc 4	P	73 FR 59956	10/9/2008	QA for parameter monitoring
Proc 5	P	74 FR 21136	5/6/2009	QA for Hg CEMS
Proc 5		75 FR 54970	9/9/2010	QA for Hg CEMS
Proc 6		Tentative		QA for HCl CEMS
<u>Part 60, Appendix J</u>				
App-J		55 FR 33925	8/20/1990	Wood stove thermal efficiency
<u>Alternative Procedures and Miscellaneous</u>				
		48 FR 44700	9/29/1983	S-Factor method for sulfuric acid plants
		48 FR 48669	10/20/1983	Corrections to S-Factor publication
		49 FR 30672	7/31/1984	Add fuel analysis procedures for gas turbine
		51 FR 21762	6/16/1986	Alternative PST for low level concentrations
		54 FR 46234	11/2/1989	Misc. revisions to Appendix A, 40 CFR Part 60
		55 FR 40171	10/2/1990	Monitoring revisions to Subpart J (Refineries)
<u>Part 60</u>				
		54 FR 06660	2/14/1989	Test methods & procedures revision
		54 FR 21344	5/17/1989	Correction notice
		54 FR 27015	6/27/1989	Correction notice
<u>Part 61, Appendix B</u>				
101-111	P	62 FR 45639	8/27/1997	Reformat, revise, amend methods
101-111		64 FR 61744	10/17/2002	Reformat, revise, amend methods
101		47 FR 24703	6/8/1982	Hg in air streams
101A		47 FR 24703	6/8/1982	Hg in sewage sludge incinerators
101A		61 FR 18262	4/25/1996	Revisions - Consistency with Method 29
101		49 FR 35768	9/12/1984	Corrections to M101 and M101A
102		47 FR 24703	6/8/1982	Hg in H ₂ streams

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103		48 FR 55266	12/9/1983	Revised Be screening method
104		48 FR 55268	12/9/1983	Revised beryllium method
105		40 FR 48299	10/14/1975	Hg in sewage sludge
105		49 FR 35768	9/12/1984	Revised Hg in sewage sludge
106		47 FR 39168	9/7/1982	Vinyl chloride (VC)
107		47 FR 39168	9/7/1982	VC in process streams
107		52 FR 20397	6/1/1987	Alternative calibration procedure
107A		47 FR 39485	9/8/1982	VC in process streams
108		51 FR 28035	8/4/1986	Inorganic arsenic
108A		51 FR 28035	8/4/1986	Arsenic in ore samples
108B		51 FR 22026	5/31/1990	Arsenic in ore alternative
108C		55 FR 22026	5/31/1990	Arsenic in ore alternative
108B/C		55 FR 32913	8/13/1990	Correction notice
109	P	52 FR 13586	4/23/1987	VE from coke oven batteries (used to develop M303)
111		50 FR 05197	2/6/1985	Polonium-210
114		54 FR 51695	12/15/1989	Monitoring of radionuclides
115		54 FR 51702	12/15/1989	Radon-222
<u>Part 61</u>				
		53 FR 36972	9/23/1988	Corrections
<u>Part 63 Appendix A</u>				
303-306	P	62 FR 45639	8/27/1997	Reformat and revise methods
303-306		65 FR 61744	10/17/2002	Reformat and revise methods
301		57 FR 61970	12/29/1992	Field data validation protocol
301	P	69 FR 76642	12/22/2004	Revisions
301		76 FR 28664	5/18/2011	Revisions
302				(Reserved)
303		58 FR 57898	10/27/1993	Coke Oven Door Emissions
304A		62 FR 2793	1/17/1997	Biodegradation rate (vented)
304B		62 FR 2793	1/17/1997	Biodegradation rate (enclosed)
305		59 FR 19590	4/22/1994	Compound specific liquid waste
306		60 FR 4948	1/25/1995	Chromium from electroplaters/anodizers
306A		60 FR 4948	1/25/1995	Simplified chromium sampling from electroplaters/anodizers
306B		60 FR 4948	1/25/1995	Surface tension of chromium suppressors
307		59 FR 61801	12/2/1994	Solvent Degreaser VOC
308	P	58 FR 66079	12/17/1993	Methanol

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308		63 FR 18504	4/15/1998	Methanol (Pulp and Paper MACT)
309	P	59 FR 29216	6/4/1994	Aerospace solvent recovery material balance
310A		62 FR 12546	3/17/1997	Residual hexane in EPDM rubber
310B		62 FR 12546	3/17/1997	Residual hexane in EPDM rubber
310C		62 FR 12546	3/17/1997	Residual hexane in EPDM rubber
311		60 FR 62930	12/7/1995	VOC HAPS in furniture coatings
312A		62 FR 12546	3/17/1997	Residual styrene in SBR rubber
312B		62 FR 12546	3/17/1997	Residual styrene in SBR rubber
312C		62 FR 12546	3/17/1997	Residual styrene in SBR rubber
313A		62 FR 12546	3/17/1997	Residual styrene in PBR rubber
313B		62 FR 12546	3/17/1997	Residual styrene in PBR rubber
314		Tentative		Halogenated compounds in solvents
315		62 FR 52418	10/7/1997	MeCl Extractable organic matter
316	P	62 FR 15257	3/31/1997	Formaldehyde - manual method
317		Tentative		Phenol - manual method
318	P	62 FR 52266	3/31/1997	Formaldehyde, phenol, methanol with FTIR
319	P	61 FR 55862	10/29/1996	Filter efficiency; paint over-spray
319		63 FR 46525	3/27/1998	Filter efficiency, paint over-spray
320	P	63 FR 14182	3/24/1998	Extractive FTIR
320		64 FR 31898	6/14/1999	Extractive FTIR
321	P	63 FR 14182	3/24/1998	FTIR for HCl from Portland Cement Kilns
321		64 FR 31898	6/14/1999	FTIR for HCl from Portland Cement kilns
322	P	63 FR 14182	3/24/1998	GFC/IR for HCl from Portland Cement kilns
323	P	68 FR 1925	1/14/2003	Formaldehyde from natural gas-fired sources
323		75 FR 51570	8/20/2010	Formaldehyde from natural gas-fired sources
324	P	69 FR 4652	1/30/2004	Vapor phase Hg by sorbent trap
325A/B	P	Pending		Benzene using passive samplers
326	P	Tentative		Acrylonitrile

P = Proposal

Tentative = Under evaluation