

**EPA Clean Air Act Performance Audit Samples  
Stationary Source Air Sampling (SSAS) Table  
Effective Date July 1, 2009**

Matrix	NELAC Analyte Code	Analyte	Conc Range	Acceptance Criteria <sup>13</sup>
		<b>Inorganics in Impinger Solution</b>		
		<b>EPA Method 6 and 8</b> <sup>1,2</sup>	mg/dscm	
Air & Emissions	4010	Sulfur Dioxide	50-2000	± 5% fixed acceptance limit
		<b>EPA Method 8</b> <sup>1,2</sup>	mg/dscm	
Air & Emissions	4020	Sulfuric Acid mist	10-150	± 5% fixed acceptance limit
		<b>EPA Method 7</b> <sup>1,3</sup>	mg/dscm	
Air & Emissions	3885	Oxides of Nitrogen	50-2000	± 10% fixed acceptance limit
		<b>EPA Method 13A and 13B</b> <sup>1,4</sup>	mg/dscm	
Air & Emissions	1730	Fluoride	1.0-50	± 15% fixed acceptance limit
		<b>EPA Method 26 and 26A</b> <sup>5</sup>	mg/L	
Air & Emissions	1770	Hydrogen Chloride	5.0-100	± 10% fixed acceptance limit
Air & Emissions	1775	Hydrogen Fluoride	5.0-100	± 10% fixed acceptance limit
		<b>Metals on Glass Fiber Filters</b> <sup>6</sup>		
		<b>EPA Method 29</b>	µg/filter	
Air & Emissions	1005	Antimony	10-250	± 25% fixed acceptance limit
Air & Emissions	1010	Arsenic	10-250	± 25% fixed acceptance limit
Air & Emissions	1015	Barium	10-250	± 25% fixed acceptance limit
Air & Emissions	1020	Beryllium	10-250	± 25% fixed acceptance limit
Air & Emissions	1030	Cadmium	10-250	± 25% fixed acceptance limit
Air & Emissions	1040	Chromium	10-250	± 25% fixed acceptance limit
Air & Emissions	1050	Cobalt	10-250	± 25% fixed acceptance limit
Air & Emissions	1055	Copper	10-250	± 25% fixed acceptance limit
Air & Emissions	1075	Lead	10-500	± 25% fixed acceptance limit
Air & Emissions	1090	Manganese	10-250	± 25% fixed acceptance limit
Air & Emissions	1105	Nickel	10-500	± 25% fixed acceptance limit
Air & Emissions	1140	Selenium	10-250	± 25% fixed acceptance limit
Air & Emissions	1150	Silver	10-250	± 25% fixed acceptance limit
Air & Emissions	1165	Thallium	10-250	± 25% fixed acceptance limit
Air & Emissions	1190	Zinc	10-250	± 25% fixed acceptance limit
		<b>EPA Method 29</b>	µg/filter	
Air & Emissions	1095	Mercury	0.20-10	± 25% fixed acceptance limit
		<b>EPA Method 12</b>	µg/filter	
Air & Emissions	1075	Lead	10-250	± 25% fixed acceptance limit

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		<b>Metals in Impinger Solution <sup>7</sup></b>		
		<b>EPA Method 29</b>	µg/ml	
Air & Emissions	1005	Antimony	0.15-25	± 25% fixed acceptance limit
Air & Emissions	1010	Arsenic	0.15-25	± 25% fixed acceptance limit
Air & Emissions	1015	Barium	0.15-25	± 25% fixed acceptance limit
Air & Emissions	1020	Beryllium	0.15-25	± 25% fixed acceptance limit
Air & Emissions	1030	Cadmium	0.15-25	± 25% fixed acceptance limit
Air & Emissions	1040	Chromium	0.15-25	± 25% fixed acceptance limit
Air & Emissions	1050	Cobalt	0.15-25	± 25% fixed acceptance limit
Air & Emissions	1055	Copper	0.15-25	± 25% fixed acceptance limit
Air & Emissions	1075	Lead	0.15-25	± 25% fixed acceptance limit
Air & Emissions	1090	Manganese	0.15-25	± 25% fixed acceptance limit
Air & Emissions	1105	Nickel	0.15-25	± 25% fixed acceptance limit
Air & Emissions	1140	Selenium	0.15-25	± 25% fixed acceptance limit
Air & Emissions	1150	Silver	0.15-25	± 25% fixed acceptance limit
Air & Emissions	1165	Thallium	0.15-25	± 25% fixed acceptance limit
Air & Emissions	1190	Zinc	0.15-25	± 25% fixed acceptance limit
		<b>EPA Method 29 and 101A</b>	ng/mL	
Air & Emissions	1095	Mercury	0.50-200	± 25% fixed acceptance limit
		<b>EPA Method 12</b>	µg/ml	
Air & Emissions	1075	Lead	0.10-120	± 25% fixed acceptance limit

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		<b>Volatiles in Gas Cylinder</b>		
		<b>EPA Method 18 <sup>8</sup></b>	ppm	
Air & Emissions	4300	Acetaldehyde	10-100	± 10% fixed acceptance limit
Air & Emissions	9300	Acetic Acid	10-100	± 10% fixed acceptance limit
Air & Emissions	4315	Acetone	10-100	± 10% fixed acceptance limit
Air & Emissions	4325	Acrolein	10-100	± 10% fixed acceptance limit
Air & Emissions	4375	Benzene	5.0-50	± 10% fixed acceptance limit
Air & Emissions	9318	1,3-Butadiene	10-100	± 10% fixed acceptance limit
Air & Emissions	4410	2-Butanone (MEK)	10-100	± 10% fixed acceptance limit
Air & Emissions	4450	Carbon Disulfide	5.0-50	± 10% fixed acceptance limit
Air & Emissions	4455	Carbon Tetrachloride	5.0-50	± 10% fixed acceptance limit
Air & Emissions	4475	Chlorobenzene	5.0-50	± 10% fixed acceptance limit
Air & Emissions	4505	Chloroform	5.0-50	± 10% fixed acceptance limit
Air & Emissions	4735	1,4-Dioxane	10-100	± 10% fixed acceptance limit
Air & Emissions	4745	Epichlorohydrin	10-100	± 10% fixed acceptance limit
Air & Emissions	4765	Ethylbenzene	5.0-50	± 10% fixed acceptance limit
Air & Emissions	4855	Hexane	5.0-50	± 10% fixed acceptance limit
Air & Emissions	4926	Methane	5.0-50	± 10% fixed acceptance limit
Air & Emissions	4930	Methanol	10-100	± 10% fixed acceptance limit
Air & Emissions	4940	Methyl Acetate	10-100	± 10% fixed acceptance limit
Air & Emissions	4975	Methylene Chloride	5.0-50	± 10% fixed acceptance limit
Air & Emissions	5115	Tetrachloroethylene	5.0-50	± 10% fixed acceptance limit
Air & Emissions	5140	Toluene	5.0-50	± 10% fixed acceptance limit
Air & Emissions	5170	Trichloroethylene	5.0-50	± 10% fixed acceptance limit
Air & Emissions	5235	Vinyl Chloride	10-100	± 10% fixed acceptance limit
Air & Emissions	5260	Xylenes, total	5.0-50	± 10% fixed acceptance limit
		<b>EPA Method 25 <sup>9</sup></b>	ppm	
Air & Emissions	3860	Non-Methane Organic Compounds	50-3000	± 20% fixed acceptance limit
		<b>Volatile Organic Compounds in Surface Coatings <sup>10</sup></b>		
		<b>EPA Method 24 - Surface Paints and Inks</b>	g/L	
Air & Emissions	4075	Volatile Organic Compounds of Paint	300-500	± 5% fixed acceptance limit
Air & Emissions	4070	Volatile Organic Compounds in Ink	300-500	± 5% fixed acceptance limit
		<b>EPA Method 24A - Publication Rotogravure Inks and Coatings</b>	g/L	
Air & Emissions	4070	Volatile Organic Compounds in Ink	550-800	± 5% fixed acceptance limit
		<b>Organic Extractables on Glass Fiber Filters <sup>11</sup></b>		
		<b>EPA Method 315</b>	mg/sample	
Air & Emissions	5123	Methylene Chloride Extractable Material (MCEM)	1.5-50	± 50% fixed acceptance limit

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Matrix	NELAC Analyte Code	Analyte	Conc Range	Acceptance Criteria <sup>13</sup>
		<b>Dioxins and Furans on XAD-2 Cartridge <sup>12</sup></b>	ng/cartridge	
		<b>EPA Method 23</b>		
Air & Emissions	9618	2,3,7,8-Tetrachlorodibenzo-p-dioxin	1.0-20	± 20% fixed acceptance limit
Air & Emissions	9612	2,3,7,8-Tetrachlorodibenzofuran	1.0-20	± 20% fixed acceptance limit
Air & Emissions	9451	1,3,6,8-Tetrachlorodibenzo-p-dioxin	1.0-20	± 20% fixed acceptance limit
Air & Emissions	9449	1,3,6,8-Tetrachlorodibenzofuran	1.0-20	± 20% fixed acceptance limit
Air & Emissions	9448	1,2,8,9-Tetrachlorodibenzo-p-dioxin	1.0-20	± 20% fixed acceptance limit
Air & Emissions	9446	1,2,8,9-Tetrachlorodibenzofuran	1.0-20	± 20% fixed acceptance limit
Air & Emissions	9540	1,2,3,7,8-Pentachlorodibenzo-p-dioxin	1.0-20	± 20% fixed acceptance limit
Air & Emissions	9543	1,2,3,7,8-Pentachlorodibenzofuran	1.0-20	± 20% fixed acceptance limit
Air & Emissions	9549	2,3,4,7,8-Pentachlorodibenzofuran	1.0-20	± 20% fixed acceptance limit
Air & Emissions	9445	1,2,4,6,8-Pentachlorodibenzo-p-dioxin	1.0-20	± 20% fixed acceptance limit
Air & Emissions	9443	1,2,4,6,8-Pentachlorodibenzofuran	1.0-20	± 20% fixed acceptance limit
Air & Emissions	9440	1,2,3,8,9-Pentachlorodibenzo-p-dioxin	1.0-20	± 20% fixed acceptance limit
Air & Emissions	9439	1,2,3,8,9-Pentachlorodibenzofuran	1.0-20	± 20% fixed acceptance limit
Air & Emissions	9453	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	1.0-20	± 20% fixed acceptance limit
Air & Emissions	9471	1,2,3,4,7,8-Hexachlorodibenzofuran	1.0-20	± 20% fixed acceptance limit
Air & Emissions	9456	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	1.0-20	± 20% fixed acceptance limit
Air & Emissions	9474	1,2,3,6,7,8-Hexachlorodibenzofuran	1.0-20	± 20% fixed acceptance limit
Air & Emissions	9459	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	1.0-20	± 20% fixed acceptance limit
Air & Emissions	9477	1,2,3,7,8,9-Hexachlorodibenzofuran	1.0-20	± 20% fixed acceptance limit
Air & Emissions	9480	2,3,4,6,7,8-Hexachlorodibenzofuran	1.0-20	± 20% fixed acceptance limit
Air & Emissions	9424	1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin	1.0-20	± 20% fixed acceptance limit
Air & Emissions	9425	1,2,3,4,6,8-Hexachlorodibenzofuran	1.0-20	± 20% fixed acceptance limit
Air & Emissions	9442	1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin	1.0-20	± 20% fixed acceptance limit
Air & Emissions	9430	1,2,3,4,8,9-Hexachlorodibenzofuran	1.0-20	± 20% fixed acceptance limit
Air & Emissions	9426	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	1.0-20	± 20% fixed acceptance limit
Air & Emissions	9420	1,2,3,4,6,7,8-Heptachlorodibenzofuran	1.0-20	± 20% fixed acceptance limit
Air & Emissions	9423	1,2,3,4,7,8,9-Heptachlorodibenzofuran	1.0-20	± 20% fixed acceptance limit
Air & Emissions	9422	1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin	1.0-20	± 20% fixed acceptance limit
Air & Emissions	9421	1,2,3,4,6,7,9-Heptachlorodibenzofuran	1.0-20	± 20% fixed acceptance limit
Air & Emissions	9519	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	1.0-20	± 20% fixed acceptance limit
Air & Emissions	9516	1,2,3,4,6,7,8,9-Octachlorodibenzofuran	1.0-20	± 20% fixed acceptance limit

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		1) mg/dscm = milligrams per dry standard cubic meter. Dry gas sample volume for audit sample is equal to 1 dscm.		
		2) Prepared from Sulfuric Acid in HPLC-grade water.		
		3) Prepared from Potassium Nitrate in HPLC-grade water.		
		4) Prepared from Sodium Fluoride in HPLC-grade water.		
		5) Prepared from Potassium Chloride and Sodium Fluoride in HPLC-grade water.		
		6) Prepared on Glass Fiber Filter spiked with analytes diluted in 2% Nitric Acid.		
		7) Prepared using 2% Nitric Acid.		
		8) Prepared as whole-volume samples in audit cylinders. Diluent gas is ultra-high purity Nitrogen. Compatibility of the analytes may necessitate multiple cylinders to cover the requested analyte list. Due to potential interactions all listed analytes cannot be spiked into a single cylinder. In 40 CFR Part 60, Appendix A, Reference Method 18, Section 9.2 says the "+/- 10% fixed acceptance limits" are recommended criteria.		
		9) Prepared with volatile organic compounds that condense at dry-ice temperatures (e.g., ketones, Acrolein) and volatile organic compounds that remain gaseous at dry-ice temperatures (e.g., Propane). Diluent gas is ultra-high purity Nitrogen that should contain 2-8% Carbon Dioxide.		
		10) Prepare the Volatile Organic Compounds audit standards by mixing paint or ink with mineral spirits. Example of historical mixes: Prepare 13-17 kg paint or ink and 0.7-3.0 kg mineral spirits. Audit standards should be delivered and stored in sealed container with no head space. Assigned Values for the VOCs analytes are determined from the verification testing mean. Volatile Organic Compounds (g/L) = (Volatile Matter % / 100%) (Density, g/mL) (1000 ml/L)		
		11) Prepared on Glass Fiber Filter spiked with Phenanthrene in Methylene Chloride.		
		12) Prepared on XAD-2 cartridge spiked with analytes in nonane. At a minimum each Dioxins and Furans on XAD-2 Cartridge audit standard must contain the following three analytes: 2,3,7,8-Tetrachlorodibenzo-p-dioxin, 1,2,3,7,8-Pentachlorodibenzo-p-dioxin and 2,3,4,7,8-Pentachlorodibenzofuran plus at least five additional dioxin or furans randomly selected from the analyte list, one each from the five levels of chlorination (Tetra, Penta, Hexa, Hepta and Octa).		
		13) Acceptance Criteria represent the EPA Audit Sample historical limits.		