

## INFORMAL REVIEW DRAFT

[Note: The pre-existing regulation text is set forth below in normal type. The original proposed amendments are shown in underline to indicate additions and ~~strikeout~~ to indicate deletions. Additional proposed modifications are shown in double-underline to indicate additions and ~~double-strikeout~~ to indicate deletions. The square brackets “[ ]” are used to indicate minor adjustments to text (e.g., page numbers and adoption dates) that will be updated upon adoption of the proposed amendments.]

# **APPENDIX D**

## **SOURCE TESTING:**

### **SUMMARY OF REQUIREMENTS**

### **FOR MEASUREMENTS**

### **AND ALTERNATIVES**

## APPENDIX D

### Source Testing: Summary of Requirements for Measurements and Alternatives

\*\*\*\*\* NOTES FOR FOLLOWING TABLE \*\*\*\*\*

- (1) Each reference to a measurement requirement includes the following requirements for the substances to be tested and type of test to be performed:
  - (a) The test shall measure the quantities of all listed substances whose presence in detectable quantities can be determined using the ARB-adopted test method or other method specified in section IX.A. for the substance indicated. Therefore the test indicated for "dioxins" shall include measurement of all the polychlorinated dibenzodioxins and dibenzofurans to which the ARB-adopted method for dioxins and furans applies. Specifically, the test results shall include the determination of total tetra-, penta-, hexa-, hepta-, and octa- PCDD/PCDF homologue groups and all the 2,3,7,8-substituted PCDD/PCDF isomers listed in the method; and
  - (b) ARB-adopted test methods which are necessary to characterize associated source conditions, including stack flow rate and moisture content, shall also be performed to ensure a proper source test for the material indicated. These associated tests shall be identified in the proposed source test protocol in the inventory plan.
- (2) Reference to the "full set of metals" or "all metals" herein refers to the following listed substances which are required to be measured and reported: arsenic (As), beryllium (Be), cadmium (Cd), chromium (Cr) which includes total chromium and hexavalent chromium (Cr VI), copper (Cu), lead (Pb), manganese (Mn), mercury (Hg), nickel (Ni), selenium (Se), and zinc (Zn).
- (3) Fuel analysis shall include analysis for the full set of metals referred to in Note (2), chlorine content, and sulfur content.
- (4) The notation "two-step test" means the protocol in EICG Section IX.E. for specified classes of facilities.
- (5) The symbol "-" in the table column for "Alternative (if any)" means that no alternative to the specified requirement is available.
- (6) The symbol "." in the table indicates "same as above." The symbol "- -" in the table means "same across cells." These two symbols are used to clarify column content and row header content information that simply repeats from table cells above or across, respectively.

INFORMAL REVIEW DRAFT

(7) Waste water treatment facilities may propose an alternative testing approach based on a combination of water sampling and air sampling to calculate the airborne emissions of the PFAS-related substances. The results of water testing at the influent and other appropriate locations within the facility may be used in conjunction with appropriate engineering calculations to calculate the airborne emissions expected of not only the water-tested PFAS but also the specified related airborne forms. Air sampling (such as flux chamber sampling) may be required to calculate air emissions of some substances. All air emission estimates derived from water sampling and air testing results shall be included in the final emission inventory report. The proposed two-step protocol and any alternatives are subject to the approval of the air district and CARB. The list of required PFAS-related substances, and their relation to the water-based test list, are specified in the table below.

**Target PFAS-related Substances for Alternative Wastewater Emission Testing**

<b><u>Chemical Name (and Acronym if Available)</u></b>	<b><u>CAS</u></b>
<u>Perfluorobutanoic acid {Perfluorobutyric acid} {PFBA}</u>	<u>375224</u>
<u>Perfluoropentanoic acid {PFPeA}</u>	<u>2706903</u>
<u>Perfluorohexanoic acid {PFHxA}</u>	<u>307244</u>
<u>Perfluoroheptanoic acid {PFHpA}</u>	<u>375859</u>
<u>Perfluorooctanoic acid {PFOA}</u>	<u>335671</u>
<u>Perfluorooctanoic acid {PFOA} and its salts, esters, and sulfonates</u>	<u>2795393</u>
<u>Perfluorooctanoic acid fluoride</u>	<u>335660</u>
<u>Ammonium perfluorooctanoate</u>	<u>3825261</u>
<u>Perfluorononanoic acid {PFNA}</u>	<u>375951</u>
<u>Perfluorodecanoic acid {PFDA}</u>	<u>335762</u>
<u>Perfluoroundecanoic acid {PFUnA}</u>	<u>2058948</u>
<u>Perfluorododecanoic acid {PFDoA}</u>	<u>307551</u>
<u>Perfluorododecane sulfonate</u>	<u>79780395</u>
<u>Perfluoro-1-dodecanesulfonate, sodium salt {PFDoS}</u>	<u>1260224541</u>
<u>Perfluorotridecanoic acid {PFTrDA}</u>	<u>72629948</u>
<u>Perfluorotetradecanoic acid {PFTeDA}</u>	<u>376067</u>
<u>Perfluorohexadecanoic acid {PFHxDA}</u>	<u>67905195</u>
<u>Perfluorooctadecanoic acid {PFODA}</u>	<u>16517116</u>
<u>Perfluorobutane sulfonic acid {PFBS}</u>	<u>375735</u>
<u>Perfluorobutane sulfonate (and salts)</u>	<u>1152</u>
<u>Perfluoropentane sulfonic acid</u>	<u>2706914</u>
<u>Perfluoropentane sulfonate {PFPeS}</u>	<u>175905369</u>
<u>Perfluorohexane sulfonic acid/sulfonate {PFHxS}</u>	<u>355464</u>
<u>Perfluoroheptane sulfonic acid</u>	<u>375928</u>
<u>Perfluorooctane sulfonic acid</u>	<u>1763231</u>
<u>Perfluorooctane sulfonate {PFOS}</u>	<u>45298906</u>
<u>Perfluorooctane sulfonyl fluoride</u>	<u>307357</u>
<u>Perfluorononane sulfonate {PFNS}</u>	<u>474511074</u>

INFORMAL REVIEW DRAFT

<u>Chemical Name (and Acronym if Available)</u>	<u>CAS</u>
<u>Perfluorodecane sulfonic acid</u>	<u>335773</u>
<u>Perfluorododecane sulfonate</u>	<u>79780395</u>
<u>Perfluoro-1-dodecanesulfonate, sodium salt {PFDoS}</u>	<u>1260224541</u>
<u>Perfluorooctane sulfonamide {PFOSA}</u>	<u>754916</u>
<u>Decafluoro-4-(pentafluoroethyl)cyclohexanesulfonate {PFecHS}</u>	<u>67584423</u>
<u>N-Ethylperfluorooctanesulfonamidoethyl alcohol {N-EtFOSE}</u>	<u>1691992</u>
<u>N-Methylperfluorooctanesulfonamidoethanol {N-MeFOSE}</u>	<u>24448097</u>
<u>N-Ethyl perfluorooctane sulfonamid {EtFOSA} {MeFOSAm} {Sulfluramid}</u>	<u>4151502</u>
<u>Perfluoro-N-methyloctanesulfonamide {N-MeFOSA}</u>	<u>31506328</u>
<u>N-(Heptadecafluorooctylsulfonyl)-N-methylglycine {NMeFOSAA}</u>	<u>2355319</u>
<u>2-(N-Ethyl-perfluorooctanesulfonamido)acetic acid {NEtFOSAA}</u>	<u>2991506</u>
<u>4:2 Fluorotelomer sulfonic acid {FTS 4:2} {also: 1H,1H,2H,2H-Perfluorohexane sulfonic acid}</u>	<u>757124724</u>
<u>6:2 Fluorotelomer sulfonic acid {also: 1H,1H,2H,2H-Perfluorooctane sulfonic acid}</u>	<u>27619972</u>
<u>6:2 Fluorotelomer sulfonate {FTS 6:2}</u>	<u>425670753</u>
<u>6:2 Fluorotelomer alcohol {FtOH 6:2}</u>	<u>647427</u>
<u>6:2 Fluorotelomer acrylate</u>	<u>17527296</u>
<u>2-Perfluorohexyl ethyl methacrylate {6:2 FTMAC}</u>	<u>1996889</u>
<u>6:2 Fluorotelomer acetate</u>	<u>37858030</u>
<u>6:2 Fluorotelomer carboxylic acid {also: 2-perfluorohexyl ethanoic acid}</u>	<u>53826123</u>
<u>6:2 Fluorotelomer unsaturated carboxylic acid {also: 2H-perfluoro-2-octenoic acid}</u>	<u>70887886</u>
<u>8:2 Fluorotelomer sulfonic acid {FTS 8:2} {also: 1H,1H,2H,2H-Perfluorodecane sulfonic acid}</u>	<u>39108344</u>
<u>8:2 Fluorotelomer sulfonate</u>	<u>481071787</u>
<u>8:2 Fluorotelomer alcohol {FtOH 8:2}</u>	<u>678397</u>
<u>8:2 Fluorotelomer unsaturated carboxylic acid {also: 2H-perfluoro-2-decenoic acid}</u>	<u>70887842</u>
<u>8:2 Fluorotelomer carboxylic acid {also: 2-perfluorooctyl ethanoic acid}</u>	<u>27854315</u>
<u>10:2 Fluorotelomer sulfonic acid {also: 1H,1H,2H,2H-Perfluorododecane sulfonate}</u>	<u>120226600</u>
<u>10:2 Fluorotelomer alcohol {FtOH 10:2}</u>	<u>865861</u>
<u>10:2 Fluorotelomer carboxylic acid {also: 2-perfluorodecyl ethanoic acid}</u>	<u>53826134</u>
<u>3:3 Fluorotelomer carboxylic acid {also: 2H,2H,3H,3H-Perfluorohexanoic acid}{3:3 FTCA}</u>	<u>356025</u>
<u>5:3 Fluorotelomer carboxylic acid {also: 2H,2H,3H,3H-Perfluorooctanoic acid} {5:3 acid}</u>	<u>914637493</u>
<u>7:3 Fluorotelomer carboxylic acid {also: 2H,2H,3H,3H-Perfluorodecanoic acid}</u>	<u>812704</u>
<u>Hexafluoropropylene oxide dimer acid {HFPO} and its ammonium salt {GenX/GenX Chemicals}</u>	<u>13252136</u>
<u>Hexafluoropropylene oxide dimer acid {HFPO} and its ammonium salt {GenX/GenX Chemicals} (alt. CAS; see 13252136)</u>	<u>62037803</u>
<u>Perfluoro(2-methyl-3-oxahexanoic) acid {GenX/GenX Chemicals} (alt. CAS; see 13252136)</u>	<u>62037803</u>
<u>Ammonium 4,8-dioxa-3H-perfluorononanoate {ADONA Ammonium salt}</u>	<u>958445448</u>
<u>4,8-Dioxa-3H-perfluorononanoic acid {ADONA}</u>	<u>919005144</u>
<u>9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid {9-Cl-PF3ONS}</u>	<u>756426581</u>
<u>11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid {11-Cl-PF3OUdS}</u>	<u>763051929</u>
<u>11-Chloroeicosafluoro-3-oxaundecane-1-sulfonate (potassium or other salts)</u>	<u>83329899</u>
<u>Nonafluoro-3,6-dioxaheptanoic acid {NFDHA}</u>	<u>151772586</u>
<u>Perfluoro(2-ethoxyethane) sulfonic acid {PFEEESA}</u>	<u>113507827</u>

INFORMAL REVIEW DRAFT

<u>Chemical Name (and Acronym if Available)</u>	<u>CAS</u>
<u>Perfluoro-3-methoxypropanoic acid {PFMPA}</u>	<u>377731</u>
<u>Perfluoro-4-methoxybutanoic acid {PFMBA}</u>	<u>863090895</u>
<u>Perfluoroisobutylene {PFIB}</u>	<u>382218</u>
<u>2-(Perfluorooctyl)ethyl methacrylate</u>	<u>1996889</u>
<u>1-Iodo-2-(perfluorooctyl)ethane</u>	<u>2043530</u>
<b><u>Other Synonyms Used for the Above Chemicals</u></b>	
<u>Cyclohexanesulfonic acid, decafluoro(pentafluoroethyl)-, potassium salt (see Decafluoro-4-(pentafluoroethyl)cyclohexanesulfonate)</u>	<u>67584423</u>
<u>2H-perfluoro-2-decenoic acid {8:2 FTUCA} {8:2 FOUEA} (see 8:2 Fluorotelomer unsaturated carboxylic acid)</u>	<u>70887842</u>
<u>2-perfluorodecyl ethanoic acid {10:2 FDEA} (see 10:2 Fluorotelomer carboxylic acid)</u>	<u>53826134</u>
<u>2-perfluorohexyl ethanoic acid {6:2 FTCA} {6:2 FHEA} (see 6:2 Fluorotelomer carboxylic acid)</u>	<u>53826123</u>
<u>2H-perfluoro-2-octenoic acid {6:2 FHUEA} (see 6:2 Fluorotelomer unsaturated carboxylic acid)</u>	<u>70887886</u>
<u>2-perfluorooctyl ethanoic acid {8:2 FTA} {8:2 FOEA} (see 8:2 Fluorotelomer carboxylic acid)</u>	<u>27854315</u>
<u>Sodium perfluoro-1-dodecanesulfonate {PFDoS} (see Perfluoro-1-dodecanesulfonate, sodium salt )</u>	<u>1260224541</u>
<u>2H,2H,3H,3H-Perfluorohexanoic acid {3:3 FTCA} (see 3:3 Fluorotelomer carboxylic acid)</u>	<u>356025</u>
<u>2H,2H,3H,3H-Perfluorooctanoic acid {5:3 acid} (see 5:3 Fluorotelomer carboxylic acid)</u>	<u>914637493</u>
<u>2H,2H,3H,3H-Perfluorodecanoic acid (see 7:3 Fluorotelomer carboxylic acid)</u>	<u>812704</u>
<u>N-Ethyl-N-((heptadecafluorooctyl)sulfonyl)glycine (see 2-(N-Ethyl-perfluorooctanesulfonamido)acetic acid)</u>	<u>2991506</u>
<u>N-Methylperfluorooctanesulfonic acid (see Perfluoro-N-methyloctanesulfonamide)</u>	<u>31506328</u>
<u>N-Methyl perfluorooctanesulfonamideoacetic acid (see N-(Heptadecafluorooctylsulfonyl)-N-methylglycine)</u>	<u>2355319</u>
<u>1H,1H,2H,2H-Perfluorohexane sulfonic acid (see 4:2 Fluorotelomer sulfonic acid)</u>	<u>757124724</u>
<u>1H,1H,2H,2H-Perfluorooctane sulfonic acid (see 6:2 Fluorotelomer sulfonic acid )</u>	<u>27619972</u>
<u>1H,1H,2H,2H-Perfluorodecane sulfonic acid (see 8:2 Fluorotelomer sulfonic acid)</u>	<u>39108344</u>
<u>1H,1H,2H,2H-Perfluorododecane sulfonate (see 10:2 Fluorotelomer sulfonic acid)</u>	<u>120226600</u>

**APPENDIX D**

**Source Testing:**

**Summary of Requirements for Measurements and Alternatives\***

(See notes preceding the table for further explanation of terms and symbols used in the table.)

(Symbol “.” indicates “same as above.” Symbol “- -” means “same across cells”.)

Emitting Process, Device or Facility Activity	Substance and Type of Test	Alternative (if any)
---	----------------------------	----------------------

---

**~~COMBUSTION~~**

1. Incinerators

(a) Incinerators burning hazardous, municipal, or biomedical waste, or burning tires, or heating 55-gallon (or other sizes) drums for the purpose of drum reconditioning, reclamation, or recycling. Does not include refuse incinerators at schools, prisons, restaurants, or hotels.	a. Full set metals/stack test b. Hydrogen chloride/stack test c. PAH/stack test d. Dioxins/stack test e. Formaldehyde/stack test f. Benzene/stack test g. Vinyl chloride/stack test h. PCBs/stack test: required any time that dioxins are tested PCBs shall be speciated to include: PCB 77, PCB 81, PCB 105, PCB 114, PCB 118, PCB 123, PCB 126, PCB 156, PCB 157, PCB 167, PCB 169, and PCB 189.	Small business: Fuel analysis Small business: Fuel analysis    Small business: Not required Small business: Not required Small business: Not required
--	--	--

(b) Incinerators at schools, prisons, restaurants, and hotels.	Full set metals/stack test	
---	----------------------------	--

(c) Metal reclamation when surface is coated with plastic material	Same as 1(a) above	Same as 1(a) above
--	--------------------	--------------------

2. Coal and coke combustion including incineration*	a. Full set metals/stack test b. Hydrogen chloride/stack test c. PAH/stack test d. Dioxins/stack test e. Formaldehyde/stack test	Small business: Fuel analysis Small business: Fuel analysis
--	--	--

Requirements a-e shall not apply to universities, schools, colleges, hospitals, and correctional institutions where coal or coke combustion is used primarily for space heating.

\* See notes preceding the table for further explanation of terms used in the table.

INFORMAL REVIEW DRAFT

3. Residual and crude oil combustion and incineration\* a. Full set metals/stack test Small business: Fuel analysis  
b. Metals, chloride/fuel analysis  
c. Benzene/stack test  
d. PAH/stack test  
e. Formaldehyde/stack test

~~Requirements a-e shall not apply to universities, schools, colleges, hospitals, and correctional institutions where residual or crude oil combustion is used primarily for space heating.~~

4. Distillate and diesel combustion and incineration\* a. Metals, chloride/fuel analysis  
b. PAH/stack test  
c. Formaldehyde/stack test  
d. Diesel PM (PM10) If source testing is necessary, ARB should be consulted as to the most appropriate test method.

~~Requirements a-c shall not apply to universities, schools, colleges, hospitals, and correctional institutions where distillate or diesel combustion is used primarily for space heating.~~

~~Requirements a-c shall not apply to emergency or stand-by equipment that primarily burn distillate or diesel fuel.~~

5. Waste oil combustion and incineration\* (including oil containing used, recycled, reprocessed, or re-refined oil) a. Full set metals/stack test Small business: Fuel analysis  
b. Halogenated organics/stack test  
c. Benzene/stack test  
d. PAH/stack test  
e. Dioxins/stack test  
f. Formaldehyde/stack test Small business: Not required  
g. PCBs/stack test: required

~~any time that dioxins are tested  
PCBs that should be speciated include: PCB 77, PCB 81, PCB 105, PCB 114, PCB 118, PCB 123, PCB 126, PCB 156, PCB 157, PCB 167, PCB 169, and PCB 189, as described in the Consolidated Table of OEHHA / ARB Approved Risk Assessment Health Values.~~

\* If co-fired with hazardous, municipal, or biomedical waste,

INFORMAL REVIEW DRAFT

~~—or burning tires, then include all testing required under 1(a).~~



INFORMAL REVIEW DRAFT

6. ~~Wood, wood waste, and agricultural waste combustion and incineration\* (includes untreated and treated wood)~~ a. ~~Full set metals/stack test~~ b. ~~PAH/stack test~~ c. ~~Dioxins/stack test~~ d. ~~Formaldehyde/stack test~~ ~~Small business: Fuel analysis~~ ~~Requirements a-d shall not apply to universities, schools, colleges, hospitals, and correctional institutions where wood, wood waste, or agricultural waste combustion is used primarily for space heating.~~

7. ~~Natural gas combustion~~ a. ~~Formaldehyde/stack test for electric utilities only~~

~~OTHER PROCESSES~~

8. ~~Waste water treatment facilities including Publicly Owned Treatment Works (POTWs)~~

~~Sludge incinerator~~ Same as Incinerators 1(a) ~~Same as Incinerators 1(a)~~

9. ~~Agriculture related facilities: dust~~ a. ~~Metals/Lab analysis of dust representative of fugitive dust\*\*~~ ~~Small business: Not required~~

10. ~~Pharmaceutical mfg.~~

~~Blender~~ a. ~~Halogenated organics/ducted or as applicable in method~~ b. ~~Benzene/ducted or as applicable in method~~

~~Drying oven~~ a. ~~Halogenated organics ducted or as applicable in method~~ b. ~~Benzene/ducted or as applicable in method~~

\* ~~If co-fired with hazardous, municipal, or biomedical waste, or burning tires, then include all testing required under 1(a).~~

\*\* ~~Preferably dust trapped by the particulate control equipment, if any.~~

INFORMAL REVIEW DRAFT

11. Smelters and foundries

- ~~(a) All~~
  - ~~a. Full set metals/stack test~~ ~~Small business: Metals test/ feed material analysis for As, Be, Cd, Cr(VI), Ni, Pb~~
  - ~~b. Hydrogen sulfide/stack test~~ ~~Small business: Not required~~
- ~~(b) Secondary copper smelters~~
  - ~~a. Same as 11(a) plus dioxins/stack test~~

12. Petroleum refineries

- ~~- CO boilers~~
  - ~~a. Benzene/as applicable in method~~
  - ~~b. Formaldehyde/as applicable in method~~
  - ~~c. All metals/ducted or as applicable in method~~
- ~~- Catalytic crackers~~
  - ~~a. Benzene/as applicable in method~~
  - ~~b. Formaldehyde/as applicable in method~~
  - ~~c. All metals/ducted or as applicable in method~~
- ~~- Oil combustion~~
  - ~~a. Same as appropriate oil combustion by fuel type~~ ~~Same as 5 (oil combustion)~~

13. Asphaltic concrete production

- ~~a. Full set of metals/ducted or as applicable in method~~
- ~~b. Benzene/ducted or as applicable in method~~
- ~~c. PAH/ducted or as applicable in method~~ ~~Small business: Not required~~

14. Cement mfg.

- ~~a. Full set of metals/stack test~~
- ~~b. Formaldehyde/stack test~~
- ~~c. Benzene/stack test~~
- ~~d. Dioxins/stack test \*~~
- ~~e. PAH/stack test \*~~ ~~Small business: Not required~~
- ~~f. Hydrogen chloride/stack test\*~~ ~~Small business: Fuel analysis, including total chloride~~

~~\_\_\_\_\_~~  
~~\_\_\_\_\_~~  
~~\* except when burning primarily natural gas; then not required~~

INFORMAL REVIEW DRAFT

15. Pulp and Paper mfg.

~~–Combustion a. All combustion, Same as for Combustion  
as applicable by fuel type~~

~~–Bleaching a. Formaldehyde/ducted or as  
applicable in method~~

~~b. Halogenated organics/ducted  
or as applicable in method~~

16. Textile mfg.

~~–Combustion a. All combustion, Same as for Combustion  
as applicable by fuel type~~

~~–Other processes a. Benzene/ducted or  
as applicable in method~~

~~b. Formaldehyde/ducted or as  
applicable in method~~

~~c. Halogenated organics/  
ducted or as applicable in method~~

17. Solvent recycling  
(re-refining)

~~a. Halogenated organics/  
ducted or as applicable in method~~

~~b. Benzene/ducted or as  
applicable in method~~

18. Fiberboard mfg.

~~a. Formaldehyde/ducted or  
as applicable in method~~

19. Glass mfg.

~~a. Arsenic/stack test~~

~~b. Cr(VI) and lead/stack test Small business: Not required~~

20. Bulk plant/terminal

~~a. Gasoline vapors/existing  
compliance tests must be provided~~

<b><u>Emitting Process, Device or Facility Activity</u></b>	<b><u>Substance and Type of Test</u></b>	<b><u>Alternative (if any)</u></b>
<del>--COMBUSTION--</del>	<del>--</del>	<del>--</del>
1. Incinerators	<del>--</del>	<del>--</del>
<u>(a) Incinerators burning hazardous, municipal, or biomedical waste, or burning tires, or heating 55 gallon (or other sizes) drums for the purpose of drum reconditioning, reclamation, or recycling. Does not include refuse incinerators at schools, prisons, restaurants, or hotels.</u>	<u>a. Full set metals/stack test</u>	<u>Small business: Fuel analysis</u>

INFORMAL REVIEW DRAFT

<u>Emitting Process, Device or Facility Activity</u>	<u>Substance and Type of Test</u>	<u>Alternative (if any)</u>
..	<u>b. Hydrogen chloride/stack test</u>	<u>Small business: Fuel analysis</u>
..	<u>c. PAH/stack test</u>	=
..	<u>d. Dioxins/stack test</u>	=
..	<u>e. Formaldehyde/stack test</u>	<u>Small business: Not required</u>
..	<u>f. Benzene/stack test</u>	<u>Small business: Not required</u>
..	<u>g. Vinyl chloride/stack test</u>	<u>Small business: Not required</u>
..	<u>h. PCBs/stack test: required any time that dioxins are tested. PCBs shall be speciated to include: PCB 77, PCB 81, PCB 105, PCB 114, PCB 118, PCB 123, PCB 126, PCB 156, PCB 157, PCB 167, PCB 169, and PCB 189.</u>	=
<u>(b) Incinerators at schools, prisons, restaurants, and hotels.</u>	<u>Full set metals/stack test</u>	=
<u>(c) Metal reclamation when surface is coated with plastic material</u>	<u>Same as 1(a) above</u>	<u>Same as 1(a) above</u>
<u>2. Coal and coke combustion including incineration*</u>	<u>a. Full set metals/stack test</u>	<u>Small business: Fuel analysis</u>
..	<u>b. Hydrogen chloride/stack test</u>	<u>Small business: Fuel analysis</u>
..	<u>c. PAH/stack test</u>	=
..	<u>d. Dioxins/stack test</u>	=
..	<u>e. Formaldehyde/stack test</u>	=
..	<u>a-e above</u>	<u>Requirements a-e shall not apply to universities, schools, colleges, hospitals, and correctional institutions where coal or coke combustion is used primarily for space heating.</u>
<u>3. Residual and crude oil combustion and incineration*</u>	<u>a. Full set metals/stack test</u>	<u>Small business: Fuel analysis</u>
..	<u>b. Metals, chloride/fuel analysis</u>	=
..	<u>c. Benzene/stack test</u>	=

INFORMAL REVIEW DRAFT

<u>Emitting Process, Device or Facility Activity</u>	<u>Substance and Type of Test</u>	<u>Alternative (if any)</u>
..	<u>d. PAH/stack test</u>	=
..	<u>e. Formaldehyde/stack test</u>	=
..	<u>a-e above</u>	<u>Requirements a-e shall not apply to universities, schools, colleges, hospitals, and correctional institutions where residual or crude oil combustion is used primarily for space heating.</u>
<u>4. Distillate and diesel combustion and incineration*</u>	<u>a. Metals, chloride/fuel analysis</u>	=
..	<u>b. PAH/stack test</u>	=
..	<u>c. Formaldehyde/stack test</u>	=
..	<u>d. Diesel PM (PM10) If source testing is necessary, ARB should be consulted as to the most appropriate test method.</u>	-
..	<u>a-c above</u>	<u>Requirements a-c shall not apply to universities, schools, colleges, hospitals, and correctional institutions where distillate or diesel combustion is used primarily for space heating.</u>
..	<u>a-c above</u>	<u>Requirements a-c shall not apply to emergency or stand-by equipment that primarily burn distillate or diesel fuel.</u>
<u>5. Waste oil combustion and incineration* (including oil containing used, recycled, reprocessed, or re-refined oil)</u>	<u>a. Full set metals/stack test</u>	<u>Small business: Fuel analysis</u>
..	<u>b. Halogenated organics/stack test</u>	=
..	<u>c. Benzene/stack test</u>	=
..	<u>d. PAH/stack test</u>	=
..	<u>e. Dioxins/stack test</u>	=
..	<u>f. Formaldehyde/stack test</u>	<u>Small business: Not required</u>

INFORMAL REVIEW DRAFT

<u>Emitting Process, Device or Facility Activity</u>	<u>Substance and Type of Test</u>	<u>Alternative (if any)</u>
--	g. <u>PCBs/stack test: required any time that dioxins are tested. PCBs that should be speciated include: PCB 77, PCB 81, PCB 105, PCB 114, PCB 118, PCB 123, PCB 126, PCB 156, PCB 157, PCB 167, PCB 169, and PCB 189, as described in the Consolidated Table of OEHHA / ARB Approved Risk Assessment Health Values.</u>	=
<u>6. Wood, wood waste, and agricultural waste combustion and incineration* (includes untreated and treated wood)</u>	a. <u>Full set metals/stack test</u>	<u>Small business: Fuel analysis</u>
--	b. <u>PAH/stack test</u>	=
--	c. <u>Dioxins/stack test</u>	=
--	d. <u>Formaldehyde/stack test</u>	=
--	<u>a-d above</u>	<u>Requirements a-d shall not apply to universities, schools, colleges, hospitals, and correctional institutions where wood, wood waste, or agricultural waste combustion is used primarily for space heating.</u>
<u>7. Natural gas combustion</u>	a. <u>Formaldehyde/stack test for electric utilities only</u>	=
<b><u>--OTHER PROCESSES--</u></b>	--	--
<u>8. Waste water treatment facilities - including Publicly Owned Treatment Works (POTWs)</u>	--	--
- <u>Sludge incinerator</u>	<u>Same as Incinerators 1(a)</u>	<u>Same as Incinerators 1(a)</u>
- <u>Unit processes (including preliminary treatment, primary treatment, secondary treatment, basins, solids and sludge handling, filtration, and chlorination), or as proposed</u>	a. <u>Appendix A-I listed substances/two-step test</u>	<u>For PFAS-related compounds, wastewater treatment facilities may propose a combination of water testing and air sampling to calculate emissions of the substances in Note 7 of this Appendix</u>

INFORMAL REVIEW DRAFT

<b><u>Emitting Process, Device or Facility Activity</u></b>	<b><u>Substance and Type of Test</u></b>	<b><u>Alternative (if any)</u></b>
9. Agriculture-related facilities: <u>dust</u>	a. <u>Metals/Lab analysis of dust representative of fugitive dust</u> ** —	<u>Small business: Not required</u>
10. <u>Pharmaceutical mfg.</u>	--	--
- <u>Blender</u>	a. <u>Halogenated organics/ducted or as applicable in method</u>	=
--	b. <u>Benzene/ducted or as applicable in method</u>	=
- <u>Drying oven</u>	a. <u>Halogenated organics ducted or as applicable in method</u>	=
--	b. <u>Benzene/ducted or as applicable in method</u>	=
11. <u>Smelters and foundries</u>	--	--
(a) <u>All</u>	a. <u>Full set metals/stack test</u>	<u>Small business: Metals test/feed material analysis for As, Be, Cd, Cr(VI), Ni, Pb</u>
--	b. <u>Hydrogen sulfide/stack test</u>	<u>Small business: Not required</u>
(b) <u>Secondary copper smelters</u>	a. <u>Same as 11(a) plus dioxins/stack test</u>	=
(c) <u>Secondary aluminum production</u>	--	--
- <u>Thermal chip dryers and secondary aluminum processing units processing material other than clean charge</u>	a. <u>Dioxins/stack test</u>	=
- <u>Scrap dryers/delacquering kilns/decoating kilns, sweat furnaces</u>	a. <u>Dioxins/stack test</u>	=
--	b. <u>Hydrogen chloride/stack test</u>	=
- <u>In-line fluxers using reactive flux materials and secondary aluminum processing units processing clean charge</u>	a. <u>Hydrogen chloride/stack test</u>	=
12. <u>Petroleum refineries</u>	--	--
- <u>CO boilers</u>	a. <u>Benzene/as applicable in method</u>	=

INFORMAL REVIEW DRAFT

<b><u>Emitting Process, Device or Facility Activity</u></b>	<b><u>Substance and Type of Test</u></b>	<b><u>Alternative (if any)</u></b>
..	<u>b. Formaldehyde/as applicable in method</u>	=
..	<u>c. All metals/ducted or as applicable in method</u>	=
<u>- Catalytic crackers</u>	<u>a. Benzene/as applicable in method</u>	=
..	<u>b. Formaldehyde/as applicable in method</u>	=
..	<u>c. All metals/ducted or as applicable in method</u>	=
<u>- Oil combustion</u>	<u>a. Same as appropriate oil combustion by fuel type</u>	<u>Same as 5 (oil combustion)</u>
<u>13. Asphaltic concrete production</u>	<u>a. Full set of metals/ducted or as applicable in method</u>	=
..	<u>b. Benzene/ducted or as applicable in method</u>	=
..	<u>c. PAH/ducted or as applicable in method</u>	<u>Small business: Not required</u>
<u>14. Cement mfg.</u>	<u>a. Full set of metals/stack test</u>	=
..	<u>b. Formaldehyde/stack test</u>	=
..	<u>c. Benzene/stack test</u>	=
..	<u>d. Dioxins/stack test ***</u>	=
..	<u>e. PAH/stack test ***</u>	<u>Small business: Not required</u>
..	<u>f. Hydrogen chloride/stack test***</u>	<u>Small business: Fuel analysis, including total chloride</u>
<u>15. Pulp and Paper mfg.</u>	<u>- -</u>	<u>- -</u>
<u>- Combustion</u>	<u>a. All combustion, as applicable by fuel type</u>	<u>Same as for Combustion</u>
<u>- Bleaching</u>	<u>a. Formaldehyde/ducted or as applicable in method</u>	=
..	<u>b. Halogenated organics/ducted or as applicable in method</u>	=
<u>16. Textile mfg.</u>	-	-
<u>- Combustion</u>	<u>a. All combustion, as applicable by fuel type</u>	<u>Same as for Combustion</u>
<u>- Other processes</u>	<u>a. Benzene/ducted or as applicable in method</u>	=



INFORMAL REVIEW DRAFT

<u>Emitting Process, Device or Facility Activity</u>	<u>Substance and Type of Test</u>	<u>Alternative (if any)</u>
--	<u>b. Formaldehyde/ducted or as applicable in method</u>	=
--	<u>c. Halogenated organics/ducted or as applicable in method</u>	=
<u>17. Solvent recycling (re-refining)</u>	<u>a. Halogenated organics/ducted or as applicable in method</u>	=
--	<u>b. Benzene/ducted or as applicable in method</u>	=
<u>18. Fiberboard mfg.</u>	<u>a. Formaldehyde/ducted or as applicable in method</u>	=
<u>19. Glass mfg.</u>	<u>a. Arsenic/stack test</u>	=
--	<u>b. Cr(VI) and lead/stack test</u>	<u>Small business: Not required</u>
<u>20. Bulk plant/terminal</u>	<u>a. Gasoline vapors/existing compliance tests must be provided</u>	=
<u>21. Landfills</u>	--	--
<u>- Active areas (e.g., daily and intermediate cover), final covered areas, or as proposed</u>	<u>a. Appendix A-I listed substances/two-step test</u>	=
<u>22. Composting</u>	--	--
<u>- Unit processes (including feedstock and receiving, composting, mixing, finished product, uncomposted feedstock, and fugitive emissions locations), or as proposed</u>	<u>a. Appendix A-I listed substances/two-step test</u>	=
<u>23. Scrap metal recycling and recovery</u>	--	--
<u>- Metal shredders</u>	<u>a. Appendix A-I listed substances/two-step test</u>	=

\* If co-fired with hazardous, municipal, or biomedical waste, or burning tires, then include all testing required under 1(a).

\*\* Preferably dust trapped by the particulate control equipment, if any.

\*\*\* except when burning primarily natural gas; then not required