## ➡§ 93100. Nonvehicular Airborne Toxic Control Measures.

The nonvehicular airborne toxic control measures contained in this subchapter have been adopted by the state board and shall be implemented by adoption of regulations by local air pollution control and air quality management districts pursuant to Health and Safety Code Section 39666.

## ➡§ 93101. Benzene Airborne Toxic Control Measure -Retail Service Stations.

(a) Definitions. For the purposes of this section, the following definitions shall apply:

(1) "ARB-certified vapor recovery system" means a vapor recovery system which has been certified by the state board pursuant to Section 41954 of the Health and Safety Code.

(2) "Excavation" means exposure to view by digging.

(3) "Gasoline" means any organic liquid (including petroleum distillates and methanol) having a Reid vapor pressure of four pounds or greater and used as a motor vehicle fuel or any fuel which is commonly or commercially known or sold as gasoline.

(4) "Motor vehicle" has the same meaning as defined in Section 415 of the Vehicle Code.

(5) "Owner or operator" means an owner or operator of a retail service station.

(6) "Phase I vapor recovery system" means a gasoline vapor recovery system which recovers vapors during the transfer of gasoline from delivery tanks into stationary storage tanks.

(7) "Phase II vapor recovery system" means a gasoline vapor recovery system which recovers vapors during the fueling of motor vehicles from stationary storage tanks.

(8) "Retail service station" means any new or existing motor vehicle fueling service station subject to payment of California sales tax on gasoline sales.

(9) "Existing retail service station" means any retail service station operating, constructed, or under construction as of the date of district adoption of regulations implementing this control measure.

(10) "New retail service station" means any retail service station which is not constructed or under construction as of the date of district adoption of regulations implementing this control measure.

(11) "Tank replacement" means replacement of one or more stationary storage tanks at an existing retail service station or excavation of 50 percent or more of an existing retail service station's total underground liquid piping from the stationary storage tanks to the gasoline dispensers.

(12) "Throughput" means the volume of gasoline dispensed at a retail service station.

(b) Phase I Vapor Recovery System Requirements.

(1) No owner or operator shall transfer, permit the transfer, or provide equipment for the transfer of gasoline, and no other person shall transfer gasoline from a gasoline delivery tank equipped with a vapor recovery system into a stationary storage tank at a retail service station unless an ARB-certified Phase I vapor recovery system is installed on the stationary storage tank and used during the transfer.

(2) The provisions of subdivision (b)(1) shall not apply to:

(A) A transfer to a stationary storage tank with a capacity of less than 1.0 cubic meter (260 gallons).

(B) A transfer to a stationary storage tank used the majority of the time for the fueling of implements of husbandry as defined in Division 16, Chapter 1, of the Vehicle Code.

(C) A transfer to a stationary storage tank used exclusively to fuel motor vehicles with a fuel capacity of five gallons or less.

(D) An existing retail service station with an annual station gasoline throughput from tanks other than those described in subdivisions (b)(2)(A), (b)(2)(B) and (b)(2)(C) of 480,000 or fewer gallons during the calendar year prior to district adoption of the measure. If during any calendar year thereafter the gasoline throughput from such tanks at the existing retail service station exceeds 480,000 gallons, this exemption shall cease to apply commencing with the first day of the following calendar year.

(E) A transfer to a stationary storage tank at an existing retail service station which receives gasoline exclusively from delivery tanks that are not required to be equipped with vapor recovery systems.

(3) Notwithstanding (b)(2)(D), at the time of tank replacement at an existing retail service station, ARB-certified Phase I vapor recovery systems shall be installed and used thereafter on all of the station facilities, except those which are exempt from the Phase I requirement by (b)(2)(A), (b)(2)(B), (b)(2)(C) or (b)(2)(E).

(c) Phase II Vapor Recovery System Requirements.

(1) No owner or operator shall transfer, permit the transfer or provide equipment for the transfer of gasoline from a stationary storage tank at a retail service station into a motor vehicle fuel tank unless an ARB-certified Phase II vapor recovery system is installed and used during the transfer.

(2) The provisions of subdivision (c)(1) shall not apply to:

(A) A transfer of gasoline from a stationary storage tank which is exempt from Phase I requirements under subdivision (b)(2)(A), (b)(2)(B), or (b)(2)(C).

(B) An existing retail service station which is exempt from Phase I requirements under subdivision (b)(2)(D).

(3) Notwithstanding (c)(2)(B), at the time of tank replacement at an existing retail service station, ARB-certified Phase II vapor recovery systems shall be installed and used thereafter on all of the station facilities, except those which are exempt from the Phase II requirement by (c)(2)(A).

(d) Correction of Defects. No owner or operator shall use or permit the use of any Phase II system or any component thereof containing a defect identified in Title 17, California Code of Regulations, Section 94006 until it has been repaired, replaced, or adjusted, as necessary to remove the defect, and, if required under Health and Safety Code Section 41960.2, district personnel have reinspected the system or have authorized its use pending reinspection. Nothing in this subdivision shall excuse compliance with subdivision (c)(1).

(e) Compliance Schedule. For purposes of this section, the following compliance schedule shall apply:

(1) The owner or operator of any new retail service station subject to this section shall comply with the provisions of this section at the time gasoline is first sold from the station.

(2) The owner or operator of any existing retail service station without ARB-certified Phase I and II vapor recovery systems shall notify the air pollution control officer in writing in advance of an intended tank replacement and shall secure all necessary permits and other approvals for the installation of Phase I and II vapor recovery systems. The owner or operator of an existing retail service station shall comply with the provisions of this section upon completion of the tank replacement.

(3) The owner or operator of an existing retail service station subject to this section, who has not earlier complied in accordance with (e)(2), shall within 15 months after district adoption of the regulations implementing this control measure secure all permits and other approvals necessary for

installation of the equipment required by this section. The owner or operator shall comply with the provisions of this section within 24 months after district adoption of regulations implementing this control measure.

(4) Excluding those existing retail service stations subject to this section as a result of tank replacement, the owner or operator of a previously exempt stationary storage tank or retail service station where the operation or annual throughput has changed such that the exemption from either the Phase I or II requirements or both is no longer applicable, shall comply with the section's provisions in accordance with (e)(3) above, provided that the first day the retail station or stationary storage tank is no longer exempt shall be considered as the date of district adoption of regulations implementing this control measure.

**➡§ 93101.5. Airborne Toxic Control Measure to Reduce Emissions of Hexavalent Chromium and Nickel from Thermal Spraying.**

(a) Applicability

This Airborne Toxic Control Measure (ATCM) shall apply to each thermal spraying operation at a stationary source that uses materials containing chromium, chromium compounds, nickel, or nickel compounds. This ATCM does not apply to portable thermal spraying operations.

(b) Definitions

For the purposes of this section, the following definitions shall apply:

(1) "Air Pollution Control System" means equipment that is installed for the purpose of collecting and containing emissions of airborne particles from thermal spraying processes. "Air Pollution Control System" includes, but is not limited to, enclosures, exhaust hoods, ductwork, fans/blowers, particulate control devices, and exhaust stacks/vents.

(2) "Control Device" means a device that reduces emissions of particulate matter. "Control Device" includes, but is not limited to, dry filter cartridges, HEPA filters, water curtains, cyclones, baghouses, and scrubbers.

(3) "Detonation Gun Spraying" means a thermal spraying process in which the coating material is heated and accelerated to the workpiece by a series of detonations or explosions from oxygen-fuel gas mixtures.

(4) "Dry Filter System" means a dry particulate filter control system that uses filter media to remove particulate emissions from the exhaust air stream.

(5) "Enclosure" means a structure, such as a booth, that surrounds a thermal spraying process and captures and contains particulate emissions and vents them to a control device. Enclosures may have permanent or temporary coverings on open faces.

(6) "Existing Thermal Spraying Operation" means a thermal spraying operation that is in operation before January 1, 2005.

(7) "Flame Spraying" means a thermal spraying process in which an oxygen/fuel gas flame is the source of heat for melting the surfacing material.

(8) "High Efficiency Particulate Air (HEPA) Filter" means a disposable, dry filter that has a minimum particle collection efficiency of 99.97 percent when tested with a mono-disperse 0.3 um test aerosol.

(9) "Hexavalent chromium" means the form of chromium with a valence state of +6.

(10) "High-Velocity Oxy-Fuel (HVOF) Spraying" means a thermal spray process in which particles are injected into a high-velocity jet formed by the combustion of oxygen and fuel.

(11) "Independent Tester" means a person who engages in the testing of stationary sources to determine compliance with air pollution laws or regulations and who meets all of the following criteria:

(A) The independent tester is not owned in whole or in part by the owner/operator of the thermal spraying operation; and

(B) The independent tester has not received gross income from the owner/operator of the thermal spraying operation in excess of $100,000 or in excess of 10% of the tester's annual revenues, other than as a result of source test contracts; and

(C) The independent tester has not manufactured or installed any emission control device or monitor used in connection with the specific source to be tested; and

(D) When conducting the compliance test, the independent tester does not use any employee or agent who:

1. holds a direct or indirect investment of $1,000 or more in the owner/operator of the thermal spraying operation; or

2. has directly received income in excess of $250 from the owner/operator of the thermal spraying operation in the previous 12 months; or

3. is a director, officer, partner, employee, trustee, or holds any position of management in the owner/operator of the thermal spraying operation.

(12) "Initial Startup" means the first time a new thermal spraying operation begins production or the first time additional or modified thermal spraying operations begin operating at a modified source. If such production or operation occurs prior to the operative date of this section, "Initial Startup" means the operative date of this section. "Initial Startup" does not include operation solely for testing of equipment or subsequent startup of permit units following malfunction or shutdown.

(13) "Intake Area" means the area of the opening(s) in an enclosure from which make-up air is drawn from outside the enclosure during normal operations.

(14) "Inward Face Velocity" means the airflow into an enclosure that prevents escape of contaminated air from the enclosure. Inward face velocity is measured in feet per minute, in accordance with Appendix 2.

(15) "Leak" means the release of any particulate matter from any opening in the emission collection system/device other than the intended exhaust or emission point of that emission control system/device.

(16) "Location" means one or more contiguous or adjacent properties. Contiguous or adjacent properties are properties with two or more parcels of land in actual physical contact, or separated solely by a public roadway or other public right-of-way.

(17) "Modification" means:

(A) any existing thermal spraying operation that did not use materials containing chromium, chromium compounds, nickel or nickel compounds before January 1, 2005, but begins using any of these materials on or after January 1, 2005; or

(B) any physical change in, change in the method of operation of, or addition to an existing permit unit that requires an application for an authority to construct and/or a permit to operate issued by the permitting agency. Routine maintenance and/or repair is not considered a physical change. A "change

in the method of operation" of equipment, unless previously limited by an enforceable permit condition, shall not include:

1. an increase in the production rate, unless such increase will result in an increase in emissions that causes a move from a lower tier to a higher tier in subsection (c)(1)(A) Table 1 or Table 2 of this regulation; or

2. an increase in the hours of operation; or

3. a change in ownership of a source; or

(C) the replacement of components for which the fixed capital cost exceeds 50 percent of the fixed capital cost that would be required to construct a comparable new source.

(18) "Modified Thermal Spraying Operation" means any thermal spraying operation which has undergone a modification.

(19) "New Thermal Spraying Operation" means any thermal spraying operation that begins initial operations on or after January 1, 2005. "New Thermal Spraying Operation" does not include the installation of a new permit unit at an existing thermal spraying operation or the modification of an existing thermal spraying operation.

(20) "Operating Parameter" means a parameter established for a control device or process parameter which, if achieved by itself or in combination with one or more other operating parameter values, determines that an owner or operator is in compliance with the applicable emission limitation or standard.

(21) "Permit Unit" means any article, machine, piece of equipment, device, process, or combination thereof, which may cause or control the release of air emissions of hexavalent chromium or nickel from a thermal spraying operation and which requires a permit to operate issued by a permitting agency.

(22) "Permitting Agency" means the local air pollution control or air quality management district.

(23) "Plasma Spraying" means a thermal spraying process in which an electric arc is used to ionize a gas and produce a plasma jet that melts and propels the coating material to the workpiece.

(24) "Point Source" means a permit unit that releases air pollutants through an intended opening such as, but not limited to, a stack, chimney, or vent.

(25) "Portable Thermal Spraying Operation" means a thermal spraying operation that is temporarily used for field applications at offsite locations. A thermal spraying operation is not a "Portable Thermal Spraying Operation" if the thermal spraying operation or its replacement resides at the same location for more than 30 consecutive days.

(26) "Potential to Emit" means the maximum capacity of a stationary source to emit a regulated air pollutant based on its physical and operational design. Any physical or operational limitation on the capacity of the stationary source to emit a pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design only if the limitations are listed as enforceable conditions in an air permit issued by the permitting agency.

(27) "Sensitive Receptor" means any residence including private homes, condominiums, apartments, and living quarters; education resources such as preschools and kindergarten through grade twelve (k-12) schools; daycare centers; and health care facilities such as hospitals or retirement and nursing homes. A sensitive receptor includes individuals housed in long term care hospitals, prisons, and dormitories or similar live-in housing.

(28) "Stationary Source" means any building, structure, facility or installation which emits any affected pollutant directly or as a fugitive emission. "Building, structure, facility, or installation" includes all pollutant emitting activities which meet all of the following criteria:

(A) are under the same ownership or operation, or which are owned or operated by entities which are under common control; and

(B) belong to the same industrial grouping either by virtue of falling within the same two-digit standard industrial classification code or by virtue of being part of a common industrial process, manufacturing process, or connected process involving a common raw material; and

(C) are located on one or more contiguous or adjacent properties.

(29) "Substantial Use" of an Authority to Construct means one or more of the following: (A) the equipment that constitutes the source has been purchased or acquired; (B) construction activities, other than grading or installation of utilities or foundations, have begun and are continuing; or (C) a contract to complete construction of the source within one year has been entered into.

(30) "Thermal Spraying Operation" means one or more of several processes in which metallic or nonmetallic surfacing materials are deposited in a molten or semi-molten condition on a substrate to form a coating. The surfacing material may originate in the form of powder, rod, or wire before it is heated, prior to spraying and deposition. Thermal spraying processes include: detonation gun spraying, flame spraying, high-velocity oxy-fuel spraying, plasma spraying, and twin-wire electric arc spraying. For the purposes of this section, "Thermal Spraying Operation" includes only those operations that are conducted at stationary sources and use materials containing chromium, chromium compounds, nickel, or nickel compounds. "Thermal Spraying Operation" does not include portable thermal spraying operations.

(31) "Twin-Wire Electric Arc Spraying" means a thermal spraying process where two electrically conducting wires are brought close together to create an electric arc. The molten material formed in the arc is then projected by a compressed gas stream towards a work piece on which it forms a coating.

(32) "Volume Source" means a permit unit, either controlled or uncontrolled, from which air pollutants undergo initial dispersion within a building or structure prior to their release into the outdoor ambient air. "Volume Source" also includes a thermal spraying process that is conducted outside of a building or structure and releases pollutants directly into the outdoor ambient air.

(33) "Water Curtain" means a particulate control system that utilizes flowing water (i.e., a conventional water curtain) or a pumpless system to remove particulate emissions from the exhaust air stream.

(c) Standards

(1) Standards for Existing Thermal Spraying Operations

Effective January 1, 2006, each owner or operator of an existing thermal spraying operation must control hexavalent chromium and nickel emissions by complying with the control efficiency requirements specified in subsection (c)(1)(A), the enclosure standards specified in subsection (c)(1)(B), and the ventilation system standards specified in subsection (c)(1)(C). Annual hexavalent chromium and nickel emissions and maximum hourly nickel emissions must be determined in accordance with the emission calculation methods in Appendix 1 or may be based on the results of an emissions source test. The use of data from an emissions source test must be approved by the permitting agency and the test must be conducted by an independent tester.

(A) Control Efficiency Requirements for Existing Thermal Spraying Operations

All existing thermal spraying operations must control hexavalent chromium and nickel emissions as follows:

1. All hexavalent chromium and nickel emissions from thermal spraying operations must be routed through an air pollution control system that meets the enclosure and ventilation standards in subsections (c)(1)(B) and (c)(1)(C).

2. For point sources, maximum hourly emissions of nickel from all thermal spraying operations at a stationary source must not exceed 0.1 lb. For volume sources, maximum hourly emissions of nickel from all thermal spraying operations must not exceed 0.01 lb.

3. For point sources, the air pollution control system must include a control device that is certified by its manufacturer to meet the minimum control efficiency requirements specified in Table 1 of this subsection (c)(1)(A). For volume sources, the air pollution control system must include a control device that is certified by its manufacturer to meet the minimum control efficiency requirements specified in Table 2 of subsection (c)(1)(A). Emissions of hexavalent chromium and/or nickel from all thermal spraying operations at a stationary source must be included when determining the annual emissions from thermal spraying under subsection (c)(1)(A). If an existing control device meets the minimum control efficiency requirements specified in subsection (c)(1)(A), no additional controls are required by this regulation, but the owner or operator must still comply with the enclosure standards in subsection (c)(1)(B), and the ventilation system standards in subsection (c)(1)(C). If a thermal spraying operation has an air permit that limits the use of chromium and nickel to specific thermal spraying permit units, the control efficiency requirements, enclosure standards, and ventilation system standards only apply to those specific thermal spraying permit units.

4. All thermal spraying operations that are subject to more than one minimum control efficiency requirement under subsection (c)(1)(A) must comply with the most stringent applicable requirement.

Table 1: Point Sources - Control Efficiency Requirements for Existing Thermal Spraying Operations

Table 1: Point Sources - Control Efficiency Requirements for Existing Thermal Spraying Operations

| Tier | Annual Hexavalent Chromium Emissions from Thermal Spraying 1 | Annual Nickel Emissions from Thermal Spraying 1 | Minimum Control Efficiency Requirements 2 |
|---|---|---|---|
| 1 | >0.004 lbs/yr and <0.04 lbs/yr | >2.1 lbs/yr and <20.8 lbs./yr | 90% by weight (e.g., a water curtain) |
| 2 | > 0.04 lbs/yr and <0.4 lbs/yr | > 20.8 lbs/yr and <208 lbs/yr | 99.999% @ 0.5 microns(e.g., a high-efficiency dry filter) |
| 3 | > 0.4 lbs/yr | > 208 lbs/yr | 99.97% @ 0.3 microns (e.g., a HEPA filter) |


| *Tier* | *Annual Hexavalent Chromium Emissions from Thermal Spraying*[1] | *Annual Nickel Emissions from Thermal Spraying*[1] | *Minimum Control Efficiency Requirements*[2] |
|---|---|---|---|
| 1 | ≥ 0.004 lbs/yr and ≤ 0.04 lbs/yr | ≥ 2.1 lbs/yr and ≤ 20.8 lbs./yr | 90% by weight (e.g., a water curtain) |
| 2 | > 0.04 lbs/yr and ≤ 0.4 lbs/yr | > 20.8 lbs/yr and ≤ 208 lbs/yr | 99.999% @ 0.5 microns (e.g., a high-efficiency dry filter) |
| 3 | > 0.4 lbs/yr | > 208 lbs/yr | 99.97% @ 0.3 microns (e.g., a HEPA filter) |


1. Emissions are controlled emissions from all thermal spraying operations at a stationary source, if the thermal spraying operation is already equipped with a control device.

a. For non-permitted sources, annual emissions must be determined in accordance with the emission calculation methods specified in Appendix 1 or based on the results of an emissions source test that has been reviewed and approved by the permitting agency.

b. For permitted sources, annual emissions must be calculated based on the potential to emit or in accordance with the allowable limits set forth in the permit conditions. Emissions must be determined in accordance with the emission calculation methods specified in Appendix 1 or based on the results of an emissions source test that has been reviewed and approved by the permitting agency.

2. Control efficiency requirements must be certified by the manufacturer/supplier of the control device and/or filter media. Thermal spraying operations are not required to conduct an emissions source test to verify the control efficiency at the listed particle sizes.


1. Emissions are controlled emissions from all thermal spraying operations at a stationary source, if the thermal spraying operation is already equipped with a control device.

a. For non-permitted sources, annual emissions must be determined in accordance with the emission calculation methods specified in Appendix 1 or based on the results of an emissions source test that has been reviewed and approved by the permitting agency.

b. For permitted sources,annual emissions must be calculated based on the potential to emit or in accordance with the allowable limits set forth in the permit conditions. Emissions must be determined in accordance with the emission calculation methods specified in Appendix 1 or based on the results of an emissions source test that has been reviewed and approved by the permitting agency.

2. Control efficiency requirements must be certified by the manufacturer/supplier of the control device and/or filter media. Thermal spraying operations are not required to conduct an emissions source test to verify the control efficiency at the listed particle sizes.

Table 2: Volume Sources - Control Efficiency Requirements for Existing Thermal Spraying Operations

Table 2: Volume Sources - Control Efficiency Requirements for Existing Thermal Spraying Operations

| Tier | Annual Hexavalent Chromium Emissions from Thermal Spraying 1 | Annual Nickel Emissions from Thermal Spraying 1 | Minimum Control Efficiency Requirements 2 |
|---|---|---|---|
| 1 | >0.001 lbs/yr and <0.01 lbs/yr | >0.3 lbs/yr and <3.1 lbs./yr | 99% by weight (e.g., a dry filter) |
| 2 | > 0.01 lbs/yr and <0.1lbs/yr | > 3.1 lbs/yr and <31 lbs/yr | 99.999% @ 0.5 microns (e.g., a high-efficiency dry filter) |
| 3 | > 0.1 lbs/yr | > 31 lbs/yr | 99.97% @ 0.3 microns (e.g., a HEPA filter) |



| *Tier* | *Annual Hexavalent Chromium Emissions from Thermal Spraying*[1] | *Annual Nickel Emissions from Thermal Spraying*[1] | *Minimum Control Efficiency Requirements*[2] |
|---|---|---|---|
| 1 | ≥ 0.001 lbs/yr and ≤ 0.01 lbs/yr | ≥ 0.3 lbs/yr and ≤ 3.1 lbs./yr | 99% by weight (e.g., a dry filter) |
| 2 | > 0.01 lbs/yr and ≤ 0.1 lbs/yr | > 3.1 lbs/yr and ≤ 31 lbs/yr | 99.999% @ 0.5 microns (e.g., a high-efficiency dry filter) |
| 3 | > 0.1 lbs/yr | > 31 lbs/yr | 99.97% @ 0.3 microns (e.g., a HEPA filter) |

1. Emissions are controlled emissions from all thermal spraying operations at a stationary source, if the thermal spraying operation is already equipped with a control device.
a. For non-permitted sources, annual emissions must be determined in accordance with the emission calculation methods specified in Appendix 1 or based on the results of an emissions source test that has been reviewed and approved by the permitting agency.
b. For permitted sources, annual emissions must be calculated based on the potential to emit or in accordance with the allowable limits set forth in the permit conditions. Emissions must be determined in accordance with the emission calculation methods specified in Appendix 1 or based on the results of an emissions source test that has been reviewed and approved by the permitting agency.
2. Control efficiency requirements must be certified by the manufacturer/supplier of the control device and/or filter media. Thermal spraying operations are not required to conduct an emissions source test to verify the control efficiency at the listed particle sizes.


1. Emissions are controlled emissions from all thermal spraying operations at a stationary source, if the thermal spraying operation is already equipped with a control device.

a. For non-permitted sources, annual emissions must be determined in accordance with the emission calculation methods specified in Appendix 1 or based on the results of an emissions source test that has been reviewed and approved by the permitting agency.

b. For permitted sources,annual emissions must be calculated based on the potential to emit or in accordance with the allowable limits set forth in the permit conditions. Emissions must be determined in accordance with the emission calculation methods specified in Appendix 1 or based on the results of an emissions source test that has been reviewed and approved by the permitting agency.

2. Control efficiency requirements must be certified by the manufacturer/supplier of the control device and/or filter media. Thermal spraying operations are not required to conduct an emissions source test to verify the control efficiency at the listed particle sizes.

(B) Enclosure Standards

All existing thermal spraying operations that are subject to subsection (c)(1)(A) must use air pollution control systems that meet the following criteria by January 1, 2006. All modified or new thermal

spraying operations that are subject to subsection (c)(2)(A)2. or (c)(3)(A)1., respectively, must use air pollution control systems that meet the following criteria upon initial startup.

1. Enclosures must be exhaust ventilated such that a continuous inward flow of air is maintained from all designed make-up air openings during thermal spraying operations.

2. To ensure good capture of airborne pollutants, the average inward face velocity of air through the enclosure must either be:

a. a minimum of 100 feet per minute; or

b. the minimum velocity for metal spraying facilities as established in "Industrial Ventilation, A Manual of Recommended Practice", 25th Edition, published by the American Conference of Governmental Industrial Hygienists, which is incorporated by reference herein.

The inward face velocity must be confirmed by a velocity measuring device approved by the permitting agency (e.g., a pitot tube or anemometer.) Measurement of inward face velocity must be performed in accordance with the methods set forth in Appendix 2 or an alternative method approved by the permitting agency. This subsection does not require the use of an independent tester to measure inward face velocity.

3. When thermal spraying is being performed, all air inlets and access openings must be covered to prevent the escape of dust or mist contaminants into areas outside the enclosure. This requirement does not apply to any designed or intended make-up air vents or openings. Coverings can be permanent (e.g., a door) or temporary (e.g., plastic flaps). Temporary coverings must be approved by the permitting agency.

4. Before the enclosure is opened, thermal spraying must cease and the exhaust system must be run for a sufficient period of time, as determined by the permitting agency, to remove contaminated air within the enclosure. A minimum of three air exchanges must be exhausted from the booth after thermal spraying ceases.

5. For the purposes of thermal spraying equipment calibration or research and development activities, permitting agencies may allow operators to open the enclosure door during thermal spraying operations, if all of the following conditions are met:

a. The enclosure must be a four-sided booth equipped with a permanent door.

b. The enclosure must be under negative pressure, as demonstrated in accordance with subsection (d)(1)(C).

c. The owner or operator must verify that the average inward face velocity of air through the enclosure is at least 100 feet per minute while the door is open, in accordance with Appendix 2.

d. The owner or operator must obtain approval from the permitting agency before beginning operations pursuant to this subsection.

(C) Ventilation System Standards

1. Installation of Ventilation System for Existing, New, and Modified Thermal Spraying Operations

For existing thermal spraying operations, the exhaust gas stream from the air pollution control system required by subsection (c)(1)(B) must be ducted to a particulate matter control device meeting the applicable control efficiency requirements of subsection (c)(1)(A) by January 1, 2006.

For modified or new thermal spraying operations, the exhaust gas stream from the air pollution control collection system required by subsection (c)(1)(B) must be ducted to a particulate matter control device meeting the applicable control efficiency requirements of subsection (c)(2)(A)2. or (c)(3)(A)1., respectively, upon initial startup.

2. Operating Requirements for Ventilation Systems at Existing, New, and Modified Thermal Spraying Operations

a. The ventilation system and control device must be properly maintained and kept in good operating condition at all times. Any leak, as determined by a visual leak inspection conducted in accordance with Appendix 3, is a violation of this section.

b. Material collected by a particulate matter control system must be discharged into closed containers or an enclosed system that is completely sealed to prevent dust emissions.

c. Dust collectors for control devices must be maintained in a manner that prevents emissions of particulate matter into the ambient air.

(D) Permit Requirements for Existing Thermal Spraying Operations

All unpermitted existing thermal spraying operations must submit a permit application to the permitting agency no later than October 1, 2005. This permitting requirement applies only to existing thermal spraying operations that use materials containing chromium, chromium compounds, nickel, or nickel compounds.

(E) Standards for Remotely Located Existing Thermal Spraying Operations

1. The requirements of subsections (c)(1)(A), (c)(1)(B), and (c)(1)(C) do not apply to existing thermal spraying operations that meet all of the following criteria:

a. The thermal spraying operation is located at least 1,640 feet from a sensitive receptor, as determined by the permitting agency; and

b. Annual emissions of hexavalent chromium from all thermal spraying operations do not exceed 0.5 lb; and

c. The thermal spraying operation uses an air pollution control system that achieves a minimum control efficiency of 90 percent; and

d. The thermal spraying operation complies with the permitting requirements of subsection (c)(1)(D); and

e. The owner or operator of the thermal spraying operation has submitted an annual report to the permitting agency by March 1st of each calendar year, that quantifies emissions of hexavalent chromium and nickel from all thermal spraying operations during the previous calendar year; and

f. The thermal spraying operation has undergone a site specific analysis from the permitting agency to ensure public health protection.

2. Thermal spraying operations that qualify for this standard must undergo an annual evaluation by the permitting agency to ensure that the thermal spraying operation still complies with the conditions of this standard. This standard shall cease to apply if the permitting agency determines that the thermal spraying operation no longer meets all of the criteria in subsection (c)(1)(E)1. If the permitting agency determines that the standard ceases to apply, the owner or operator of the thermal spraying operation must submit a permit application to the permitting agency within 3 months of receipt of the permitting agency's determination. The owner or operator must achieve compliance with the requirements of this section within 9 months of receipt of the permitting agency's determination.

(F) Exemption for Existing Thermal Spraying Operations with Low Emission Levels

1. The requirements in subsections (c)(1)(A), (c)(1)(B), and (c)(1)(C) shall not apply to existing thermal spraying operations that meet all of the following criteria:

a. For point sources, annual emissions of hexavalent chromium are less than 0.004 lb and annual emissions of nickel are less than 2.1 lbs. For volume sources, annual emissions of hexavalent chromium are less than 0.001 lb and annual emissions of nickel are less than 0.3 lb; and

b. For point sources, maximum hourly emissions of nickel from all thermal spraying operations at a stationary source do not exceed 0.1 lb. For volume sources, maximum hourly emissions of nickel from all thermal spraying operations at a stationary source do not exceed 0.01 lb; and

c. The thermal spraying operation complies with the permitting requirements of subsection (c)(1)(D); and

d. The owner or operator of the thermal spraying operation has submitted an annual report to the permitting agency by March 1st of each calendar year, that quantifies emissions of hexavalent chromium and nickel from all thermal spraying operations during the previous calendar year.

(2) Standards for Modified Thermal Spraying Operations

(A) Upon initial startup, each owner or operator of a modified thermal spraying operation must comply with all of the following requirements:

1. Modified thermal spraying operations must control hexavalent chromium and nickel emissions by complying with the control efficiency requirements specified in subsection (c)(2)(A)2.

2. All thermal spraying operations that undergo a modification on or after January 1, 2005, must use a control device that is certified by the manufacturer to achieve 99.97 percent control efficiency for particles that are 0.3 micron in diameter. These thermal spraying operations must also comply with the enclosure standards specified in subsection (c)(1)(B) and the ventilation standards specified in subsection (c)(1)(C).

3. For point sources, the maximum hourly emissions of nickel from all thermal spraying operations at a stationary source must not exceed 0.1 lb. For volume sources, the maximum hourly emissions of nickel from all thermal spraying operations at a stationary source must not exceed 0.01 lb. Maximum hourly nickel emissions must be determined in accordance with the emission calculation methods specified in Appendix 1 or may be based on the results of an emissions source test. The use of source test data must be approved by the permitting agency and the test must be conducted by an independent tester.

4. All thermal spraying operations that undergo a modification on or after January 1, 2005, must submit a permit modification application to the permitting agency, in accordance with permitting agency requirements. This permitting requirement only applies to thermal spraying operations that use materials containing chromium, chromium compounds, nickel, or nickel compounds.

(3) Standards for New Thermal Spraying Operations

(A) 1. No person may operate a new thermal spraying operation unless it is located outside of an area that is zoned for residential or mixed use and is located at least 500 feet from the boundary of any area that is zoned for residential or mixed use.

2. A new thermal spraying operation shall be deemed to meet the standard specified above in subsection (c)(3)(A)1. if one of the following criteria are met, even if the operation does not meet the standard at the time of initial startup (e.g., because of a zoning change that occurs after the authority to construct is issued):

a. A new thermal spraying operation shall be deemed to meet the standard specified above if it meets the standard at the time it is issued an authority to construct by the permitting agency, and substantial use of the authority to construct takes place within one year after it is issued, or

b. A new thermal spraying operation shall be deemed to meet the standard specified above if it meets the standard at the time it is issued an authority to construct by the permitting agency, and

substantial use of the authority to construct takes place before any zoning change occurs that affects the operation's ability to meet the standard at the time of initial start-up.

3. Prior to initial startup of a new thermal spraying operation, the owner or operator must demonstrate to the permitting agency that the operation either meets the standard specified above in subsection (c)(3)(A)1., or meets one of the criteria specified above in subsection (c)(3)(A)2.

(B) On and after initial startup, the new thermal spraying operation must use a control device that is certified by the manufacturer to achieve 99.97 percent control efficiency for particles that are 0.3 micron in diameter. These operations must also comply with the enclosure standards specified in subsection (c)(1)(B) and the ventilation standards specified in subsection (c)(1)(C).

(C) The maximum hourly emissions of nickel from all thermal spraying operations at a stationary source must not exceed 0.1 lb. Maximum hourly nickel emissions must be determined in accordance with the emission calculation methods specified in Appendix 1 or may be based on the results of an emissions source test. The use of source test data must be approved by the permitting agency and the test must be conducted by an independent tester.

(D) Prior to initial startup, the thermal spraying operation must undergo a site specific analysis from the permitting agency to ensure public health protection.

(E) Permit Requirements for New Thermal Spraying Operations

All new thermal spraying operations must submit a permit application to the permitting agency prior to initial startup, in accordance with permitting agency requirements. This permitting requirement only applies to new thermal spraying operations that use materials containing chromium, chromium compounds, nickel, or nickel compounds.

(d) Test Requirements and Test Methods

(1) Testing to Demonstrate Compliance with Enclosure and Ventilation Standards

(A) The owner or operator of an existing thermal spraying operation subject to the control efficiency requirements in subsection (c)(1)(A), must conduct a test to demonstrate compliance with the enclosure and ventilation standards specified in subsections (c)(1)(B) and (c)(1)(C). The test must include measurement of the inward face velocity (in accordance with Appendix 2) and a visual leak inspection (in accordance with Appendix 3.) This test must be conducted within 60 days of the operative date of this section. The owner or operator must notify the permitting agency at least 30 days prior to conducting a test. Although 60 days are allowed to conduct the test, all thermal spraying operations must comply with specified control efficiency requirements, enclosure standards, and ventilation standards by January 1, 2006, as specified in subsection (c)(1).

(B) The owner or operator of a modified or new thermal spraying operation subject to the control efficiency requirements in subsections (c)(2)(A)2. or (c)(3)(A)1., respectively, must conduct a test to demonstrate compliance with the enclosure and ventilation standards in subsections (c)(1)(B) and (c)(1)(C). The test must include measurement of the inward face velocity (in accordance with Appendix 2) and a visual leak inspection (in accordance with Appendix 3.) This test must be conducted within 60 days after initial startup. The owner or operator must notify the permitting agency at least 30 days prior to conducting a test. Although 60 days are allowed to conduct the test, all thermal spraying operations must comply with specified control efficiency requirements, enclosure standards, and ventilation standards upon initial startup.

(C) Before beginning operations pursuant to subsection (c)(1)(B)5., the owner or operator must verify that negative pressure is maintained while the enclosure door is open, using one of the following procedures:

1. Measuring with an anemometer at the door opening to demonstrate flow into the enclosure door, or

2. Measuring the static pressure across the enclosure door, or

3. Using smoke tubes to demonstrate flow into the enclosure door.

As specified in subsection (e)(5), this negative pressure verification must have been performed at least once during the12-month period immediately before operations begin, and at least once after the enclosure is changed in any way that may impact air flow.

(2) Verification of Control Efficiency

Existing thermal spraying operations that are subject to Tier 2 or Tier 3 control efficiency requirements specified in subsection(c)(1)(A), modified thermal spraying operations that are subject to the requirements of subsection (c)(2)(A)2., and new thermal spraying operations that are subject to the requirements of subsection (c)(3)(A)1., must use control devices with a control efficiency verified by the manufacturer. This verification must be provided to the permitting agency upon request. The control device manufacturer must verify the control efficiency using one of the following test methods, which are incorporated by reference herein:

(A) ASHRAE Standard 52.2-1999, "Method of Testing General Ventilation Air-Cleaning Devices for Removal Efficiency by Particle Size", American Society of Heating, Refrigerating, and Air-Conditioning Engineers, Inc., 1791 Tullie Circle NE, Atlanta, GA 30329. 1999.

(B) MIL-PRF-51526A(EA), "Filter, Particulate, 340 CMH (200 CFM), 13 March 2000, U.S. Army.

(C) ASME AG-1-2003, "Code on Nuclear Air and Gas Treatment", American Society of Mechanical Engineers, 345 E. 47th St., New York, NY 10017. 2003.

(D) IEST-RP-CC001.3, "HEPA and ULPA Filters", Institute of Environmental Sciences and Technology, 5005 Newport Drive, Suite 506, Rolling Meadows, IL 60008-3841. 1993.

(3) Source Tests to Determine Emissions of Hexavalent Chromium and Nickel

Owners or operators of thermal spraying operations may choose to quantify hexavalent chromium and/or nickel emissions using data from a source test rather than using the calculation methods specified in Appendix 1. In addition, a permitting agency may require that a source test be performed to quantify hexavalent chromium and/or nickel emissions from thermal spraying operations. The use of source test data must comply with the requirements specified in this subsection (d)(3).

(A) Use of Existing Source Tests

A source test conducted prior to January 1, 2006, may be used to quantify emissions or demonstrate compliance with the standards in subsection (c)(1)(A), if the permitting agency approves the use of that test. The test must be conducted by an independent tester, in accordance with a test protocol that was reviewed and approved by the permitting agency.

(B) Test Methods

If the owner or operator of a thermal spraying operation conducts a source test to quantify emissions of hexavalent chromium and/or nickel, the testing must be conducted in accordance with the following listed test methods, which are incorporated by reference herein, or in accordance with alternative test methods approved by the permitting agency.

1. Testing to determine emissions of hexavalent chromium must be conducted in accordance with one of the following test methods, which are incorporated by reference herein:

ARB Test Method 425, "Determination of Total Chromium and Hexavalent Chromium Emissions from Stationary Sources", last amended July 28, 1997, section 94135, title 17, California Code of Regulations (CCR).

EPA Test Method 306, "Determination of Chromium Emissions From Decorative and Hard Chromium Electroplating and Chromium Anodizing Operations - Isokinetic Method", 40 CFR 63, Appendix A, as promulgated on January 25, 1995.

South Coast Air Quality Management District (SCAQMD) Test Method 205.1, "Determination of Hexavalent and Total Chromium from Plating", August 1991.

2. Testing to determine emissions of nickel must be conducted in accordance with one of the following test methods, which are incorporated by reference herein:

ARB Test Method 433, "Determination of Total Nickel Emissions from Stationary Sources", last amended September 12, 1989, section 94145, title 17, California Code of Regulations (CCR).

ARB Test Method 436, "Determination of Multiple Metals Emissions from Stationary Sources" (for nickel only), adopted July 28, 1997, section 94161, title 17, California Code of Regulations (CCR).

(C) The owner or operator of a thermal spraying operation that is conducting a source test must submit a pre-test protocol to the permitting agency, in accordance with permitting agency procedures, at least 60 days prior to conducting a source test. The pre-test protocol must include source test methods, planned sampling parameters, preliminary pollutant analytical data, calculated targets for testing the pollutant, and any proposed modifications to standardized methods. In addition, the pre-test protocol must include information on equipment, logistics, personnel, and any other information required by the permitting agency.

(e) Monitoring, Inspection, and Maintenance Requirements

(1) Monitoring Requirements

All thermal spraying operations with air pollution control systems must comply with the applicable monitoring requirements listed in Table 3 of this subsection (e)(1). In addition, any other operating parameters designated by the permitting agency must be monitored while conducting thermal spraying to ensure compliance with the requirements set forth in subsection (c).

Table 3 - Summary of Monitoring Requirements for Thermal Spraying Operations Using Add-on Air Pollution Control Devices

| | Control Equipment | Monitoring Requirements |
|---|---|---|
| (A) | Dry particulate filter system (e.g., dry filter cartridge, HEPA filter) | 1. Ensure that the pressure differential gauge continuously monitors pressure drop across the control device while conducting thermal spraying.<br>2. Record pressure drop once per week while conducting thermal spraying. |
| (B) | Conventional Water Curtain | 1. Ensure that the flow meter continuously monitors the water flow rate while conducting thermal spraying.<br>2. Monitor the water curtain continuity by visual observation to ensure that there are no gaps while conducting thermal spraying.<br>3. Record water flow rate and water curtain continuity once per week while conducting thermal spraying. |
| (C) | Pumpless Water Curtain | 1. Monitor parameters that indicate booth performance, per manufacturer's recommendations, while conducting thermal spraying.<br>2. Visually inspect the water curtain for continuity to ensure that there are no gaps while conducting thermal spraying.<br>3. Record recommended parameters and water curtain continuity once per week while conducting thermal spraying. |

| | *Control Equipment* | *Monitoring Requirements* |
|---|---|---|
| (A) | Dry particulate filter system (e.g., dry filter cartridge, HEPA filter) | 1. Ensure that the pressure differential gauge continuously monitors pressure drop across the control device while conducting thermal spraying.<br>2. Record pressure drop once per week while conducting thermal spraying. |
| (B) | Conventional Water Curtain | 1. Ensure that the flow meter continuously monitors the water flow rate while conducting thermal spraying.<br>2. Monitor the water curtain continuity by visual observation to ensure that there are no gaps while conducting thermal spraying.<br>3. Record water flow rate and water curtain continuity once per week while conducting thermal spraying. |
| (C) | Pumpless Water Curtain | 1. Monitor parameters that indicate booth performance, per manufacturer's recommendations, while conducting thermal spraying.<br>2. Visually inspect the water curtain for continuity to ensure that there are no gaps while conducting thermal spraying.<br>3. Record recommended parameters and water curtain continuity once per week while conducting thermal spraying. |

(2) Pressure Drop Monitoring Requirements

All dry particulate control devices (e.g., dry filter cartridges or HEPA filters) must have gauges that continuously monitor the pressure drop across each control device when thermal spraying is occurring. The gauge must have a high and low setting for the pressure drop and must trigger an alarm system when the high or low set points are exceeded. The gauge must be designed to accurately measure pressure drops within the expected range and have an accuracy of at least +5% of full scale. The

gauge must be located so that it can be easily visible and in clear sight of the operation or maintenance personnel. The pressure drop must be maintained per manufacturer's specifications. If the pressure drop is outside of the acceptable limits, the owner or operator must shut down the thermal spraying operation immediately and take corrective action. The thermal spraying operation must not be resumed until the pressure drop is within the specified limit(s).

(3) Water Curtain Monitoring Requirements

For thermal spraying operations that are conducted in water curtain booths, the owner or operator must monitor booth operating parameters during thermal spraying to ensure compliance with the requirements specified in subsection (c). Water curtain booths must provide a continuous sheet of water down the rear wall of the booth. For all water curtain booths, the owner or operator must visually monitor the water curtain during thermal spraying to ensure that the sheet is continuous without any gaps or dry spots. The owner or operator of a conventional water curtain booth must continuously monitor the water flow rate with a flow meter during thermal spraying to ensure the water flow meets or exceeds the minimum flow rate recommended by the manufacturer. The owner or operator of a pumpless water curtain booth must monitor the parameters recommended by the booth manufacturer to ensure that these parameters meet or exceed the manufacturer's recommendations. If the water curtain fails the continuity and/or flow requirements, the owner or operator must shut down the thermal spraying operation immediately to take corrective action. The thermal spraying operation must not be resumed until the monitored parameters meet or exceed the manufacturer's recommendations.

(4) Inspection and Maintenance Requirements

All thermal spraying operations with air pollution control systems must comply with the applicable inspection and maintenance requirements listed in Table 4.

Table 4 - Summary of Inspection and Maintenance Requirements for Thermal Spraying Operations Using Add-on Air Pollution Control Devices

| | Control Equipment | Inspection & Maintenance Requirements | Frequen cy |
|---|---|---|---|
| (A) | Dry particulate filter system (e.g., dry filter cartridge, HEPA filter) | 1. Conduct a visual inspection to ensure there are no leaks in accordance with Appendix 3. | At least once every 90 days. |
| | | 2. Visually inspect ductwork from work area to the control device to ensure there are no leaks in accordance with Appendix 3. | At least once every 90 days. |
| | | 3. Replace filter. | Per manufacturer's specifications or permitting agency's requirement. |
| (B) | Water Curtain | 1. Visually inspect ductwork from booth to the exhaust stack to ensure there are no leaks in accordance with Appendix 3. | At least once every 90 days. |
| (C) | All | 1. Measure inward face velocity at each opening in accordance with Appendix 2. This requirement does not apply to existing thermal spraying operations that are remotely located and comply with the standards in section (c)(1)(E). | At least once per calendar year and whenever the air pollution control system is changed in any way that may impact air flow. |

| | *Control Equipment* | *Inspection & Maintenance Requirements* | *Frequency* |
|---|---|---|---|
| (A) | *Dry particulate filter system (e.g., dry filter cartridge, HEPA filter)* | *1. Conduct a visual inspection to ensure there are no leaks in accordance with Appendix 3.* | *At least once every 90 days.* |
| | | *2. Visually inspect ductwork from work area to the control device to ensure there are no leaks in accordance with Appendix 3.* | *At least once every 90 days* |
| | | *3. Replace filter.* | *Per manufacturer's specifications or permitting agency's requirement.* |
| (B) | *Water Curtain* | *1. Visually inspect ductwork from booth to the exhaust stack to ensure there are no leaks in accordance with Appendix 3.* | *At least once every 90 days.* |
| (C) | *All* | *1. Measure inward face velocity at each opening in accordance with Appendix 2. This requirement does not apply to existing thermal spraying operations that are remotely located and comply with the standards in section (c)(1)(E).* | *At least once per calendar year and whenever the air pollution control system is changed in any way that may impact air flow.* |

(5) Negative Pressure Measurements

Thermal spraying operations that are operating pursuant to subsection (c)(1)(B)5. (i.e., operating with the enclosure door open), must demonstrate negative pressure at least once every 12 months and whenever the enclosure is changed in any way that may impact air flow.

(f) Recordkeeping Requirements

(1) Monitoring Data Records

The owner or operator must maintain records of monitoring data required by subsection (e), including the date and time the data are collected. Recordkeeping logs must include the applicable acceptable limit(s) for: pressure drop (dry particulate control); water flow rate (conventional water curtain); or manufacturer's recommended parameter limits (pumpless water curtain).

(2) Inspection Records

The owner or operator must maintain inspection records that clearly document all inspections and maintenance activities to enable the permitting agency to determine whether the requirements of subsection (e)(4) have been met. The records may take the form of a checklist and must identify:

(A) the name of the device inspected;

(B) the date and time of inspection;

(C) a brief description of the working condition of the device during the inspection;

(D) all maintenance activities performed on the components of the air pollution control system (e.g., duct work replacement, filter replacement, fan replacement, leak repairs, etc.);

(E) the actions taken to correct deficiencies found during the inspection; and

(F) the person that conducted the inspection.

(3) Material Usage Records

For thermal spraying materials that contain chromium, chromium compounds, nickel, or nickel compounds, the owner or operator must record the name and quantity of material used during each month of the annual reporting period, and the total usage to date for that calendar year.

(4) Source Test Records

The owner or operator must maintain test reports documenting the conditions and results of all source tests.

(5) Equipment Malfunctions and Failures

The owner or operator must maintain records of the occurrence, duration, cause (if known), and action taken for each equipment malfunction and/or failure. This recordkeeping requirement applies only to equipment malfunctions or failures that cause or may cause uncontrolled emissions to be released.

(6) Records Maintenance and Retention

All records required by this subsection (f) must be readily accessible for inspection and review at the thermal spraying operation for at least five years. If so requested by the permitting agency, the owner or operator must provide copies of the records to the permitting agency.

(g) Reporting Requirements

(1) Initial Emission Inventory for Existing Thermal Spraying Operations

All existing thermal spraying operations must submit an emission inventory for hexavalent chromium and nickel to the permitting agency no later than October 1, 2005. This inventory must quantify the emissions from thermal spraying operations conducted during the 12-month period between July 1, 2004 and July 1, 2005. The emission inventory must be prepared in accordance with Appendix 1 or must be based on an emissions source test approved by the permitting agency.

(2) Annual Emission Inventory for Existing Thermal Spraying Operations Qualifying for the Standards for Remotely Located Operations or the Exemption for Operations with Low Emission Levels

Existing thermal spraying operations that qualify for the standards specified in subsection (c)(1)(E) or the exemption specified in subsection (c)(1)(F) must submit an annual report to the permitting agency by March 1st of each calendar year that quantifies emissions of hexavalent chromium and nickel from thermal spraying operations during the previous calendar year.

(3) Initial Notification

Existing thermal spraying operations that intend to begin using materials containing chromium, chromium compounds, nickel, or nickel compounds on or after January 1, 2005, must notify the permitting agency at least 45 days prior to using any of these materials. If the use of these materials begins before the operative date of this section, this notification may be delayed until the operative date of this section.

(4) Reports of Breakdowns, Equipment Malfunctions, and Failures

The owner or operator of a thermal spraying operation must report breakdowns, equipment malfunctions, and failures as required by the permitting agency. This reporting requirement only applies to equipment malfunctions or failures that cause or may cause uncontrolled emissions to be released.

(5) Source Test Documentation

(A) Notification of Source Test

The owner or operator of a thermal spraying operation must notify the permitting agency of his or her intention to conduct a source test to measure emissions of hexavalent chromium and/or nickel. The owner or operator must provide this notification to the permitting agency at least 60 days before the source test is scheduled. The notification must include a pre-test protocol and any other documentation required by the permitting agency.

(B) Reports of Source Test Results

The owner or operator of a thermal spraying operation must provide the source test results to the permitting agency no later than 60 days following completion of the testing.

(6) Adjustments to the Timeline for Submittal and Format of Reports

A permitting agency may change the timeline for submittal of periodic reports, allow consolidation of multiple reports into a single report, establish a common schedule for submittal of reports, or accept reports prepared to comply with other State or local requirements. Prior to allowing any of these changes, the permitting agency must determine that the change will provide the same information and will not reduce the overall frequency of reporting.

(h) Severability

Each part of this section is deemed severable, and in the event that any part of this section is held to be invalid, the remainder of this section shall continue in full force and effect.

## ➡§ 93102. Airborne Toxic Control Measure for Chromium Plating and Chromic Acid Anodizing Facilities.

The Airborne Toxic Control Measure for Chromium Plating and Chromic Acid Anodizing Facilities (ATCM) is contained in sections 93102 through 93102.16. The ATCM is organized as follows:

Sections 93102 through 93102.3 specify the applicability of the ATCM, exemptions, and definitions. Section 93102.4 sets forth requirements for hexavalent chromium facilities that differ depending on whether a facility is an existing facility, a modified facility, or a new facility. Section 93102.5 sets forth various new requirements that apply to all facilities beginning October 24, 2007 (i.e., all existing, modified, and new facilities). Section 93102.6 contains special provisions that apply only to enclosed hexavalent chromium electroplating facilities and facilities that perform electroplating using a trivalent chromium bath. Sections 93102.7 through 93102.14 contain additional requirements that apply to all facilities, unless an exception is provided in this ATCM. Most of the requirements in sections 93102.7 through 93102.14 have been in effect since 1998. Section 93102.15 sets forth requirements that apply to the manufacture, sale, supply, offer for sale, and use of chromium plating and chromic acid anodizing kits in California. There are nine appendices to the ATCM; these appendices are contained in section 93102.16.

## ➡§ 93102.1. Applicability.

(a) This regulation shall apply to:

(1) The owner or operator of any facility performing hard chromium electroplating, decorative chromium electroplating, or chromic acid anodizing.

(2) Any person who sells, supplies, offers for sale, uses, or manufactures for sale in California a chromium electroplating or chromic acid anodizing kit.

(b)Title V Permits.

The owner or operator of a major source subject to the requirements of this section is required to obtain a title V permit (See 42 U.S.C. 7401, et seq.) from the permitting authority of the district in which the major source is located.

(c)Severability.

Each part of this ATCM shall be deemed severable, and in the event that any part of this ATCM is held to be invalid, the remainder of this ATCM shall continue in full force and effect.

## ➡§ 93102.2. Exemptions.

(a) This regulation shall not apply to process tanks associated with a chromium electroplating or chromic acid anodizing process, but in which neither chromium electroplating nor chromic acid anodizing is taking place. Examples of such tanks include, but are not limited to, rinse tanks, etching tanks, electro stripping tanks and cleaning tanks. Tanks that contain a chromium solution, but in which no electrolytic process occurs, are not subject to this regulation. An example of such a tank is a chromium conversion coating tank where no electrical current is applied.

(b) The requirements of sections 93102.4 and 93102.11 do not apply during periods of equipment

breakdown, provided the provisions of the permitting agency's breakdown rule are met (see Appendix 6).

**➡§ 93102.3. Definitions.**

(a) For the purposes of this regulation, the following definitions shall apply:

(1) "Add-on air pollution control device" means equipment installed in the ventilation system of chromium electroplating and anodizing tanks for the purposes of collecting and containing chromium emissions from the tank(s).

(2) "Air pollution control technique" means any method, such as an add-on air pollution control device, mechanical fume suppressant or a chemical fume suppressant, that is used to reduce chromium emissions from chromium electroplating and chromic acid anodizing tanks.

(3) "Ampere-hours" means the integral of electrical current applied to a plating tank (amperes) over a period of time (hours).

(4) "Annual permitted ampere-hours" means the maximum allowable chromium plating or anodizing rectifier production in ampere-hours, on an annual basis as specified in the permitting agency's Permit to Operate for the facility.

(5) "Area source" means any stationary source of hazardous air pollutants that is not a major source as defined in this part.

(6) "Base material" means the metal or metal alloy, or plastic that comprises the workpiece.

(7) "Bath component" means the trade or brand name of each component(s) in trivalent chromium plating baths. For trivalent chromium baths, the bath composition is proprietary in most cases. Therefore, the trade or brand name for each component(s) can be used; however, the chemical name of the wetting agent contained in that component must be identified.

(8) "Breakdown" means an unforeseeable impairment of an air pollution control equipment or related operating equipment which causes a violation of any emission limitation or restriction prescribed by a permitting agency's rule or by State law and which: is not the result of neglect or disregard of any air pollution control law, rule, or regulation; is not intentional or the result of negligence, or improper maintenance; is not a recurrent breakdown of the same equipment; and, does not constitute a nuisance pursuant to section 41700 of the California Health and Safety Code, with the burden of proving the criteria of this section placed upon the person seeking to come under the provisions of this law.

(9) "Chemical fume suppressant" means any chemical agent that reduces or suppresses fumes or mists at the surface of an electroplating or anodizing bath; another term for fume suppressant is mist suppressant.

(10) "Chromic acid" means the common name for chromium anhydride ($CrO_3$).

(11) "Chromic acid anodizing" means the electrolytic process by which an oxide layer is produced on the surface of a base material for functional purposes (e.g., corrosion resistance or electrical insulation) using a chromic acid solution. In chromic acid anodizing, the part to be anodized acts as the anode in the electrical circuit, and the chromic acid solution, with a concentration typically ranging from 50 to 100 grams per liter (g/L), serves as the electrolyte.

(12) "Chromium electroplating or chromic acid anodizing tank" means the receptacle or container in which hard or decorative chromium electroplating or chromic acid anodizing occurs, along with the following accompanying internal and external tank components needed for chromium electroplating or chromic acid anodizing. These tank components include, but are not limited to, rectifiers fitted with controls to allow for voltage adjustments, heat exchanger equipment, and circulation pumps.

(13) "Composite mesh-pad system" means an add-on air pollution control device typically consisting of several mesh-pad stages to remove particles.

(14) "Decorative chromium electroplating" means the process by which a thin layer of chromium (typically 0.003 to 2.5 micrometers) is electrodeposited on a base metal, plastic, or undercoating material to provide a bright surface with wear and tarnish resistance. In this process, the part(s) serves as the cathode in the electrolytic cell and the solution serves as the electrolyte. Typical current density applied during this process ranges from 540 to 2,400 Amperes per square meter (A/m2) for total plating times ranging between 0.5 to 5 minutes.

(15) "Dragout" means fluid containing hexavalent chromium that adheres to parts when they are removed from a tank.

(16) "Electroplating or anodizing bath" means the electrolytic solution used as the conducting medium in which the flow of current is accompanied by movement of metal ions for the purpose of electroplating metal out of the solution onto a workpiece or for oxidizing the base material.

(17) "Emission limitation" means, for trivalent chromium plating, the concentration of total chromium allowed to be emitted expressed in milligrams per dry standard cubic meter (mg/dscm). For hexavalent chromium plating or anodizing, the allowable surface tension expressed in dynes per centimeter (dynes/cm) or the milligrams of hexavalent chromium per ampere-hour (mg/amp-hr) of electrical charge applied to the chromium electroplating or anodizing tank, or the concentration of chromium allowed to be emitted expressed in milligrams per dry standard cubic meter (mg/dscm).

(18) "Enclosed hexavalent chromium electroplating tank" means a hard, decorative or chromic acid anodizing tank using a hexavalent chromium solution that is equipped with an enclosing hood and ventilated at half the rate or less than that of a ventilated open surface tank of the same surface area.

(19) "Enclosed storage area" means any space or structure used to contain material that prevents its contents from being emitted into the atmosphere. This includes cabinets, closets or sheds designated for storage.

(20) "Executive Officer" means the Executive Officer of the Air Resources Board, or his or her delegate.

(21) "Existing facility" means a facility that is in operation before October 24, 2007.

(22) "Facility" means the major or area source at which chromium electroplating or chromic acid anodizing is performed and/or any source or group of sources or other contaminant-emitting activities which are located on one or more contiguous properties within the District, in actual physical contact or separated solely by a public roadway or other public right-of way, and are owned or operated by the same person (or by persons under common control), or an outer continental shelf (OCS) source as determined in 40 CFR Section 55.2, as last amended September 2, 1997.

(23) "Fiber-bed mist eliminator" means an add-on air pollution control device that removes particles from a gas stream through the mechanisms of inertial impaction and Brownian diffusion.

(24) "Foam blanket" means the type of chemical fume suppressant that generates a layer of foam across the surface of a solution when current is applied to that solution. A foam blanket does not lower surface tension of a liquid.

(25) "Fresh water" means water, such as tap water, that has not been previously used in a process operation or, if the water has been recycled from a process operation, it has been treated and meets the effluent guidelines for chromium wastewater.

(26) "Fugitive dust" means any solid particulate matter that may contain hexavalent chromium that has the potential to become airborne by natural or man-made activities. "Fugitive dust" does not include particulate matter emitted from an exhaust stack.

(27) "Hard chromium electroplating or industrial chromium electroplating" means a process by which a thick layer of chromium (typically greater than 1.0 micrometers) is electrodeposited on a base material to provide a surface with functional properties such as wear resistance, a low coefficient of friction, hardness, and corrosion resistance. In this process, the part serves as the cathode in the electrolytic cell and the solution serves as the electrolyte. The hard chromium electroplating process is performed at current densities typically ranging from 1,600 to 6,500 A/m2 for total plating times ranging from 20 minutes to 36 hours depending upon the desired plate thickness.

(28) "Hexavalent chromium" means the form of chromium in a valence state of +6.

(29) "High Efficiency Particulate Arrestor (HEPA) filter" means filter(s) rated at 99.97 percent or more efficient in collecting particle sizes 0.3 micrometers.

(30) "Initial startup" means the first time a new facility begins production or the first time a modified chromium plating or anodizing tank begins operating at a modified facility. If such production or operation occurs prior to October 24, 2007, the date of "Initial Startup" is October 24, 2007. "Initial Startup" does not include operation solely for testing of equipment or subsequent startup of permit units following malfunction or shutdown.

(31) "Large, hard chromium electroplating facility" means a facility that performs hard chromium electroplating and emits greater than or equal to 10 pounds per year (lbs/yr) controlled emissions of hexavalent chromium.

(32) "Leak" means the release of chromium emissions from any opening in the emission collection system prior to exiting the emission control device.

(33) "Major source" means any stationary source, or group of stationary sources located within a contiguous area and under common control, that emits, or has the potential to emit considering controls, in the aggregate, 10 tons per year or more of any hazardous air pollutant, or 25 tons per year or more of any combination of hazardous air pollutants.

(34) "Maximum cumulative potential rectifier capacity" means the summation of the total installed rectifier capacity associated with the hard chromium electroplating tanks at a facility, expressed in amperes, multiplied by the maximum potential operating schedule of 8,400 hours per year and 0.7, which assumes that electrodes are energized 70 percent of the total operating time. The maximum potential operating schedule is based on operating 24 hours per day, 7 days per week, 50 weeks per year.

(35) "Mechanical fume suppressant" means any device, including but not limited to polyballs, that reduces fumes or mist at the surfaces of an electroplating or anodizing bath by direct contact with the surface of the bath.

(36) "Medium, hard chromium electroplating facility" means a facility that performs hard chromium electroplating and emits greater than 2 pounds per year (lbs/yr) controlled emissions but less than 10 pounds per year (lbs/yr) controlled emissions of hexavalent chromium.

(37) "Modification" means either:

(A) any physical change in, change in method of operation of, or addition to an existing permit unit that requires an application for a permit to construct and/or operate and results in an increase in hexavalent chromium emissions. Routine maintenance and/or repair shall not be considered a physical change. A change in the method of operation of equipment, unless previously limited by an enforceable permit condition, shall not include:

1. an increase in the hours of operation; or

2. a change in ownership of a facility; or

3. an increase in the annual ampere-hours, unless such increase will cause a facility to be subject to a different requirement in Table 93102.4 of section 93102.4.

(B) the addition of any new chromium plating or anodizing tank at an existing facility which increases hexavalent chromium emissions; or

(C) the fixed capital cost of the replacement of components exceeding 50 percent of the fixed capital cost that would be required to construct a comparable new facility.

(38) "Modified facility" means any facility which has undergone a modification.

(39) "New facility" means any facility that begins initial operations on or after October 24, 2007. "New Facility" does not include the installation of a new chromium plating or anodizing tank at an existing facility or the modification of an existing facility.

(40) "Operating parameter value" means a minimum or maximum value established for a control device or process parameter which, if achieved by itself or in combination with one or more other operating parameter values, determines that an owner or operator is in continual compliance with the applicable emission limitation or standard.

(41) "Owner or Operator" means a person who is the owner or the operator of a facility performing hard chromium electroplating, decorative chromium electroplating, or chromic acid anodizing.

(42) "Packed-bed scrubber" means an add-on air pollution control device consisting of a single or double packed-bed that contains packing media on which the chromic acid droplets impinge.

(43) "Permitting agency" means the local air pollution control or air quality management district.

(44) "Person" shall have the same meaning as defined in Health and Safety Code section 39047.

(45) "Responsible official" means one of the following:

(A) For a corporation: A president, secretary, treasurer, or vice president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities and either:

1. The facilities employ more than 250 persons or have gross annual sales or expenditures exceeding $25 million (in second quarter 1980 dollars); or

2. The delegation of authority to such representative is approved in advance by the Administrator.

(B) For a partnership or sole proprietorship: a general partner or the proprietor, respectively.

(C) For a municipality, state, Federal, or other public agency: either a principal executive officer or ranking elected official. For the purposes of this part, a principal executive officer of a Federal agency includes the chief executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., a Regional Administrator of the U.S. EPA).

(D) For sources (as defined in this part) applying for or subject to a title V permit: "responsible official" shall have the same meaning as defined in 40 CFR Part 70 or federal title V regulations in this chapter (42 U.S.C. 7401, et seq.), whichever is applicable.

(46) "School under construction" means any property that meets any of the following conditions:

(A) construction of a school has commenced; or

(B) a CEQA Notice for the construction of a school has been issued; or

(C) a school has been identified in an approved local government specific plan.

(47) "Sensitive receptor" means any residence including private homes, condominiums, apartments, and living quarters; education resources such as preschools and kindergarten through grade twelve (k-12) schools; daycare centers; and health care facilities such as hospitals or retirement and nursing homes. A sensitive receptor includes long term care hospitals, hospices, prisons, and dormitories or similar live-in housing.

(48) "Small, hard chromium electroplating facility" means a facility that performs hard chromium electroplating and emits less than or equal to 2 pounds per year (lbs/yr) controlled emissions of hexavalent chromium.

(49) "Source" means any chromium electroplating or chromic acid anodizing operation and any equipment or materials associated with the selected associated air pollution control technique.

(50) "Stalagmometer" means an instrument used to measure the surface tension of a solution by determining the mass of a drop of liquid by weighing a known number of drops or by counting the number of drops obtained from a given volume of liquid.

(51) "Substantial use" of an Authority to Construct means one or more of the following: (A) the equipment that constitutes the source has been purchased or acquired; (B) construction activities, other than grading or installation of utilities or foundations, have begun and are continuing; or (C) a contract to complete construction of the source within one year has been entered into.

(52) "Surface tension" means the property, due to molecular forces, that exists in the surface film of all liquids and tends to prevent liquid from spreading.

(53) "Tank" means the structure or receptacle containing the electroplating or anodizing bath.

(54) "Tank operation" means the time in which current and/or voltage is being applied to a chromium electroplating tank or a chromic acid anodizing tank.

(55) "Tensiometer" means an instrument used to measure the surface tension of a solution by determining the amount of force needed to pull a ring from the liquid surface. The amount of force is proportional to the surface tension.

(56) "Trivalent chromium" means the form of chromium in a valence state of +3.

(57) "Trivalent chromium process" means the process used for electrodeposition of a thin layer of chromium onto a base material using a trivalent chromium solution instead of a chromic acid solution.

(58) "Weekly" means at least once every seven calendar days.

(59) "Wetting agent" means the type of chemical fume suppressant that reduces the surface tension of a liquid.

### ➡§ 93102.4. Requirements for Existing, Modified, and New Hexavalent Chromium Plating and Chromic Acid Anodizing Facilities.

This section 93102.4 sets forth requirements that apply to all hexavalent chromium hard and decorative chromium electroplating and chromic acid anodizing facilities, except for facilities subject to section 93102.6 (i.e., facilities that perform electroplating using a trivalent chromium bath or are facilities with enclosed hexavalent chromium electroplating tanks). The requirements differ depending on whether a facility is an existing facility, a modified facility or a new facility. Additional requirements that apply to all facilities (i.e., all existing, modified, and new facilities) are contained in section 93102.5, sections 93102.7 through 93102.14 and section 93102.16.

Subsection (a) contains the requirements to reduce hexavalent chromium emissions that were in effect before October 24, 2007. The limits in subsection (a) shall remain in effect for a facility until the limits in subsection (b) become effective. Once the limits in subsection (b) become effective for an individual facility the limits in subsection (a) no longer apply.

The limits in subsection (b) are phased in depending on the amount of annual permitted ampere-hours and the distance to the nearest sensitive receptor. Depending on the facility, limits in subsection (b) become effective on April 24, 2008, October 24, 2009, October 24, 2010, or October 24, 2011.
(a) Requirements that Apply to Existing Hexavalent Chromium Electroplating and Chromic Acid Anodizing Facilities.

An existing facility is a facility that is in operation before October 24, 2007.

In addition to the limits specified in this subsection (a) all facilities (i.e., all existing, modified, and new facilities) must comply with the applicable provisions contained in section 93102.5, sections 93102.7 through 93102.14, and section 93102.16.

(1) Limits that Apply to Existing Hard Chromium Electroplating Facilities Until the Limits in subsection 93102.4(b) Become Effective.

During tank operation, each owner or operator of an existing, facility shall control hexavalent chromium emissions discharged to the atmosphere from that facility by reducing the hexavalent chromium emissions from the add-on air pollution control device(s) serving the electroplating tank(s) as identified below.

(A) Limits that Apply Until the Limits in subsection 93102.4(b) Become Effective for Existing Hard Chromium Electroplating Facilities that Began Operations on or before December 16, 1993.

| *Facility Size* | *Controlled Emissions[1] (lbs/yr)* | *Requirement* | | |
|---|---|---|---|---|
| | | *≤ 60 million amp–hrs[2]* | *> 60 million amp–hrs[2]* *Option 1* | *Option 2[3]* |
| Large | ≥ 10 lbs/yr | ≤0.006 mg/amp–hr | ≤0.006 mg/amp–hr | ≤0.006 mg/amp–hr |
| Medium | <10 lbs/yr but >2 lbs/yr | ≤0.03 mg/amp–hr | ≤0.006 mg/amp–hr | ≤0.03 mg/amp–hr and 0.015 mg/dscm |
| Small | ≤2 lbs/yr | ≤0.15 mg/amp–hr | ≤0.03 mg/amp–hr | ≤0.15 mg/amp–hr and 0.015 mg/dscm |

[1] combined hexavalent or total chromium emissions from hard chromium plating operations
[2] maximum cumulative potential rectifier capacity or usage limit
[3] "Option 2" is an alternative emission limitation for small and medium facilities that elect to demonstrate compliance with both a mg/amp–hr and a mg/dscm requirement

(B) Limits that Apply Until the Limits in subsection 93102.4(b) Become Effective for Existing Hard Chromium Electroplating Facilities that Began Operations after December 16, 1993, and Before October 24, 2007.

| *Facility Size* | *Controlled Emissions[1] (lbs/yr)* | *Requirement* | |
|---|---|---|---|
| | | *≤60 million amp–hrs[2]* | *>60 million amp–hrs[2]* |
| Large | ≥ 10 lbs/yr | ≤0.006 mg/amp–hr | ≤0.006 mg/amp–hr |
| Medium/Small | <10 lbs/yr | ≤0.03 mg/amp–hr | ≤0.006 mg/amp–hr |

[1] combined hexavalent or total chromium emissions from hard chromium plating operations
[2] maximum cumulative potential rectifier capacity or usage limit

(C) Special Provisions that Apply for some Hard Chromium Electroplating Facilities Using Less than or Equal to 500,000 Ampere-hours per Year Until the Limits in subsection 93102.4(b) Become Effective.

The permitting agency may approve, on a case-by-case basis, alternative standards for hard chromium electroplating facilities using less than or equal to 500,000 ampere-hours per year. The operation must have been constructed on or before December 16, 1993. At a minimum, the facility must use a chemical fume suppressant containing a wetting agent to lower the surface tension of the plating bath to at least 45 dynes per centimeter (dynes/cm) (3.1x10-3 pound-force per foot [lbF/ft]). Effective April 24, 2008, the chemical fume suppressant used by the facility must meet the criteria specified in section 93102.8 and the surface tension shall be maintained below the value specified in Table 93102.8. The permitting agency may require additional emission reduction techniques as necessary to reduce the public health impact of emissions from the operation. The owner or operator must comply with the applicable parameter monitoring [section 93102.9], recordkeeping [section 93102.12], and reporting [section 93102.13] requirements. If an emission reduction technique not identified in this rule is used, the owner or operator must submit a plan to the permitting agency describing the alternative technique and identifying appropriate monitoring, recordkeeping, and reporting requirements. The permitting agency, with U.S. EPA concurrence, shall approve this plan if equivalent results are obtained. Upon approval, the requirements identified in the plan shall be the applicable requirements under this regulation.

(2) Requirements that Apply to Existing Hexavalent Decorative Chromium Electroplating and Chromic Acid Anodizing Facilities Until the Limits in subsection 93102.4(b) Become Effective.

During tank operation, each owner or operator of an existing decorative hexavalent chromium electroplating or chromic acid anodizing facility shall control hexavalent chromium emissions discharged to the atmosphere by meeting either of the requirements identified below.

| *Method of Compliance* | *Requirement* |
|---|---|
| 1. add–on air pollution control equipment, or chemical fume suppressants, or mechanical fume suppressants (i.e. polyballs) | ≤0.01 milligrams per dry standard cubic meter of air (mg/dscm) ($4.4 \times 10^{-6}$ gr/dscf) |
| 2. chemical fume suppressants containing a wetting agent[1] | ≤45 dynes per centimeter (dynes/cm) ($3.1 \times 10^{-3}$ pound–force per foot [lbF/ft]) |

[1] Effective April 24, 2008, the chemical fume suppressant used by the facility must meet the criteria specified in section 93102.8 and the surface tension shall be maintained below the value specified in Table 93102.8.

(b) Limits that Apply to All Existing Hexavalent Hard and Decorative Chromium Electroplating and Chromic Acid Anodizing Facilities After October 24, 2007.

(1) During tank(s) operation, each owner or operator of an existing hexavalent chromium facility shall control hexavalent chromium emissions discharged to the atmosphere by meeting the requirements identified below.

Table 93102.4: Hexavalent Chromium Emission Limits for Existing Tanks

**Table 93102.4: Hexavalent Chromium Emission Limits for Existing Tanks**

| *Sensitive Receptor Distance*[1] | *Annual Permitted Ampere–Hours* | *Emission Limitation* | *Effective Date* |
|---|---|---|---|
| ≤ 330 feet | ≤ 20,000 | Use Chemical Fume Suppressants as specified in section 93102.8[2] | April 24, 2008 |
| ≤ 330 feet | > 20,000 and ≤ 200,000 | 0.0015 milligrams/ampere–hour as measured after add–on air pollution control device(s) | October 24, 2010 |
| ≤ 330 feet | > 200,000 | 0.0015 milligrams/ ampere–hour as measured after add–on air pollution control device(s)[3] | October 24, 2009 |
| > 330 feet | ≤ 50,000 | Use Chemical Fume Suppressant as specified in section 93102.8[2] | April 24, 2008 |
| > 330 feet | > 50,000 and ≤ 500,000 | 0.0015 milligrams/ ampere–hour | October 24, 2011 |
| > 330 feet | > 500,000 | 0.0015 milligrams/ ampere–hour as measured after add–on air pollution control device(s)[3] | October 24, 2009 |

[1] Distance shall be measured as specified in section 93102.4(b)(2)(A).
[2] Alternatively, a facility may install an add–on air pollution control device(s) that controls emissions to below 0.0015 milligrams per ampere–hour.
[3] When annual emissions exceed 15 grams a site specific risk analysis must be conducted by the owner or operator in accordance with the permitting agency's procedures, unless a site specific risk analysis has already been conducted and approved by the permitting agency. The analysis shall be submitted to the permitting agency.

(2) Demonstrating Compliance with the Emission Limitation in Table 93102.4

(A) Distance to the nearest sensitive receptor shall be submitted to the permitting agency. The measurement shall be provided to the permitting agency within 30 days of October 24, 2007.

1. For facilities that do not have an add-on air pollution control device on October 24, 2007, the measurement shall be the distance, rounded to the nearest foot, from the edge of the hexavalent chromium plating or anodizing tank nearest the sensitive receptor to the property line of the nearest sensitive receptor that exists on October 24, 2007.

2. For facilities with an add-on air pollution control device on October 24, 2007, the measurement shall be the distance, rounded to the nearest foot, from the centroid of the stack to the property line of the nearest sensitive receptor that exists on October 24, 2007.

(B) Facilities located within 330 feet of a sensitive receptor and with annual permitted ampere-hours greater than 20,000, and facilities beyond 330 feet of a sensitive receptor with more than 500,000 annual permitted ampere-hours must use an add-on air pollution control device(s) to control hexavalent chromium emissions and demonstrate compliance with the emission limitation of 0.0015 milligrams/ampere-hour as measured after the add-on air pollution control device.

(3) Requirements for Facilities Demonstrating Compliance by an Alternative Method or Methods

As provided in Health and Safety Code Section 39666(f), the owner or operator of a facility may submit to the permitting agency an alternative method, or methods, that will achieve an equal, or greater amount of reduction in hexavalent chromium emissions and an equal, or greater reduction in risk than would be achieved by direct compliance with the requirements of section 93102.4(b)(1) and (b)(2).

(A) The information contained in Appendix 9 of section 93102.16 must be submitted to the permitting agency.

(B) To be approved by the permitting agency the owner or operator must demonstrate that the alternative method(s) is enforceable, provides an equal, or greater hexavalent chromium emission reduction, and provides an equal, or greater risk reduction than would direct compliance with the requirements of section 93102.4(b)(1) and (b)(2).

(C) Upon approval of the method(s) the owner or operator must implement the approved method(s) within the time periods specified of section 93102.4(b)(1).

(D) A facility operating under an approved alternative method(s) must comply with the requirements set forth in sections 93102.5, 93102.7, and 93102.9 through 93102.14, and 93102.16.

(c) Requirements for Modified Hexavalent Chromium Electroplating or Chromic Acid Anodizing Facilities.

(1) During tank operation, each owner or operator of a modified facility shall upon initial start-up control hexavalent chromium emissions discharged to the atmosphere from that facility by reducing the hexavalent chromium emissions from the electroplating or anodizing tank(s) by:

(A) Using an add-on air pollution device(s) to control hexavalent chromium emissions, and

(B) Meeting an emission limit of 0.0015 milligrams per ampere-hour or less.

(2) Prior to initial start-up of a modified facility, when annual emissions of hexavalent chromium are expected to exceed 15 grams per year, the owner or operator shall conduct a site specific risk analysis in accordance with the permitting agency's procedures. The analysis shall be submitted to the permitting agency.

(3) A facility is not required to comply with section 93102.4(c)(1)(A) if the facility is implementing an alternative method or methods that have been approved by the permitting agency as provided in section 93102.4(b)(3) and Health and Safety Code section 39666(f).

(d) Requirements for New Hexavalent Chromium Electroplating and Chromic Acid Anodizing Facilities Beginning October 24, 2007.

(1) No person shall operate a new facility unless it is located outside of an area that is zoned for residential or mixed use and is located, as determined by the permitting agency, at least 1,000 feet from (A) the boundary of any area that is zoned for residential or mixed use, or (B) any school or school under construction.

(A) A new facility shall be deemed to meet the requirements specified in this subsection (d)(1) if one of the following criteria is met, even if the facility does not meet the requirement at the time of initial startup (e.g., because of a zoning change that occurs after the authority to construct is issued):

1. The requirements specified in this subsection (d)(1) are met at the time it is issued an authority to construct by the permitting agency, and substantial use of the authority to construct takes place within one year after it is issued; or

2. The requirements specified in this subsection (d)(1) are met at the time it is issued an authority to construct by the permitting agency, and substantial use of the authority to construct takes place before any zoning change occurs that affects the operation's ability to meet the requirement at the time of initial startup.

(2) During tank operation, each owner or operator of a new facility shall control hexavalent chromium emissions discharged to the atmosphere from that facility by reducing the hexavalent chromium emissions from the electroplating or anodizing tank(s) by installing a HEPA add-on air pollution control device. The measured emission rate of hexavalent chromium shall be no more than 0.0011 milligrams per ampere-hour as measured after the HEPA add-on air pollution control device.

(3) Prior to initial start-up the owner or operator of each new facility shall conduct a site specific risk analysis in accordance with the permitting agency's procedures. The analysis shall be submitted to the permitting agency.

(4) Prior to initial startup, each new facility shall demonstrate to the permitting agency that the new facility meets the requirements specified in this subsection (d) of this section 93102.4.

(5) A facility is not required to comply with the requirement in section 93102.4(d)(2) to install a HEPA add-on air pollution control device if the facility is implementing an alternative method or methods that have been approved by the permitting agency as provided in section 93102.4(b)(3) and Health and Safety Code section 39666(f).

(e) Notification Requirements for New and Modified Facilities.

(1) Notification of Construction Reports.

(A) No person may construct or modify a facility, such that it becomes a facility subject to sections 93102 to 93102.16, without submitting a notification of construction or modification to the permitting agency and receiving approval in advance to construct or modify the facility.

(B) The contents of the Notification of Construction Report shall include the information contained in Appendix 4.

(2) Alternative Notification Requirements: Instead of complying with the requirements in subpart (e)(1)(A) of this subsection, a facility may fulfill these requirements by complying with the permitting agency's "New Source Review" requirements, provided similar information is obtained.

**➡§ 93102.5. Requirements that Apply to Existing, Modified, and New Hexavalent Chromium Plating or Chromic Acid Anodizing Facilities Beginning October 24, 2007.**

Each owner or operator of a hexavalent chromium plating or chromic acid anodizing facility shall comply with the following requirements on or after the dates specified below:

(a) Removal of Add-on Pollution Control Device(s). No add-on air pollution control device(s) installed before October 24, 2007, shall be removed or rendered inoperable unless it is replaced by an add-on air pollution control device(s) meeting an emission rate of 0.0015 milligrams per ampere-hour or less as measured after the add-on air pollution control device or unless the facility is operating under an approved alternative method as provided in section 93102.4(b)(3) and Health and Safety Code section 39666(f).

(b) Environmental Compliance Training. No later than October 24, 2009, and within every two years thereafter, the owner or operator of a facility shall ensure that chromium plating or chromic acid anodizing operations are conducted under the direction of the owner or operator or current employee who is onsite and who has completed the Air Resources Board (ARB) Compliance Assistance Training Course pertaining to chromium plating and chromic acid anodizing.

(1) On or after October 24, 2009, environmental compliance and recordkeeping required by this ATCM shall be conducted only by persons who completed an ARB Compliance Assistance Training Course.

(2) In the event that all persons who have completed the ARB training class are no longer associated with a facility, the owner or operator may be responsible for environmental compliance and recordkeeping required by this ATCM for a period of time not to exceed two years. The owner or operator shall ensure that as soon as practicable, but not longer than two years, personnel complete the training specified in subsection 93102.5(b).

(3) Environmental compliance training conducted by the South Coast Air Quality Management District pursuant to Rule 1469 shall fulfill the requirements of this subpart.

(4) Nothing in this subsection 93102.5(b) shall absolve an owner or operator from complying with sections 93102-93102.16.

(c) Housekeeping Requirements. Effective April 24, 2008, housekeeping practices shall be implemented to reduce potential fugitive emissions of hexavalent chromium. At a minimum, the following practices shall be implemented:

(1) Chromic acid powder or flakes, or other substances that may contain hexavalent chromium, shall be stored in a closed container in an enclosed storage area;

(2) Chromic acid powder or flakes shall be transported from an enclosed storage area to the electroplating or anodizing bath(s) in a closed container;

(3) Any liquid or solid material that may contain hexavalent chromium that is spilled shall be cleaned up or contained within one hour after being spilled.

(4) Dragout from the tank(s) shall be minimized by implementing the following practices:

(A) Facilities with automated lines. Drip trays shall be installed between tanks so that the liquid does not fall through the space between tanks. Trays shall be placed such that the liquid is returned to the tank(s).

(B) Facilities without automated lines.

1. Each electroplated or anodized part must be handled so that chromic acid is not dripped outside the electroplating tank.

2. Each facility spraying down parts over the electroplating or anodizing tank(s) to remove excess chromic acid shall have a splash guard installed at the tank to minimize overspray and to ensure that any hexavalent chromium laden liquid is returned to the electroplating or anodizing tank.

(5) Surfaces within the enclosed storage area, open floor area, walkways around the electroplating or anodizing tank(s), or any surface potentially contaminated with hexavalent chromium, that accumulates or potentially accumulates dust shall be cleaned at least once every seven days in one or more of the following manner: HEPA vacuumed, or hand wiped with a damp cloth, or wet mopped, or otherwise cleaned as approved by the permitting agency, or shall be maintained with the use of non-toxic chemical dust suppressants.

(6) Buffing, grinding, or polishing areas within a facility shall be separated from the electroplating or anodizing operation by installing a physical barrier. The barrier may take the form of plastic strip curtains.

(7) Chromium or chromium-containing wastes generated from housekeeping activities shall be stored, disposed of, recovered, or recycled using practices that do not lead to fugitive dust and in accordance with hazardous waste requirements.

**➡§ 93102.6. Special Provisions that Apply Only to Facilities that Perform Electroplating Using a Trivalent Chromium Bath or Enclosed Hexavalent Chromium Electroplating Tanks.**

(a) Provisions that Apply to All Facilities that Perform Electroplating Using a Trivalent Chromium Bath.

(1) During tank operation, each owner or operator of an existing, modified, or new facility shall control total chromium emissions discharged to the atmosphere by meeting either of the requirements identified below.

| *Method of Compliance* | *Requirement* |
|---|---|
| add–on air pollution control equipment, or chemical fume suppressants, or mechanical fume suppressants (i.e. polyballs) | $\leq$0.01 mg/dscm ($4.4 \times 10^{-6}$ gr/dscf) |
| chemical fume suppressants containing a wetting agent | use wetting agent as bath ingredient and comply with recordkeeping and reporting provisions of sections 93102.12(i) and 93102.13(e). |

(2) New facilities that perform electroplating using a trivalent chromium bath must conduct a facility wide site specific risk analysis in accordance with the permitting agency's procedures. The analysis shall be submitted to the permitting agency.

(3) An owner or operator that performs electroplating using a trivalent chromium bath and complying through use of a chemical fume suppressant containing a wetting agent shall not be required to comply with the requirements of sections 93102.4, 93102.5, 93102.7, 93102.8, 93102.9(b) through (f), 93102.10, 93102.11, 93102.12(a) through (f), and 93102.12(h).

(4) An owner or operator that performs electroplating using a trivalent chromium bath and complying with the <= 0.01 mg/dscm limit shall not be required to comply with the requirements of sections 93102.4, 93102.5, and 93102.8.

(5) If a facility has hexavalent chromium tanks in addition to trivalent chromium tanks, the hexavalent chromium tanks must comply with all of the requirements of the ATCM relating to hexavalent chromium facilities that do not have enclosed tanks.

(b) Requirements for Enclosed Hexavalent Chromium Electroplating Tanks.

(1) The owner or operator of a hexavalent chromium electroplating facility with enclosed hexavalent chromium plating tank(s) shall control hexavalent chromium emissions from the electroplating tank(s) by:

(A) Achieving a hexavalent chromium emission limitation of 0.015 mg/dscm from each tank as measured after the add-on air pollution control device(s); or

(B) Using a chemical fume suppressant specified in section 93102.8, and maintaining the surface tension of the plating bath solution at a value specified in section 93102.8; or

(C) Not allowing the mass rate of the total chromium to exceed the maximum allowable mass emission rate determined by using the calculation procedure specified in Appendix 7.

(2) The owner or operator of an existing facility that has only enclosed hexavalent chromium plating tank(s) must comply with all requirements of this ATCM except for the requirements set forth in section 93102.4.

(3) If a facility has hexavalent chromium plating tanks that are not enclosed in addition to enclosed hexavalent chromium tanks, the hexavalent chromium tanks that are not enclosed must comply with all the requirements of the ATCM related to hexavalent chromium facilities that do not have enclosed tanks.

(4) New facilities with enclosed hexavalent chromium plating tanks must comply with section 93102.4(d)(1).

**➡§ 93102.7. Performance Test Requirements and Test Methods.**

(a) Performance test requirements.

(1) The following hexavalent chromium facilities must conduct a performance test to demonstrate compliance with the hexavalent chromium emission rate as specified in section 93102.4:

(A) Existing facilities demonstrating compliance with a milligrams per ampere-hour emission limitation specified in Table 93102.4.

(B) Facilities that undergo a modification after October 24, 2007.

(C) New hexavalent chromium facilities complying with section 93102.4(d)(2) or section 93102.6(b)(1)(A) or (C).

(D) Facilities that submit an alternative compliance method or methods for approval as provided in section 93102.4(b)(3).

(2) New or modified facilities must conduct the performance test required by this section 93102.7 no later than 60 days after initial start-up.

(3) Existing facilities must conduct the performance test required by this section 93102.7 no later than the applicable effective date contained in Table 93102.4.

(4) The performance test must be conducted using one of the approved test methods specified in subsection 93102.7(c). The hexavalent chromium emission rate shall be multiplied by the facility annual permitted ampere-hour usage to determine the annual emissions of hexavalent chromium for the facility.

(5) Facilities do not need to conduct a performance test if the facility's annual permitted ampere-hour usage is ?20,000 and the facility is located within 330 feet of a sensitive receptor or the facility's annual permitted ampere-hour usage is ?50,000 and the facility is located more than 330 feet from a sensitive receptor that exists on October 24, 2007, and the facility is using chemical fume suppressants.

(6) Trivalent chromium plating facilities meeting the mg/dscm emission rate specified in section 93102.6(a)(1) must conduct a performance test to demonstrate compliance with the total chromium emission rate.

(b) Use of previously conducted performance test.

A performance test conducted after January 1, 2000 may be used to satisfy the requirements of this section 93102.7, so long as all of the following criteria are met:

(1) The test demonstrated compliance with the applicable hexavalent chromium emission rate specified in Table 93102.4 of section 93102.4 for hexavalent chromium plating or chromic acid anodizing facilities, or 0.01 mg/dscm or less total chromium emission rate for trivalent chromium

plating facilities, or 0.015 mg/dscm hexavalent chromium emission rate for facilities with enclosed hexavalent chromium electroplating tanks complying with section 93102.6(b)(1)(A), and

(2) The performance test was approved by the permitting agency, and

(3) The test is representative of the method to control emissions currently in use as of October 24, 2007, and

(4) The performance test was conducted using one of the approved test methods specified in subsection 93102.7(c).

(c) Approved test methods.

(1) Emissions testing shall be conducted with a minimum of three test runs in accordance with one of the following test methods:

(A) California Air Resources Board Test Method 425, last amended July 28, 1997, (section 94135, Title 17, California Code of Regulations (CCR); or

(B) U.S. EPA Method 306, (40 CFR 63 Appendix A) with or without hexavalent chromium option (Method 306, Section 2.2.3) provided that, if the total chromium option is used, the total chromium measurement must be assumed to be all hexavalent chromium; or

(C) South Coast Air Quality Management District Method 205.1.

(2) Smoke Test to Verify the Seal Integrity of Covers Designed to Reduce Chromium Emissions from Electroplating and Anodizing Tanks (See Appendix 5).

(3) Surface tension using a tensiometer shall be measured in accordance with U.S. EPA Method 306B (40 CFR 63 Appendix A). Surface tension using a stalagmometer shall be measured using the procedure set forth in Appendix 8, or an alternative procedure approved by the permitting agency.

(d) Pre-Test protocol. Facilities subject to the provisions of section 93102.7(a) must submit a pre-test protocol to the permitting agency at least 60 days prior to conducting a performance test. The pre-test protocol shall include the performance test criteria of the end user and all assumptions, required data, and calculated targets for testing the source target chromium concentration, the preliminary chromium analytical data, and the planned sampling parameters. In addition, the pre-test protocol shall include information on equipment, logistics, personnel, and other resources necessary for an efficient and coordinated test.

(e) Test all emission points. Each emission point subject to the requirements of this regulation must be tested unless a waiver is granted by U.S. EPA and approved by the permitting agency.

## ➡§ 93102.8. Chemical Fume Suppressants.

Chemical fume suppressants used to comply with sections 93102.4 and 93102.6(b)(1)(B) shall meet the criteria specified in this section 93102.8.

(a) One or more of the chemical fume suppressants listed in Table 93102.8 shall be used to reduce the surface tension of the electroplating or anodizing bath(s) below the surface tension value listed in Table 93102.8. The surface tension value may be measured using either a stalagmometer or a tensiometer.

Table 93102.8: Chemical Fume Suppressants Approved for Use at Specified Surface

Tensions

**Table 93102.8: Chemical Fume Suppressants Approved for Use at Specified Surface Tensions**

| *Chemical Fume Suppressant and Manufacturer* | *Stalagmometer Measured Surface Tension (dynes/centimeter)* | *Tensiometer Measured Surface Tension (dynes/centimeter)* |
|---|---|---|
| Benchbrite CR 1800® Benchmark Products | ≤ 40 | ≤ 35 |
| Clepo Chrome® MacDermid | ≤ 40 | ≤ 35 |
| Fumetrol 140® Atotech U.S.A. | ≤ 40 | ≤ 35 |
| HCA–6.2® Hunter Chemical LLC | ≤ 32 | ≤ 28 |
| HCA–4® Hunter Chemical LLC | ≤ 32 | ≤ 28 |

(b) Alternative chemical fume suppressants. Chemical fume suppressants not listed in Table 93102.8 may be used upon approval by the Executive Officer. The Executive Officer shall approve the use of an alternative chemical fume suppressant if the following criteria are met:

(1) The chemical fume suppressant has been performance tested under conditions that are representative of normal operations in a hexavalent chromium electroplating or anodizing bath and demonstrated to reduce the hexavalent chromium emissions below 0.01 milligrams per ampere hour; and

(2) In the performance testing, the hexavalent chromium emission rate of 0.01 milligrams per ampere-hour was achieved under conditions in which the surface tension did not exceed 45 dynes/cm, as measured by a stalagmometer or 35 dynes/cm, as measured by a tensiometer.

(c) A chemical fume suppressant that is listed in subsection 93102.8(a) or that has been approved under subsection 93102.8(b) may no longer be used if the Executive Officer determines that the chemical fume suppressant is no longer able to reduce the hexavalent chromium emission rate below 0.01 milligrams per ampere-hour under conditions in which the surface tension does not exceed 45 dynes/cm, as measured by a stalagmometer or 35 dynes/cm, as measured by a tensiometer.

**➡§ 93102.9. Parameter Monitoring Requirements.**

(a) Ampere-hours. Each electroplating or anodizing tank, or group of electroplating or anodizing tanks, shall have installed a continuous recording, non resettable, ampere-hour meter that operates on the electrical power lines connected to the tank or group of tanks. A separate meter shall be hard-wired for each rectifier.

(b) Pressure drop. The owner or operator shall continuously monitor the pressure drop across an add-on control device such as a composite mesh-pad (CMP), packed-bed scrubber (PBS), a CMP/PBS, fiber-bed mist eliminator, and a High Efficiency Particulate Arrestor (HEPA) filter with a mechanical gauge. The gauge shall be located so that it can be easily visible and in clear sight of the operation, or maintenance personnel. The pressure drop shall be maintained within plus or minus 2 inches of water

of the value established during the performance test to demonstrate compliance with the emission limitation for CMP, PBS, a CMP/PBS, and a fiber-bed mist eliminator. The pressure drop shall be maintained within - 1/2 times to +2 times the inches of water of the value established during the performance test to demonstrate compliance with the emission limitation for HEPA filters.

(c) Inlet velocity pressure. The owner or operator shall continuously monitor the inlet velocity pressure of a packed-bed scrubber with a mechanical gauge. The gauge shall be located so that it can be easily visible and in clear sight of the operation, or maintenance personnel. The inlet velocity pressure shall be maintained within plus or minus 10 percent of the value established during the performance test to demonstrate compliance with the emission limitation.

(d) Surface tension.

(1) The owner or operator of a facility that is required to use a chemical fume suppressant as specified in section 93102.8 to comply with section 93102.4 shall measure and monitor the surface tension of the electroplating, or anodizing bath(s) that contains a chemical fume suppressant listed in Table 93102.8 of section 93102.8 with either a stalagmometer using the procedure in Appendix 8 of section 93102.16 or a procedure approved by the permitting agency, or with a tensiometer using U.S. EPA Method 306B (40 CFR part 63, Appendix A). The surface tension shall be maintained below the value required by section 93102.8. Surface tension shall be measured daily for 20 operating days, and weekly thereafter as long as there is no violation of the surface tension requirement. If a violation occurs, the measurement frequency shall return to daily for 20 operating days, and weekly thereafter.

(2) The owner or operator of a facility using a chemical fume suppressant containing a wetting agent that is not required to use a chemical fume suppressant listed in Table 93102.8 of section 93102.8 shall measure and monitor the surface tension of the chromium electroplating or chromic acid anodizing tank bath(s) with either a stalagmometer using the procedure in Appendix 8 of section 93102.16 or a procedure approved by the permitting agency, or with a tensiometer using U.S. EPA Method 306B (40 CFR part 63, Appendix A). If the surface tension is measured with a stalagmometer the surface tension shall be maintained below 45 dynes/centimeter. If the surface tension is measured with a tensiometer, the surface tension shall be maintained below 35 dynes/centimeter. Surface tension shall be measured daily for 20 operating days, and weekly thereafter as long as there is no violation of the surface tension requirement. If a violation occurs, the measurement frequency shall return to daily for 20 operating days, and weekly thereafter.

(3) Facilities with an approved alternative method of compliance as specified in section 93102.4(b)(3) and using chemical fume suppressants as all or partial control of hexavalent chromium emissions must measure and monitor the surface tension of the electroplating or anodizing bath daily. The surface tension must be maintained at or below the surface tension measured during the performance test.

(e) Foam blanket thickness. The owner or operator shall monitor the foam blanket thickness across the surface of the electroplating, or anodizing bath(s). The foam blanket thickness shall be maintained consistent with the requirements established during the performance test to demonstrate compliance with the emission limitation. Foam thickness shall be measured hourly for 15 operating days, and daily thereafter as long as there is no violation of the foam thickness requirement. If a violation occurs, the measurement frequency shall return to hourly for 15 operating days, and daily thereafter.

(f) Mechanical fume suppressants. The owner or operator shall visually inspect the electroplating, or anodizing bath(s) for coverage comparable to the coverage during the performance test daily.

**➡§ 93102.10. Inspection and Maintenance Requirements.**

(a) Hexavalent chromium electroplating and chromic acid anodizing facilities shall comply with the applicable inspection and maintenance requirements listed in Table 93102.10.

Table 93102.10 -Summary of Inspection and Maintenance Requirements

Table 93102.10—Summary of Inspection and Maintenance Requirements

| *Control Technique/Equipment* | *Inspection and Maintenance Requirements* | *Frequency* |
|---|---|---|
| Composite mesh-pad (CMP) system, Packed-bed scrubber (PBS), or PBS/CMP | 1. Visually inspect device to ensure that there is proper drainage, no unusual chromic acid buildup on the pads, and/or packed beds and no evidence of chemical attack that affects the structural integrity of the device. | 1. 1/quarter. |
| | 2. Visually inspect back portion of the mesh pad closest to the fan to ensure there is no breakthrough of chromic acid mist, and/or back portion of the chevron mist eliminator to ensure it is dry and there is no breakthrough of chromic acid mist. | 2. 1/quarter. |
| | 3. Visually inspect ductwork from tank to the control device to ensure there are no leaks. | 3. 1/quarter. |
| | 4. Perform washdown and/or add fresh makeup water to the packed bed when it is needed. | 4. Per manufacturer. |
| Fiber-bed mist eliminator[A] | 1. Same as number 1 for CMP/PBS. | 1. 1/quarter. |
| | 2. Same as number 3 for CMP/PBS. | 2. 1/quarter. |
| | 3. Same as number 4 for CMP/PBS. | 3. Per manufacturer. |
| High Efficiency Particulate Arrestor (HEPA) filter | 1. Look for changes in the pressure drop.<br>2. Replace HEPA filter. | 1. 1/week.<br>2. Per manufacturer's specifications, or permitting agency's requirement. |
| Chromium tank covers [facilities complying with subsection 93102.6(b)] | 1. Drain the air-inlet (purge air) valves at the end of each day that the tank is in operation. | 1. 1 /day. |
| | 2. Visually inspect access door seals and membranes for integrity. | 2. 1/week. |
| | 3. Drain the evacuation unit directly into the plating tank or into the rinse tanks (for recycle into the plating tank). | 3. 1/week. |
| | 4. Visually inspect membranes for perforations using a light source that adequately illuminates the membrane (e.g., Grainger model No. 6X971 Fluorescent Hand Lamp). | 4. 1/month. |
| | 5. Visually inspect all clamps for proper operation; replace as needed. | 5. 1/month. |
| | 6. Clean or replace filters on evacuation unit. | 6. 1/month. |
| | 7. Visually inspect piping to, piping from, and body of evacuation unit to ensure there are no leaks and no evidence of chemical attack. | 7. 1/quarter. |
| | 8. Replace access door seals, membrane evacuation unit filter, and purge air inlet check valves in accordance with the manufacturer's recommendations. | 8. Per manufacturer. |
| Pitot tube | Backflush with water, or remove from the duct and rinse with fresh water. Replace in the duct and rotate 180 degrees to ensure that the same zero reading is obtained. Check pitot tube ends for damage. Replace pitot tube if cracked or fatigued. | 1/quarter. |
| Ampere-hour meter | Install and maintain per manufacturer's specifications. | Per manufacturer. |
| Stalagmometer/Tensiometer | Calibrate and maintain per manufacturer's specifications. | Per manufacturer. |

[A]Inspection and maintenance requirements for the control device installed upstream of the fiberbed mist eliminator to prevent plugging do not apply as long as the inspection and maintenance requirements for the fiber-bed unit are followed.

(b) Add-on air pollution control device(s) that is custom designed for a specific operation shall develop operating and maintenance requirements. The requirements shall be submitted to the permitting agency for review and approval. The requirements and frequency of inspection must be sufficient to ensure compliance.

**➡§ 93102.11. Operation and Maintenance Plan (O & M Plan) Requirements.**

(a) Prepare the O & M plan. The owner or operator subject to the inspection and maintenance requirements of subsection 93102.10(a) and (b) shall prepare an operation and maintenance plan. For major sources, the plan shall be incorporated by reference into the source's title V permit. The plan shall incorporate the inspection and maintenance requirements for that device, or monitoring equipment, as identified in Table 93102.10, or subsection 93102.10(b) of this ATCM and include the following elements:

(1) A standardized checklist to document the operation and maintenance of the facility, the add-on air pollution control device, and the process and control system monitoring equipment; and

(2) Procedures to be followed to ensure that equipment is properly maintained. [To satisfy the inspection and maintenance requirements of this subsection, the owner or operator may use applicable standard operating procedure (SOP) manuals, Occupational Safety and Health Administration (OSHA) plans, or other existing plans, provided the alternative plans meet the requirements of this subsection.]

(b) Retain the O & M plan. The owner or operator shall keep the written operation and maintenance plan on record after it is developed to be made available for inspection, upon request, during normal working hours.

(c) Changes to the O & M plan. Any changes made by the owner or operator should be documented in an addendum to the plan. In addition, the owner or operator shall keep previous (i.e., superseded) versions of the operation and maintenance plan on record to be made available for inspection, upon request, during normal working hours, for a period of 5 years after each revision to the plan.

(d) Revisions to the O & M plan to address breakdowns. The operation and maintenance plan shall be revised as necessary to minimize breakdowns.

**➡§ 93102.12. Recordkeeping Requirements.**

(a) Inspection records. The owner or operator shall maintain inspection records to document that the inspection and maintenance requirements of section 93102.10 and Table 93102.10, and the provisions of the operation and maintenance plan required by section 93102.11 have been met. The record can take the form of a checklist and shall identify:

(1) the device inspected,

(2) the date and time of inspection,

(3) a brief description of the working condition of the device during the inspection,

(4) maintenance activities performed on the components of the air pollution control system (i.e. duct work replacement, filter pad replacement, fan replacement, etc), and

(5) actions taken to correct deficiencies found during the inspection.

(b) Performance test records. The owner or operator shall maintain test reports documenting the conditions and results of all performance tests.

(c) Monitoring data records. The owner or operator shall maintain records of monitoring data required by section 93102.9 that are used to demonstrate compliance, including the date and time the data are collected.

(1) Cumulative rectifier usage records. Record the actual cumulative rectifier usage expended during each month of the reporting period, and the total usage expended to date.

(2) Pressure drop. The owner or operator shall record the pressure drop once a week.

(3) Inlet Velocity Pressure. The owner or operator shall record the inlet velocity pressure weekly.

(4) Surface tension.

(A) Facilities required to use a chemical fume suppressant as specified in section 93102.8 to comply with section 93102.4.

The owner or operator shall record the surface tension daily for 20 operating days, and weekly thereafter as long as there is no violation of the surface tension requirement. If the surface tension of the plating or anodizing bath exceeds levels specified in section 93102.8 the owner or operator shall again record the surface tension daily for 20 operating days, and weekly thereafter.

(B) Facilities not required to use a chemical fume suppressant specified in section 93102.8 to comply with section 93102.4.

The owner or operator shall record the surface tension daily for 20 operating days, and weekly thereafter as long as there is no violation of the surface tension requirement. If the surface tension of the plating or anodizing bath exceeds 45 dynes/centimeter as measured with a stalagmometer or exceeds 35 dynes/centimeter as measured with a tensiometer, the owner or operator shall again record the surface tension daily for 20 operating days, and weekly thereafter.

(C) Facilities with an approved alternative method of compliance as specified in section 93102.4(b)(3) and using chemical fume suppressants as all, or partial control of hexavalent chromium emissions must record the surface tension of the electroplating, or anodizing bath daily. The surface tension must be maintained at or below the surface tension measured during the performance test.

(5) Mechanical fume suppressants. Facilities with an approved alternative method of compliance as specified in section 93102.4(b)(3) and using mechanical fume suppressants as all or partial control of hexavalent chromium emissions must record the coverage on the electroplating or anodizing bath daily. Coverage shall be reported as a percentage of bath surface area.

(6) Foam thickness. The owner or operator shall record the foam thickness hourly for 15 operating days, and daily thereafter as long as there is no violation of the foam thickness requirement. If a violation occurs, the measurement frequency shall return to hourly for 15 operating days, and daily thereafter.

(d) Breakdown records. The owner or operator shall maintain records of the occurrence, duration, and cause (if known) and action taken on each breakdown.

(e) Records of excesses. The owner or operator shall maintain records of exceedances of the emission limitations in section 93102.4, the monitoring parameter values established under section 93102.9, or any site-specific operating parameters established for alternative equipment. The records shall include the date of the occurrence, the duration, cause (if known), and, where possible, the magnitude of any excess emissions.

(f) Records demonstrating facility size. Facility size for determining the applicable emission limitation in subsection 93102.4(a) is determined by the maximum cumulative potential rectifier capacity. However, a facility with a maximum cumulative potential rectifier capacity of 60 million amp-hr/yr or more may, at the option of the owner or operator, be considered small or medium if the actual cumulative rectifier usage is less than 60 million amp-hr/yr as demonstrated by using either of the following procedures:

(1) Annual actual cumulative rectifier capacity. Show by records that the facility's previous annual actual cumulative rectifier capacity was less than 60 million amp-hr/yr, by using nonresettable ampere-hour meters and keeping monthly records of actual ampere-hour capacity for each 12-month rolling period following the compliance date. The actual cumulative rectifier capacity for the previous 12-month rolling period shall be tabulated monthly by adding the capacity for the current month to the capacities for the previous 11 months; or

(2) Maximum cumulative potential rectifier usage limit. By accepting a limit on the maximum cumulative potential rectifier usage of a hard chromium electroplating facility through a title V permit condition or a permitting agency operating permit condition and by maintaining monthly records in accordance with subsection 93102.12(c)(1) to demonstrate that the limit has not been exceeded.

(g) Records of annual ampere-hour use. Facilities shall maintain monthly records of total ampere-hour

use per calendar year. The record shall be submitted to the permitting agency as part of their Initial and Ongoing Compliance Status Reports, as specified in Appendix 2 and 3.

(h) Records of chemical fume suppressant additions. For facilities using chemical fume suppressants to comply with the standards, or requirements, the owner or operator shall maintain records of the date, time, approximate volume, and product identification of the chemical fume suppressant that is added to the electroplating or anodizing bath.

(i) Records of trivalent chromium process components. For facilities complying with subsection 93102.6(a) using the trivalent chromium process, the owner or operator shall maintain records of the bath components purchased, with the wetting agent clearly identified as a bath constituent contained in one of the components.

(j) New/modified source review information. The owner or operator shall maintain records supporting the notifications and reports required by the permitting agency's new source review provisions and/or subsection 93102.4(e).

(k) Housekeeping records. The owner or operator shall maintain records demonstrating compliance with housekeeping requirements, as required by section 93102.5, including the dates on which specific activities were completed, and records showing that chromium or chromium-containing wastes have been stored, disposed of, recovered, or recycled using practices that do not lead to fugitive dust emissions.

(l) Records retention. All records shall be maintained for five years, at least two years on site.

**➡§ 93102.13. Reporting Requirements.**

(a) Performance test documentation.

(1) Notification of performance test.

(A) The owner or operator of a facility shall notify the permitting agency of his or her intention to conduct a performance test at least 60 calendar days before the performance test is scheduled.

(B) The provisions in subsection 93102.13(a)(1)(A), above, do not apply if the performance test was conducted prior to July 24, 1997, was used to demonstrate compliance with subsection 93102.4(a) or subsection 93102.6(a), and was approved by the permitting agency and the U.S. EPA.

(2) Reports of performance test results. The owner or operator shall report performance test results to the permitting agency. Reports of performance test results shall be submitted no later than 90 days following the completion of the required performance test, and shall be submitted as part of the notification of compliance status required by subsection (b) of this section.

(3) The content of performance test reports shall contain the information identified in Appendix 1.

(b) Initial compliance status report. An initial compliance status report is required each time that a facility becomes subject to the requirements of this ATCM. The owner or operator shall submit to the permitting agency an initial compliance status report, signed by the responsible official who shall certify its accuracy, attesting to whether the facility has complied with this rule.

(1) The initial compliance status report shall be submitted to the permitting agency no later than 180 days after the effective date of this rule for existing facilities, or at start-up for new facilities.

(2) The content of the initial compliance status report shall contain the information identified in Appendix 2.

(c) Ongoing compliance status reports. The owner, or operator shall submit a summary report to the permitting agency to document the ongoing compliance status.

(1) Ongoing compliance status reports shall be submitted to the permitting agency on or before February 1 annually for all facilities, and shall include information for the preceding calendar year (January 1 through December 31).

(2) The content of ongoing compliance status reports shall include the information identified in Appendix 3.

(d) Reports of breakdowns. The owner or operator shall report breakdowns as required by the permitting agency's breakdown rule.

(e) Reports associated with the trivalent chromium process.

(1) Facilities currently using the trivalent chromium process.

(A) Owners or operators electroplating with the trivalent chromium process using a wetting agent are not subject to subsections (a), (b), and (c) of this section 93102.13, but shall submit to the permitting agency the following information no later than 30 days after the effective date of this rule:

1. The name and address of each facility subject to this paragraph;

2. A statement that a trivalent chromium process that incorporates a wetting agent will be used to comply with these requirements; and

3. The list of bath components that comprise the trivalent chromium bath, with the wetting agent clearly identified.

(B) An owner or operator electroplating with the trivalent chromium process and complying with the emission limitation option in subsection 93102.6(a) shall submit the information contained in subsections (a) and (b) of this section 93102.13. The report shall be submitted in accordance with the schedules identified in those paragraphs.

(2) Facilities changing to the trivalent chromium process. Within 30 days of a change to the trivalent chromium process, the owner or operator shall submit to the permitting agency a report that includes:

(A) Facilities electroplating with the trivalent chromium process using a wetting agent shall submit the following information:

1. The name and address of each facility subject to this paragraph; and

2. A statement that a trivalent chromium process that incorporates a wetting agent will be used to comply with these requirements; and

3. The list of bath components that comprise the trivalent chromium bath, with the wetting agent clearly identified; and

4. A description of the manner in which the process has been changed.

(B) Facilities electroplating with the trivalent chromium process and complying with the emission limitation option in 93102.6(a) shall submit the information contained in subsections (a) and (b) of this section 93102.13. The report shall be submitted in accordance with the schedules identified in those paragraphs.

(f) Adjustments to the timeline for submittal and format of reports. A permitting agency may adjust the timeline for submittal of periodic reports, allow consolidation of multiple reports into a single report, establish a common schedule for submittal of reports, or accept reports prepared to comply with other State, or local requirements. Prior to allowing an adjustment, the permitting agency must find that the adjustment will provide the same information and will not alter the overall frequency of reporting.

**➡§ 93102.14. Procedure for Establishing Alternative Requirements.**

(a) Request Approval of an Alternative Requirement. Any person may request approval of an alternative requirement. The person seeking such approval shall submit the proposed alternative requirement to the permitting agency for approval. The request must include the proposed alternative requirement, the reason for requesting the alternative requirement, and information demonstrating that the criteria for approval identified in Table 93102.14 are met.

(b) Approval of an Alternative Requirement. A permitting agency may approve an alternative requirement if it determines that application of the alternative requirement meets the criteria for approval, identified in Table 93102.14, and the permitting agency has received concurrence by the ARB and U.S. EPA, where concurrence is required.

(c) Concurrence for an Alternative Requirement. For those requirements identified in Table 93102.14 as requiring concurrence by the U.S. EPA and ARB, the permitting agency shall submit the alternative requirement to the concurring agency prior to final action by the permitting agency.

(d) Reports of Approved Alternative Requirements to U.S. EPA and ARB. The permitting agency shall provide the U.S. EPA and ARB with copies of all approved alternative requirements. The information shall be provided at a mutually agreed upon frequency.

(e) Approval Criteria. Nothing in this section prohibits the permitting agency from establishing approval criteria more stringent than that required in Table 93102.14.

(f) Alternatives Approved by U.S. EPA. Waivers obtained from U.S. EPA prior to October 24, 2007, shall remain in effect until the effective dates of the specified requirements become effective.

Table 93102.14 -Requirements for Approval of Alternatives

**Table 93102.14—Requirements for Approval of Alternatives**

| *Section or Subsection* | *Requirement* | *Criteria for Approval* | *Approving Agency* | *Concurring Agency*[1] |
|---|---|---|---|---|
| 93102.1 | Applicability | equivalent type and size of facility regulated | District | |
| 93102.4 | Limits and requirements | equal or greater emission reductions | District | U.S. EPA |
| 93102.7(a) | Performance test requirement | equivalent means of determining compliance | District | |
| 93102.7(b) | Use of previously conducted performance tests | overall existing tests provide a similar level of compliance assurance | District | |
| 93102.7(c) | Alternative test method | provides a similar level of accuracy and precision | District for Minor[2] and Intermediate[3] Changes | U.S. EPA, for Major[4] Changes, and ARB |
| 93102.7(d) | Amendments to the pre-test protocol | equivalent means of determining compliance | District | |
| 93102.7(e) | Test all emission points | equivalent means of determining compliance | District | |
| 93102.9 | Parameter monitoring | equivalent means of determining and assuring compliance | District for Minor[5] and Intermediate[6] Changes | U.S. EPA for Major[7] Changes |
| 93102.10 | Inspection maintenance requirements | equivalent means of assuring compliance | District | |
| 93102.11 | Operation and maintenance plans | equivalent means of assuring compliance | District | |
| 93102.12(a) through (f) and (h) through (j) | Record-keeping | equivalent means of assuring compliance | District for Minor[8] Changes | U.S. EPA for Major[9] Changes |
| 93102.12(*l*) | Retention of records | assure historical records available for up to 5 years | District for Minor[8] Changes | U.S. EPA for Major[9] Changes |
| 93102.13 | Reporting | equivalent means of assuring compliance | District for Minor[8] Changes | U.S. EPA for Major[9] Changes |

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1. U.S. EPA, or the implementing agency, in accordance with any delegation of authority to approve alternatives from the U.S. EPA.

2. Minor change to test method means: (1) A modification to a federally enforceable test method that: (i) Does not decrease the stringency of the emission limitation or standard; (ii) Has no national significance (e.g., does not affect implementation of the applicable regulation for other affected sources, does not set a national precedent, and individually does not result in a revision to the test method); and (iii) Is site-specific, made to reflect or accommodate the operational characteristics, physical constraints, or safety concerns of an affected source. (2) Examples of minor changes to a test method include, but are not limited to: (i) Field adjustments in a test method's sampling procedure, such as a modified sampling traverse or location to avoid interference from an obstruction in the stack, increasing the sampling time or volume, use of additional impingers for a high moisture situation, accepting particulate emission results for a test run that was conducted with a lower than specified temperature, substitution of a material in the sampling train that has been demonstrated to be more inert for the sample matrix; and (ii) Changes in recovery and analytical techniques such as a change in quality control/quality assurance requirements needed to adjust for analysis of a certain sample matrix.

3. Intermediate change to test method means a within-method modification to a federally enforceable test method involving "proven technology" (generally accepted by the scientific community as equivalent or better) that is applied on a site-specific basis and that may have the potential to decrease the stringency of the associated emission limitation or standard. Though site-specific, an intermediate change may set a national precedent for a source category and may ultimately result in a revision to the federally enforceable test method. In order to be approved, an intermediate change must be validated according to U.S. EPA Method 301 (40 CFR Part 63, Appendix A) to demonstrate

that it provides equal or improved accuracy and precision. Examples of intermediate changes to a test method include, but are not limited to: (1) Modifications to a test method's sampling procedure including substitution of sampling equipment that has been demonstrated for a particular sample matrix, and use of a different impinger absorbing solution; (2) Changes in sample recovery procedures and analytical techniques, such as changes to sample holding times and use of a different analytical finish with proven capability for the analyte of interest; and (3) "Combining" a federally required method with another proven method for application to processes emitting multiple pollutants.

4. Major change to test method means a modification to a federally enforceable test method that uses "unproven technology or procedures" (not generally accepted by the scientific community) or is an entirely new method (sometimes necessary when the required test method is unsuitable). A major change to a test method may be site-specific, or may apply to one or more sources or source categories, and will almost always set a national precedent. In order to be approved, a major change must be validated according to EPA Method 301 (40 CFR Part 63, Appendix A). Examples of major changes to a test method include, but are not limited to: (1) Use of an unproven analytical finish; (2) Use of a method developed to fill a test method gap; (3) Use of a new test method developed to apply to a control technology not contemplated in the applicable regulation; and (4) Combining two or more sampling/analytical methods (at least one unproven) into one for application to processes emitting multiple pollutants.

5. Minor change to monitoring means: (1) A modification to federally required monitoring that: (i) Does not decrease the stringency of the compliance and enforcement measures for the relevant standard; (ii) Has no national significance (e.g., does not affect implementation of the applicable regulation for other affected sources, does not set a national precedent, and individually does not result in a revision to the monitoring requirements); and (iii) Is site-specific, made to reflect or accommodate the operational characteristics, physical constraints, or safety concerns of an affected source. (2) Examples of minor changes to monitoring include, but are not limited to: (i) Modifications to a sampling procedure, such as use of an improved sample conditioning system to reduce maintenance requirements; (ii) Increased monitoring frequency; and (iii) Modification of the environmental shelter to moderate temperature fluctuation and thus protect the analytical instrumentation.

6. Intermediate change to monitoring means a modification to federally required monitoring involving "proven technology" (generally accepted by the scientific community as equivalent or better) that is applied on a site-specific basis and that may have the potential to decrease the stringency of the associated emission limitation or standard. Though site-specific, an intermediate change may set a national precedent for a source category and may ultimately result in a revision to the federally required monitoring. Examples of intermediate changes to monitoring include, but are not limited to: (1) Use of a continuous emission monitoring system (CEMS) in lieu of a parameter monitoring approach; (2) Decreased frequency for non-continuous parameter monitoring or physical inspections; (3) Changes to quality control requirements for parameter monitoring; and (4) Use of an electronic data reduction system in lieu of manual data reduction.

7. Major change to monitoring means a modification to federally required monitoring that uses "unproven technology or procedures" (not generally accepted by the scientific community) or is an entirely new method (sometimes necessary when the required monitoring is unsuitable). A major change to monitoring may be site-specific or may apply to one or more source categories and will almost always set a national precedent. Examples of major changes to monitoring include, but are not limited to: (1) Use of a new monitoring approach developed to apply to a control technology not contemplated in the applicable regulation; (2) Use of a predictive emission monitoring system (PEMS) in place of a required continuous emission monitoring system (CEMS); (3) Use of alternative calibration procedures that do not involve calibration gases or test cells; (4) Use of an analytical technology that differs from that specified by a performance specification; (5) Decreased monitoring frequency for a continuous emission monitoring system, continuous opacity monitoring system, predictive emission monitoring system, or continuous parameter monitoring system; (6) Decreased monitoring frequency for a leak detection and repair program; and (7) Use of alternative averaging times for reporting purposes.

8. Minor change to recordkeeping/reporting means: (1) A modification to federally required recordkeeping or reporting that: (i) Does not decrease the stringency of the compliance and enforcement measures for the relevant standards; (ii) Has no national significance (e.g., does not affect implementation of the applicable regulation for other affected sources, does not set a national precedent, and individually does not result in a revision to the recordkeeping or reporting requirement); and (iii) Is site-specific. (2) Examples of minor changes to recordkeeping or reporting include, but are not limited to: (i) Changes to recordkeeping necessitated by alternatives to monitoring; (ii) Increased frequency of recordkeeping or reporting, or increased record retention periods; (iii) Increased reliability in the form of recording monitoring data, e.g., electronic or automatic recording as opposed to manual recording of monitoring data; (iv) Changes related to compliance extensions granted pursuant to 40 CFR Part 63 Section 63.6(i); (v) Changes to recordkeeping for good cause shown for a fixed short duration, e.g., facility shutdown; (vi) changes to recordkeeping or reporting that is clearly redundant with equivalent recordkeeping/reporting requirements; and (vii) Decreases in the frequency of reporting for area sources to no less than once a year for good cause shown, or for major sources to no less than twice a year as required by title V, for good cause shown.

9. Major change to recordkeeping/reporting means: (1) A modification to federally required recordkeeping or reporting that: (i) May decrease the stringency of the required compliance and enforcement measures for the relevant standards; (ii) May have national significance (e.g., might affect implementation of the applicable regulation for other affected sources, might set a national precedent); or (iii) Is not site-specific. (2) Examples of major changes to recordkeeping and reporting include, but are not limited to: (i) Decreases in the record retention for all records; (ii) Waiver of all or most recordkeeping or reporting requirements; (iii) Major changes to the contents of reports; or (iv) Decreases in the reliability of recordkeeping or reporting (e.g., manual recording of monitoring data instead of required automated or electronic recording, or paper reports where electronic reporting may have been required).

### ➡§ 93102.15. Requirements Relating to Chromium Electroplating or Chromic Acid Anodizing Kits.

(a) Except as provided in subsection (b), no person shall sell, supply, offer for sale, or manufacture for sale in California, any chromium electroplating or chromic acid anodizing kit.

(b) The provisions of subsection (a) do not apply to any person that sells, supplies, offers for sale, or manufactures for sale in California a chromium electroplating or chromic acid anodizing kit to the owner or operator of a permitted facility at which chromium electroplating or chromic acid anodizing is performed.

(c) No person shall use a chromium plating or chromic acid anodizing kit to perform chromium electroplating or chromic acid anodizing unless these activities are performed at a permitted facility that complies with the requirements of this ATCM.

(d) For the purposes of this section, "chromium electroplating or chromic acid anodizing kit" means chemicals and associated equipment for conducting chromium electroplating or chromic acid anodizing including, but not limited to, internal and external tank components.

### ➡§ 93102.16. Appendices 1 Through 9.

This section 93102.16 contains Appendices 1 through 9 to the ATCM for Chromium Plating and Chromic Acid Anodizing Facilities.

## Appendix 1

## Content of Performance Test Reports

Performance test reports required by section 93102.13 shall contain the following information:
1. A brief process description;

2. Sampling location description(s);

3. A description of sampling and analytical procedures and any modifications to standard procedures;

4. Test results in mg/amp-hr;

5. Quality assurance procedures and results;

6. Records of operating conditions during the test, preparation of standards, and calibration procedures;

7. Original data for field sampling and field and laboratory analyses;

8. Documentation of calculations; and

9. Any other information required by the test method. Note: Test reports consistent with the provisions of California Air Resources Board Method 425 will fulfill the above performance test report content requirement.

## Appendix 2

## Content of Initial Compliance Status Reports

Initial compliance status reports required by subsection 93102.13(b) shall contain the following information:

1. Company Information: Facility name, address, owner/operator name, telephone number, and the measured distance to the property boundary of the nearest sensitive receptor. For facilities that do not have an add-on air pollution control device the measurement shall be the distance, rounded to the nearest foot, from the edge of the plating or anodizing tank nearest the sensitive receptor to the property line of the nearest sensitive receptor that exists on October 24, 2007. For facilities with an add-on air pollution control device the measurement shall be the distance, rounded to the nearest foot, from the centroid of the stack to the property line of the nearest sensitive receptor that exists on October 24, 2007;

2. The applicable requirements from section 93102.4 and the methods that were used to determine compliance. A description of the air pollution control technique for each emission point;

3. If a facility is using add-on controls to comply provide the following:

a) Description of add-on controls and a performance test report documenting the results of the performance test, which contains the elements listed in Appendix 1;

b) If the facility is a hexavalent chromium facility, the actual hexavalent chromium emissions of the facility in pounds per year calculated by multiplying the emission rate with the actual ampere-hours for the preceding calendar year.

c) For monitored parameters 93102.9(b) and (c), the specific operating parameter value, or range of values, that corresponds to compliance with the applicable emission limit; and

d) A statement that the owner or operator has completed and has on file the operation and maintenance plan as required by section 93102.11.

4. If a facility is using in-tank controls to comply, provide the following:

a) Description of in-tank controls including name of in tank controls, name of chemical fume suppressant, surface tension of the electroplating or anodizing bath; and

b) For monitored parameters 93102.9(d), (e), and (f) the specific operating parameter value where applicable, or range of values, that corresponds to compliance.

5. The actual cumulative ampere-hour usage expended during the preceding calendar year;

6. For facilities complying with section 93102.4(a), if the owner or operator is determining facility size based on actual cumulative rectifier usage, records to support that the facility is small or medium. For existing facilities, records from any 12-month period preceding the compliance date shall be used or a description of how operations will change to meet a small or medium designation shall be provided. For new facilities, records of projected rectifier usage for the first 12-month period of tank operation shall be used;

7. A statement that the owner or operator, or personnel designated by the owner or operator, has completed Environmental Compliance Training pursuant to 93102.5(b); and

8. A statement by the owner or operator as to whether the facilities have complied with the provisions of sections 93102 through 93102.16.

## Appendix 3

## Content of Ongoing Compliance Status Reports

Ongoing compliance status reports required by section 93102.13(c) shall contain the following information:

1. Company Information: facility name, address, owner/operator name, telephone number;, and the measured distance to the property boundary of the nearest sensitive receptor. For facilities that do not have an add-on air pollution control device the measurement shall be the distance, rounded to the nearest foot, from the edge of the plating or anodizing tank nearest the sensitive receptor to the property line of the nearest sensitive receptor. For facilities with an add-on air pollution control device the measurement shall be the distance, rounded to the nearest foot, from the centroid of the stack to the property line of the nearest sensitive receptor;

2. The relevant requirements for the facility, and the operating parameter value, or range of values, that correspond to compliance as specified in the notification of initial compliance status required by Appendix 2;

3. The actual cumulative ampere-hour usage expended during the reporting period, on a month-by-month basis, for the reporting period January 1 through December 31;

4. The actual hexavalent chromium emissions of the facility during the reporting period in pounds per year calculated by multiplying the emission rate with the actual ampere-hour usage for the reporting period;

5. A summary of any excess emissions or exceeded monitoring parameters as identified in the records required by subsection 93102.12(e);

6. A certification by a responsible official that the inspection and maintenance requirements in section 93102.10 were followed in accordance with the operation and maintenance plan for the facility;

7. If the operation and maintenance plan required by section 93102.11 was not followed, an explanation of the reasons for not following the provisions, an assessment of whether any excess emissions and/or monitoring parameter excesses are believed to have occurred, and a copy of the

record(s) required by subsection 93102.12(a) documenting that the operation and maintenance plan was not followed;

8. A description of any changes in monitoring, processes, or controls since the last reporting period;

9. A statement that the owner or operator, or personnel designated by the owner or operator, has, within the last 2 years, completed Environmental Compliance Training pursuant to 93102.5(b);

10. The name, title, and signature of the responsible official who is certifying the accuracy of the report; and

11. The date of the report.

## Appendix 4

## Notification of Construction Reports

Notification of Construction Reports required by subsection 93102.4(e) shall contain the following information:

1. The owner or operator's name, title, and address;

2. The address (i.e., physical location) or proposed address of the facility if different from the owner's or operator's;

3. A notification of intention to construct a new facility and certification that all of the criteria specified in subsection 93102.4(d) are met;

4. A notification of intention to make any physical or operational changes to a facility that may meet or has been determined to meet the criteria for a modification;

5. The expected commencement and completion dates of the construction or modification;

6. The anticipated date of (initial) startup of the facility;

7. The type of process operation to be performed (hard or decorative chromium electroplating, or chromic acid anodizing);

8. A description of the air pollution control technique to be used to control emissions, such as preliminary design drawings and design capacity if an add-on air pollution control device is used; and

9. An estimate of emissions from the facility based on engineering calculations and vendor information on control device efficiency, expressed in units consistent with the emission limits of this ATCM. Calculations of emission estimates should be in sufficient detail to permit assessment of the validity of the calculations. Note: A facility can fulfill these report content requirements by complying with the permitting agency's new source review rule or policy, provided similar information is obtained.

## Appendix 5

## Smoke Test for Chrome Tank Covers.

### SMOKE TEST TO VERIFY THE SEAL INTEGRITY OF COVERS DESIGNED TO REDUCE CHROMIUM EMISSIONS FROM ELECTROPLATING AND ANODIZING TANKS

1. Applicability and Principle

2. Applicability. This alternative method is applicable to all hard chromium electroplating and anodizing operations where a chrome tank cover is used on the tank for reducing chromium emissions.

3. Principle. During chromium electroplating or anodizing operations, bubbles of hydrogen and oxygen gas generated during the process rise to the surface of the tank liquid and burst. Upon bursting, tiny droplets of chromic acid (chromium mist) become entrained in the air above the tank. Because the chrome tank cover completely encloses the air above the tank, the chromium mist either falls back into the solution because of gravity or collects on the inside walls of the chrome tank cover and runs back into the solution. A semi-permeable membrane allows passage of the hydrogen and oxygen out of the chrome tank cover. A lit smoke device is placed inside the chrome tank cover to detect leaks at the membrane, joints, or seals.

4. Apparatus

5. Smoke device. Adequate to generate 500 to 1000 $ft^3$ of smoke/20 $ft^2$ of tank surface area (e.g., Model #1A=15 SECONDS from Superior Signal, New York).

6. Small container. To hold the smoke device.

7. Procedure

Place the small container on a stable and flat area at center of the chrome tank cover (you can use a board and place it on the buss bars). Place the smoke device inside the container. After lighting the smoke device, quickly close the access door to avoid smoke from escaping. Let smoke device completely burn; entire space under the chrome tank cover will now be filled with the smoke. Observe for leaks of smoke from each seal, joint, and membrane of the chrome tank cover. Record these observations including the locations and a qualitative assessment of any leaks of smoke.

When all seals, joints, and membranes have been observed, evacuate the unit to remove the smoke from the chrome tank cover.

Appendix 6

Air Pollution Control or Air Quality Management District Breakdown Rules.

| DISTRICT | RULE # | RULE NAME |
|---|---|---|
| Amador | 516 | Upset and Breakdown Conditions |
| Antelope | 430 | Breakdown Provisions |
| Bay Area | 1 | General Provisions and Definitions |
| Butte | 275 | Reporting Procedures for Excess Emissions |
| Calaveras | 516 | Upset and Breakdown Conditions |
| Colusa | 1.13 | Equipment Breakdown |
| El Dorado | 516 | Upset and Breakdown Conditions |
| Feather River | 9.6 | Equipment Breakdown |
| Glenn | 95.2 | Malfunction of Equipment |
| Great Basin | 403 | Breakdown |
| Imperial | 111 | Equipment Breakdown |
| Kern | 111 | Equipment Breakdown |
| Lake | Chapter III, Article II | Malfunction |
| Lassen | 2:15 | Equipment Breakdown |
| Mariposa | 516 | Upset and Breakdown Conditions |
| Mendocino | R1–5–540 | Equipment Breakdown |
| Modoc | 2.12 | Equipment Breakdown |
| Mojave | 430 | Breakdown Provisions |
| Monterey Bay | 214 | Breakdown Condition |
| North Coast | 3–4–540 | Breakdown and Violation Reporting |
| North Coast | 1–5–540 | Equipment Breakdown |
| Northern Sierra | 516 | Upset and Breakdown. Conditions |
| Northern Sonoma | 1–5–540 | Equipment Breakdown |
| Placer | 404 | Upset Conditions Breakdown. Scheduled Maintenance |
| Sacramento | 602 | Breakdown Conditions: Emergency Variance |
| San Diego | 98 | Breakdown Conditions: Emergency Variance |
| Siskiyou | 2.12 | Equipment Breakdown (Siskiyou) |
| South Coast | 430 | Breakdown Provisions |
| Tehema | 4:17 | Upset or Breakdown Conditions |
| Tuolumne | 516 | Upset and Breakdown Conditions |
| Ventura | 32 | Breakdown Conditions; Emergency Variances |
| Yolo | 5.2 | Upset/Breakdown Conditions: Emergency Variance |
| Solano | | |

Appendix 7

Alternative Requirements for Enclosed Hexavalent Chromium Electroplating Facilities - Mass Emission Rate Calculation Procedure

Mass Emission Rate shall be calculated using the following equation:

MAMER = ETSA x K x 0.015 mg/dscm

Where:

MAMER = the alternative emission rate for enclosed hexavalent chromium electroplating tanks in mg/hr.

ETSA = the hexavalent chromium electroplating tank surface area in square feet ($ft^2$).

K = a conversion factor, 425 dscm/($ft^2$ x hr).

Appendix 8

Surface Tension Procedure for a Stalagmometer

The stalagmometer must first be properly cleaned before being used for the first time and after a

period of storage. Properly clean the stalagmometer using the following procedure:

1. Set up stalagmometer in stand in a fume hood.

2. Place a clean 150 mL beaker underneath the stalagmometer then fill with reagent grade concentrated nitric acid. Immerse bottom tip (approximately 1/2") of stalagmometer into the beaker.

3. Squeeze rubber bulb and pinch at the arrow up (1) position to collapse. Place bulb end securely on top end of stalagmometer. Carefully draw the nitric acid by pinching the arrow up (1) position until the level is above the top etched line.

4. Allow nitric acid to remain in stalagmometer for 5 minutes and then carefully remove the bulb allowing the acid to completely drain.

5. Fill a clean 150 mL beaker with distilled or deionized water. Using the rubber bulb per the instructions in Step #3, rinse and drain stalagmometer with deionized or distilled water until the inside is "water break" free.

6. Fill a clean 150 mL beaker with isopropyl alcohol. Again using the rubber bulb per Step #3, rinse and drain stalagmometer twice with isopropyl alcohol and allow the stalagmometer to dry completely.

7. Take a sample of the solution to be tested and adjust the solution to room temperature. Measure the specific gravity and record reading.

8. Fill a clean 150 mL beaker with solution to be tested. Immerse bottom end of stalagmometer into the beaker. Fill the stalagmometer per instructions in Step #3, making sure that the solution level is above the top etched line.

9. Raise the stalagmometer so that the bottom end is completely out of solution. Remove bulb and immediately place a finger on the top end of the stalagmometer. Carefully use the finger to bring the solution level down to the top etched line. Do not release finger at this time.

10. "Wipe" the excess solution on the lower tip by touching it against the side of the beaker.

11. Release fingertip to allow solution to drain and count number of drops until the level reaches the bottom etched line.

Calculations for Surface Tension

$$\text{Surface tension (dynes/cm)} = \frac{Sw * Nw * D}{N * Dw}$$

Sw = Surface tension of water at 25° C or 77° F (72.75 dynes/cm)

Nw = water drop number etched on instrument

D = measured specific gravity (g/ml)

N = # of solution drops

Dw = water density (1.0 g/mL)

PRECAUTIONS:

1. Make sure the stalagmometer is clean (no sludge or film)

2. No chips, cracks, etc

3. Vertical placement

4. No vibration

5. 20 drops per minute rate (10 dynes/cm) +/- 1 drop per minute

6. Performance checked with water. The number of drops etched on the instrument shall be verified with deionized water to +/- 1 drop. If the number of drops are not within 1 drop, then the Stalagmometer shall be cleaned. If the cleaning process does not bring the drop count within 1 drop of the etched number on the instrument, then the operator shall:

a) Purchase a new Stalagmometer; or

b) Use the number of drops recorded for the distilled water run as (Nw) in the equation instead of the number of drops etched on the Stalagmometer.

7. Sample at room temperature

Appendix 9

Information to be Submitted to the Permitting Agency when Demonstrating an Alternative Method or Methods of Compliance Pursuant to section 93102.4(b)(3)

The owner or operator of a facility applying for approval of an alternative method of compliance must submit to the permitting agency the following information:

1. A performance test as specified in Section 93102.7. The test shall have been conducted in a manner consistent with normal electroplating or anodizing operations.

2. A demonstration that the alternative method achieves an equal or greater amount of reductions in hexavalent chromium emissions than would be achieved with direct compliance with the applicable emission rate in Table 93102.4.

3. Calculations based on scientifically valid risk assessment methodologies demonstrating that the alternative method results in reducing risk equally or greater than the risk reduction that would be achieved by direct compliance with the applicable emission rate in Table 93102.4. A facility using in-tank controls only must be modeled as a volume source and the resulting risk compared to the same facility modeled as a point source.

4. Documentation which demonstrates that the method is enforceable, including an operation and maintenance plan, an inspection and maintenance schedule, and a recordkeeping plan.

**➡§ 93103. Regulation for Chromate Treated Cooling Towers.**

(a) Definitions. In this regulation, hexavalent chromium and chromate are substances identified as toxic air contaminants by the Air Resources Board. You, yours, I, and my mean the person who owns or operates, or who plans to build, own, or operate, a cooling tower. The district is the local air pollution control district or air quality management district. A cooling tower is a device which evaporates circulating water to remove heat from a process, a building, or a refrigerator, and puts the heat into the ambient air. Must means a provision is mandatory, and may means a provision is permissive.

(b) Who must comply with this regulation? Any person who owns or operates, or who plans to build, own, or operate, a cooling tower must comply with this regulation.

(c) What must I do to comply with this regulation? To comply with this regulation, you must:

notify the district in writing about your cooling tower,

and

not add any hexavalent chromium-containing compounds to the cooling tower circulating water,

and

keep the hexavalent chromium concentration in the cooling tower circulating water less than 0.15 milligrams hexavalent chromium per liter of circulating water,

and

test the circulating water to determine the concentration of hexavalent chromium every six months,

and

keep the results of all required tests of circulating water for two years, and give them to the district when asked.

(d) What information must I send the district? Within 90 days after the effective date of this regulation, you must write and tell the district the following:

that you own or operate a cooling tower,

and

where the cooling tower is located,

and

who is the owner or operator of the cooling tower,

and

whether or not you use hexavalent chromium in the cooling tower,

and

if you are using hexavalent chromium, when you plan to stop.

(e) When must I comply with the hexavalent chromium limits? You must stop adding hexavalent chromium-containing compounds to the circulating water in your cooling tower and meet the 0.15 milligrams per liter hexavalent chromium concentration limit no later than 180 days after the effective date of the regulation. This is the compliance date for the regulation.

(f) For how long do I have to test the circulating water? If, after the effective date of this regulation, 2 consecutive required tests showing concentrations of hexavalent chromium less than 0.15 milligrams of hexavalent chromium per liter of circulating water, then the testing requirement is ended. All other requirements remain the same. The district may, however, require you to resume testing the circulating water at any time if the district has information that the circulating water may contain hexavalent chromium.

(g) How do I test the circulating water for hexavalent chromium? You must test the circulating water

to determine hexavalent chromium concentrations using American Public Health Association Method 312B, or an equivalent method approved by the district. You will find Method 312B in a book called Standard Methods for the Examination of Water and Wastewater, Sixteenth Edition, published by the American Public Health Association, and available at libraries and bookstores nationwide.

(h) I use hexavalent chromium in a wooden cooling tower. Even if I stop adding hexavalent chromium on the compliance date, hexavalent chromium from the wood may cause the concentration in the circulating water to exceed 0.15 milligrams per liter for a time after the compliance date. How may I avoid being cited immediately after the compliance date? You may avoid being cited for violations of the 0.15 milligrams per liter hexavalent chromium concentration limit for up to six months after the compliance date. In order to not be cited during the transition period, you must:

comply with all other requirements of this regulation,

and

notify the district in writing that your cooling tower has wooden components that are exposed to the circulating water, and that you plan to take advantage of this section,

and

test the circulating water to determine the concentration of hexavalent chromium monthly

and

show a decrease in hexavalent chromium concentrations in the circulating water each month,

and

keep the results of the tests of circulating water for two years and give them to the district when asked,

and

the hexavalent chromium concentration in the circulating water must not exceed 8 milligrams hexavalent chromium per liter of circulating water.

(i) I am planning to build a cooling tower after the effective date of this regulation. Do I need to notify the district? Yes, no later than 90 days before you begin to operate the cooling tower, you must write and tell the district the following:

who is the owner and operator of the cooling tower,

and

where the cooling tower will be located,

and

when you plan to start operation.

(j) I switched to non-chromate treatments before this regulation became effective, do I have to meet the same requirements? If you have not used hexavalent chromium in your cooling tower for at least one year immediately before the compliance date, or if your cooling tower has never used hexavalent chromium, and you can demonstrate this to the district, then the district may waive the testing requirement. Such demonstration may be made by written certification signed by a company officer, that hexavalent chromium compounds have not been used within the year immediately before the

compliance date. The district may, however, require you to test the circulating water at any time, if the district has information that the circulating water may contain hexavalent chromium.

**➡§ 93104. Dioxins Airborne Toxic Control Measure -Medical Waste Incinerators.**

(a) Definitions. For purposes of this section, the following definitions shall apply:

(1) "ARB" means the State of California Air Resources Board.

(2) "ARB Test Method 2" means the test method specified in title 17, California Code of Regulations, section 94102.

(3) "ARB Test Method 428" means the test method specified in title 17, California Code of Regulations, section 94139.

(4) "Control equipment" means any device which reduces emissions from medical waste incinerators.

(5) "Dioxins" means dibenzo-p-dioxins and dibenzofurans chlorinated in the 2, 3, 7, and 8 positions and containing 4, 5, 6, or 7 chlorine atoms and is expressed as 2, 3, 7, 8, tetrachlorinated dibenzo-para-dioxin equivalents using current California Department of Health Services toxic equivalency factors.

(6) "Facility" means every building, structure, appurtenance, installation, or improvement located on land which is under the same or common ownership or operation, and is on one or more contiguous or adjacent properties.

(7) "Medical facilities" means medical and dental offices, clinics and hospitals, skilled nursing facilities, research facilities, research laboratories, clinical laboratories, all unlicensed and licensed medical facilities, clinics and hospitals, surgery centers, diagnostic laboratories, and other providers of health care.

(8) "Medical waste incinerator" means all of the furnaces or other closed fire chambers that are located at a facility and used to dispose of waste generated at medical facilities by burning.

(9) "Uncontrolled emissions" means the dioxins emissions measured from the incinerator at a location downstream of the last combustion chamber, but prior to the air pollution control equipment.

(10) "Waste" means all discarded putrescible and nonputrescible solid, semisolid, and liquid materials, including garbage, trash, refuse, paper, rubbish, food, ashes, plastics, industrial wastes, demolition and construction wastes, equipment, instruments, utensils, appliances, manure, and human or animal solid and semisolid wastes.

(b) Requirements for medical waste incinerators that incinerate more than 25 tons of waste per year. The following requirements shall apply only to medical waste incinerators that incinerate more than 25 tons of waste per year:

(1) No person shall operate a medical waste incinerator unless:

(A) The dioxins emissions have been reduced by 99 percent or more of the uncontrolled emissions; or

(B) The dioxins emissions have been reduced to 10 nanograms or less per kilogram of waste burned.

(2) No person shall operate a medical waste incinerator unless the control equipment is installed and used in a manner which has been demonstrated to and approved by the district air pollution control officer to meet the following requirements:

(A) The flue gas temperature at the outlet of the control equipment shall not exceed 300 degrees Fahrenheit, unless it has been demonstrated to, and approved in writing by, both the ARB and the district air pollution control officer that lower emissions are achieved at a higher outlet temperature; and

(B) For a single chamber incinerator, the combustion chamber shall be maintained at no less than 1800 degrees (+ 200 degrees) Fahrenheit. For a multiple chamber incinerator, the primary combustion chamber shall be maintained at no less than 1400 degrees Fahrenheit, and the secondary chamber shall be maintained at no less than 1800 degrees (+ 200 degrees) Fahrenheit. The furnace design shall provide for a residence time for combustion gas of at least one second. Residence time shall be calculated using the following equation:

Residence Time = V

---

$Q_c$)

$$\text{Residence Time} = \frac{V}{Q_c}$$

where:

V means the volume, as expressed in cubic feet, from the point in the incinerator where the maximum temperature has been reached until the point where the temperature has dropped to 1600 degrees F.

$Q_c$ means the combustion gas flow through V, as expressed in actual cubic feet per second, which is determined with ARB Test Method 2 or calculated by the following equation:

$Q_c = Q_{stoi}$ (1 + EA) ($T_c$ + 460) x ( 1 minute)

--- ---------- ----------

(100) (528) (60 seconds)

$$Q_c = Q_{stoi} \left(1 - \frac{EA}{100}\right) \frac{(T_c + 460)}{528} \times \frac{1 \text{ minute}}{60 \text{ seconds}}$$

EA means the excess air, expressed as apercentage, supplied in excess of the air necessary to complete combustion.

$T_c$ means the maximum temperature, in degrees Fahrenheit, that has been reached in the incinerator.

$Q_{stoi}$ means the amount of air theoretically required for complete combustion, as expressed in standard cubic feet per minute (SCF) and calculated as follows:

(lb-mole $O_2$) x (lb-waste) x (SCF $O_2$) x (SCF air)

---------- ---------- ---------- ---------

(lb-waste) (min) (lb-mole $O_2$) (SCF $O_2$)

$$\frac{\text{lb-mole } O_2}{\text{lb-waste}} \times \frac{\text{lb-waste}}{\text{min}} \times \frac{\text{SCF } O_2}{\text{lb-mole } O_2} \times \frac{\text{SCF air}}{\text{SCF } O_2}$$

(3) No person shall operate a medical waste incinerator unless the bottom ash, fly ash and scrubber residuals are handled and stored in a manner that prevents entrainment into ambient air.

(4) The owner or operator of a medical waste incinerator shall maintain the following:

(A) A continuous data recording system which provides for each day of operation continuous recording of the primary and secondary combustion chamber temperatures; carbon monoxide emissions; the key operating parameters of the air pollution control equipment, as specified by the district air pollution control officer; the hourly waste charging rates; and the opacity of stack emissions or other indicator of particulate matter which is approved by the district air pollution control officer;

(B) Maintenance records for the incinerator, control equipment, and monitoring equipment; and calibration records for the monitoring equipment; and

(C) Equipment for determining and recording the weight of waste charged to the incinerator.

(5) For purposes of demonstrating compliance with subsection (b)(1) of this rule the owner or operator of a medical waste incinerator shall conduct a minimum of two annual source-tests for the dioxins stack emissions using ARB Test Method 428, and a minimum of three sampling runs shall be conducted for the method. Annual source tests shall be conducted until at least two consecutive tests demonstrate compliance, at which time the frequency of future source tests is at the discretion of the Air Pollution Control Officer. For purposes of determining compliance with subsection (b)(1)(A) of this rule, emissions shall be sampled simultaneously from the flue at a location downstream of the last combustion chamber, but prior to the control equipment, and from the stack during source testing. For purposes of determining compliance with subsection (b)(1)(B) of this rule, the source testing shall be conducted at the stack. The information regarding the composition (moisture content, and amount of the total waste that is infectious, pathological, hazardous, or radioactive) and feed rate of the fuel charged during the source test shall be provided with the test results. The district air pollution control officer can require additional necessary information regarding the composition of the waste. Source testing shall be conducted at the maximum waste firing capacity (+-10 percent) allowed by the air district permit. A copy of all source test results conducted for purposes of demonstrating compliance with this rule shall be provided to the ARB at the same time that it is provided to the local air pollution control district.

(6) Any violation, malfunction, or upset condition on the incinerator, the air pollution control equipment, or the continuous data recording system shall be reported to the district within 1 hour of occurrence or by 9 a.m. the next business day if the malfunction occurs outside normal business hours and the district does not maintain a radio room or an answering machine.

(7) No person shall operate a medical waste incinerator unless each individual who operates or maintains the incinerator obtains either a certificate of training in medical waste incineration issued by The American Society of Mechanical Engineers within nine months of the commencement of the training program, or equivalent training as determined by the Air Pollution Control Officer. Copies of the training certificates for the operators and maintenance engineers shall be submitted to the districts and the original certificates shall be available for inspection at the facility with the permit to operate.

(c) Requirements for medical waste incinerators that incinerate 25 tons or less of waste per year. The following requirements shall apply to incinerators that incinerate 25 tons or less of waste per year:

(1) No person shall operate a medical waste incinerator that incinerates 25 tons or less of waste per year unless the requirements specified in subsections (b)(3), (b)(4)(C), and (b)(7) are met.

(2) The owner or operator of a medical waste incinefator that incinerates more than 10 but less than 25 tons of waste per year shall conduct one initial source test at the incinerator stack as specified in subsection (b)(5).

(d) Compliance Schedule.

(1) No later than 90 days after district adoption of regulations enacting this control measure, the owner or operator of a medical waste incinerator that incinerates more than 25 tons of waste per year shall submit to the district air pollution control officer an application for an authority to construct the equipment necessary to meet the requirements of sections (b)(1) or (b)(2), and no later than 15 months after district adoption of regulations enacting this control measure, the owner or operator of a medical waste incinerator shall be in compliance with this regulation.

(2) The owner or operator of a medical waste incinerator who intends to permanently shut down operation of the incinerator shall notify the district of the shutdown date within 90 days after district adoption of regulations enacting this control measure. The shutdown date shall be no later than six months after district adoption of regulations enacting this control measure.

(3) The owner or operator of a medical waste incinerator that incinerates 25 tons or less of waste per year who intends to remain in operation shall notify the district within 90 days after district adoption of regulations enacting this control measure. The owner or operator of a medical waste incinerator shall be in compliance with this regulation no later than 15 months after district adoption of regulations enacting this control measure.

(e) This control measure shall not apply to those incinerators which are exclusively crematoria of human or animal remains.

**➡§ 93105. Asbestos Airborne Toxic Control Measure for Construction, Grading, Quarrying, and Surface Mining Operations.**

(a) Effective Date.

(1) No later than November 19, 2002 each air pollution control and air quality management district must:

(A) Implement and enforce the requirements of this section; or

(B) Propose their own asbestos airborne toxic control measure as provided in Health & Safety Code section 39666(d).

(2) Pre-existing Operations: The owner/operator of any project in which the construction, grading, quarrying, or surface mining operation started before the effective date of this section shall comply with this section by:

(A) The date the district begins implementing and enforcing this section as required in subsection (a)(1)(A); or

(B) The compliance date specified in the airborne toxic control measure adopted by the district as required in subsection (a)(1)(B).

(b) Applicability. Unless one of the specific exemptions specified in subsection (c) applies, this section shall apply to any construction, grading, quarrying, or surface mining operation on any property that meets any of the following criteria:

(1) Any portion of the area to be disturbed is located in a geographic ultramafic rock unit; or

(2) Any portion of the area to be disturbed has naturally-occurring asbestos, serpentine, or ultramafic rock as determined by the owner/operator, or the Air Pollution Control Officer (APCO); or

(3) Naturally-occurring asbestos, serpentine, or ultramafic rock is discovered by the owner/operator, a registered geologist, or the APCO in the area to be disturbed after the start of any construction, grading, quarrying, or surface mining operation.

(c) General Exemptions.

(1) Geologic Evaluation: The APCO may provide an exemption from this section for any property that meets the criterion in subsection (b)(1) if a registered geologist has conducted a geologic evaluation of the property and determined that no serpentine or ultramafic rock is likely to be found in the area to be disturbed. Before an exemption can be granted, the owner/operator must provide a copy of a report detailing the geologic evaluation to the APCO for his or her consideration.

(A) At a minimum, the geologic evaluation must include:

1. A general description of the property and the proposed use;

2. A detailed site characterization which may include:

i. A physical site inspection;

ii. Offsite geologic evaluation of adjacent property;

iii. Evaluation of existing geological maps and studies of the site and surrounding area;

iv. Development of geologic maps of the site and vicinity;

v. Identification and description of geologic units, rock and soil types, and features that could be related to the presence of ultramafic rocks, serpentine, or asbestos mineralization; and

vi. A subsurface investigation to evaluate the nature and extent of geologic materials in the subsurface where vertical excavation is planned; methods of subsurface investigation may include, but are not limited to borings, test pits, trenching, and geophysical surveys;

3. A classification of rock types found must conform to the nomenclature based on the International Union of Geological Science system;

4. A description of the sampling procedures used;

5. A description of the analytical procedures used, which may include mineralogical analyses, petrographic analyses, chemical analyses, or analyses for asbestos content;

6. An archive of collected rock samples for third party examination; and

7. A geologic evaluation report documenting observations, methods, data, and findings; the format and content of the report should follow the Guidelines for Engineering Geologic Reports issued by the State Board of Registration for Geologists and Geophysicists.

(B) The district may request any additional tests or other information needed to evaluate an application for exemption.

(C) The district shall grant or deny a request for an exemption within 90 days of the receipt of a complete application.

(D) If the request for an exemption is denied, the APCO shall provide written reasons for the denial.

(E) Expiration of the Geologic Exemption: If the owner/operator discovers any naturally-occurring asbestos, serpentine, or ultramafic rock in the area to be disturbed after the exemption is granted, then:

1. The owner/operator must comply with the requirements of this section;

2. The owner/operator must report the discovery of the naturally-occurring asbestos, serpentine, or ultramafic rock to the APCO no later than the next business day; and

3. The exemption under subsection (c)(1) shall expire and cease to be effective.

(2) If a method is developed to accurately demonstrate that property located in a geographic ultramafic rock unit has no detectable asbestos in the area to be disturbed, then the ARB Executive Officer shall propose to the Board for adoption a regulatory amendment allowing the method to be utilized, as appropriate, to obtain an exemption from the requirements specified in this section.

(3) Agriculture and Timber Harvesting: This section shall not apply to agricultural operations or timber harvesting except for construction of roads and buildings. Construction of roads is subject to the requirements of subsection (e) if the road is part of a construction or grading operation, quarry, or surface mine, and is subject to the requirements of subsection (d) if the road is not part of a construction or grading operation, quarry, or surface mine.

(4) Homeowners and Tenants: Individuals engaged in covered activities on residential property they own or occupy are exempt from subsections (e)(1) and (e)(3)(A).

(5) Sand and Gravel Operations: The APCO may provide an exemption for crushing, screening and conveying equipment, stockpiles, and off-site material transport at a sand and gravel operation if the operation processes only materials from an alluvial deposit.

(A) The district shall grant or deny a request for an exemption within ninety (90) days of the receipt of a complete application.

(B) If the request for an exemption is denied, the APCO shall provide written reasons for the denial.

(d) Requirements for Road Construction and Maintenance. These requirements shall apply to roads that are not part of a construction or grading project, quarry, or surface mine.

(1) No person shall conduct any road construction or maintenance activities that disturb any area that meets any criterion listed in subsections (b)(1) or (b)(2) unless all of the following conditions are met.

(A) The APCO is notified in writing at least fourteen (14) days before the beginning of the activity or in accordance with a procedure approved by the district.

(B) All the following dust control measures are implemented during any road construction or maintenance activity:

1. Unpaved areas subject to vehicle traffic must be stabilized by being kept adequately wetted, treated with a chemical dust suppressant, or covered with material that contains less than 0. 25 percent asbestos;

2. The speed of any vehicles and equipment traveling across unpaved areas must be no more than fifteen (15) miles per hour unless the road surface and surrounding area is sufficiently stabilized to prevent vehicles and equipment traveling more than 15 miles per hour from emitting dust that is visible crossing the project boundaries;

3. Storage piles and disturbed areas not subject to vehicular traffic must be stabilized by being kept adequately wetted, treated with a chemical dust suppressant, or covered with material that contains less than 0.25 percent asbestos; and

4. Activities must be conducted so that no track-out from any road construction project is visible on any paved roadway open to the public.

(C) Equipment and operations must not cause the emission of any dust that is visible crossing the project boundaries.

(2) No person shall conduct any road construction or maintenance activity that disturbs the ground surface in an area that meets the criteria in subsection (b)(3) unless:

(A) The APCO is notified no later than the next business day of the discovery that the area meets the criteria in subsection (b)(3); and

(B) The requirements of subsections (d)(1)(B) through (d)(1)(C), are implemented within twenty-four (24) hours of the discovery.

(3) Exemptions from the Requirements for Road Construction and Maintenance. The following exemptions may apply in addition to the applicable general exemptions specified in subsection (c).

(A) Emergency Road Repairs: Subsection (d)(1)(A) shall not apply when construction of a road or firebreak, or a road repair is necessary due to a landslide, flood, or other emergency or to mitigate a condition that constitutes an imminent hazard to the public. The owner/operator shall notify the APCO no later than the next business day of the action taken and the condition establishing the applicability of this subsection.

(B) Remote locations: The APCO may provide an exemption from the requirements of subsection (d) for any activity which will occur at a remote location.

1. The district shall grant or deny a request for an exemption within ninety (90) days of the receipt of a complete application.

2. If the request for an exemption is denied, the APCO shall provide written reasons for the denial.

(e) Requirements for Construction and Grading Operations.

(1) Areas of one acre or less meeting the criteria in subsections (b)(1) or (b)(2): No person shall engage in any construction or grading operation on property where the area to be disturbed is one (1.0) acre or lessunless all of the following dust mitigation measures are initiated at the start and maintained throughout the duration of the construction or grading activity:

(A) Construction vehicle speed at the work site must be limited to fifteen (15) miles per hour or less;

(B) Prior to any ground disturbance, sufficient water must be applied to the area to be disturbed to prevent visible emissions from crossing the property line;

(C) Areas to be graded or excavated must be kept adequately wetted to prevent visible emissions from crossing the property line;

(D) Storage piles must be kept adequately wetted, treated with a chemical dust suppressant, or covered when material is not being added to or removed from the pile;

(E) Equipment must be washed down before moving from the property onto a paved public road; and

(F) Visible track-out on the paved public road must be cleaned using wet sweeping or a HEPA filter equipped vacuum device within twenty-four (24) hours.

(2) Areas greater than one acre meeting the criteria in subsections (b)(1) or (b)(2): No person shall engage in any construction or grading operation on property where the area to be disturbed is greater than one (1.0) acreunless:

(A) An Asbestos Dust Mitigation Plan for the operation has been:

1. Submitted to and approved by the district before the start of any construction or grading activity; and

2. The provisions of that dust mitigation plan are implemented at the beginning and maintained throughout the duration of the construction or grading activity; and

(B) For a project started before the effective date of this section for which an asbestos dust mitigation plan was submitted at least sixty (60) days before the effective date, and for which the district has not yet approved the asbestos dust mitigation plan:

1. The measures in subsection (e)(1) must be implemented and maintained until the district-approved asbestos dust mitigation plan is implemented; and

2. The provisions of the district-approved asbestos dust mitigation plan must be implemented within fourteen (14) days of district approval of the plan and maintained throughout the remainder of the construction or grading activity.

(3) Property that meets the criteria in subsection (b)(3): No person shall engage in any construction or grading operation unless the following requirements are met:

(A) The owner/operator notifies the district of the discovery of naturally-occurring asbestos, serpentine, or ultramafic rock no later than the next business day;

(B) The dust mitigation measures in subsection (e)(1) are implemented within twenty-four (24) hours after determining that the property meets the criteria in subsection (b)(3); and

(C) For operations in which the area to be disturbed is one (1.0) acre or less, the dust mitigation measures in subsection (e)(1) are maintained throughout the duration of the construction or grading activity; or

(D) For operations in which the area to be disturbed is greater than one (1.0) acre,the owner/operator must:

1. Submit an asbestos dust mitigation plan to the district within fourteen (14) days of the discovery of naturally-occurring asbestos, serpentine, or ultramafic rock;

2. Maintain the dust mitigation measures in subsection (e)(1) until the provisions of the district-approved asbestos dust mitigation plan are implemented;

3. Implement the provisions of the district-approved asbestos dust mitigation plan within fourteen (14) days of district approval of the plan; and

4. Maintain the provisions of the district-approved asbestos dust mitigation plan throughout the remainder of the construction or grading activity.

(4) Asbestos Dust Mitigation Plans: An Asbestos Dust Mitigation Plan must specify dust mitigation practices which are sufficient to ensure that no equipment or operation emits dust that is visible crossing the property line, and must include one or more provisions addressing eachof the following topics.

(A) Track-out prevention and control measures which shall include:

1. Removal of any visible track-out from a paved public road at any location where vehicles exit the work site; this shall be accomplished using wet sweeping or a HEPA filter equipped vacuum device at the end of the work day or at least one time per day; and

2. Installation of one or more of the following track-out prevention measures:

i. A gravel pad designed using good engineering practices to clean the tires of exiting vehicles;

ii. A tire shaker;

iii. A wheel wash system;

iv. Pavement extending for not less than fifty (50) consecutive feet from the intersection with the paved public road; or

v. Any other measure as effective as the measures listed above.

(B) Keeping active storage piles adequately wetted or covered with tarps.

(C) Control for disturbed surface areas and storage piles that will remain inactive for more than seven (7) days, which shall include one or more of the following:

1. Keep the surface adequately wetted;

2. Establishment and maintenance of surface crusting sufficient to satisfy the test in subsection (h)(6);

3. Application of chemical dust suppressants or chemical stabilizers according to the manufacturers' recommendations;

4. Covering with tarp(s) or vegetative cover;

5. Installation of wind barriers of fifty (50) percent porosity around three (3) sides of a storage pile;

6. Installation of wind barriers across open areas; or

7. Any other measure as effective as the measures listed above.

(D) Control for traffic on on-site unpaved roads, parking lots, and staging areas which shall include:

1. A maximum vehicle speed limit of fifteen (15) miles per hour or less; and

2. One or more of the following:

i. Watering every two hours of active operations or sufficiently often to keep the area adequately wetted;

ii. Applying chemical dust suppressants consistent with manufacturer's directions;

iii. Maintaining a gravel cover with a silt content that is less than five (5) percent and asbestos content that is less than 0.25 percent, as determined using an approved asbestos bulk test method, to a depth of three (3) inches on the surface being used for travel; or

iv. Any other measure as effective as the measures listed above.

(E) Control for earthmoving activities which shall include one or more of the following:

1. Pre-wetting the ground to the depth of anticipated cuts;

2. Suspending grading operations when wind speeds are high enough to result in dust emissions crossing the property line, despite the application of dust mitigation measures;

3. Application of water prior to any land clearing; or

4. Any other measure as effective as the measures listed above.

(F) Control for off-site transport. The owner/operator shall ensure that no trucks are allowed to transport excavated material off-site unless:

1. Trucks are maintained such that no spillage can occur from holes or other openings in cargo compartments; and

2. Loads are adequately wetted and either:

i. Covered with tarps; or

ii. Loaded such that the material does not touch the front, back, or sides of the cargo compartment at any point less than six inches from the top and that no point of the load extends above the top of the cargo compartment.

(G) Post construction stabilization of disturbed areas. Upon completion of the project, disturbed surfaces shall be stabilized using one or more of the following methods:

1. Establishment of a vegetative cover;

2. Placement of at least three (3.0) inches of non-asbestos-containing material;

3. Paving;

4. Any other measure deemed sufficient to prevent wind speeds of ten (10) miles per hour or greater from causing visible dust emissions.

(H) Air monitoring for asbestos (if required by the APCO).

1. If required by the district APCO, the plan must include an air-monitoring component.

2. The air monitoring component shall specify the following:

i. Type of air sampling device(s);

ii. Siting of air sampling device(s);

iii. Sampling duration and frequency; and

iv. Analytical method.

(I) Frequency of reporting: The plan shall state how often the items specified in subsection (e)(5)(B), and any other items identified in the plan, will be reported to the district.

(5) Recordkeeping and Reporting Requirements.

(A) Recordkeeping Requirements: The owner/operator shall maintain all of the following records for at least seven (7) years following the completion of the construction project:

1. The results of any air monitoring conducted at the request of the APCO;

2. The documentation for any geologic evaluation conducted on the property for the purposes of obtaining an exemption, except the archive of collected samples which may be discarded at the expiration of the exemption or one (1) year after the exemption is granted whichever is less; and

3. The results of any asbestos bulk sampling that meets any of the following conditions:

i. The asbestos bulk sampling was conducted by the owner/operator to document the applicability of or compliance with this section, or

ii. The asbestos bulk sampling was done at the request of the district APCO.

(B) Reporting Requirements: The owner/operator of any grading or construction operation subject to this section shall submit the following to the District:

1. The results of any air monitoring conducted at the request of the APCO; and

2. The results of any asbestos bulk sampling that meets any of the following conditions:

i. Asbestos bulk sampling conducted by the owner/operator to document applicability of or compliance with this section; or

ii. Asbestos bulk sampling done at the request of the APCO.

(f) Requirements for Quarrying and Surface Mining Operations.

(1) No person shall engage in any quarrying or surface mining operation that meets the criteria of subsections (b)(1) or (b)(2) unless an Asbestos Dust Mitigation Plan for the operation has been submitted to and approved by the District and the fugitive dust mitigation measures specified in the Plan are implemented and maintained throughout the duration of any quarrying or surface mining operation except,

(A) Pre-existing Operations: The owner or operator of any quarrying or surface mining operation that was in operation before the date this section is implemented as determined pursuant to subsection (a) that has not obtained district approval of the asbestos dust mitigation plan may continue operating if all the following conditions are met:

1. The owner/operator has submitted an asbestos dust mitigation plan to the district at least sixty (60) days prior to the date specified in subsection (a);

2. The owner/operator implements all of the dust mitigation measures specified in subsections (f)(2)(B) and (f)(2)(C) by the effective date specified in subsection (a) and maintains them until the provisions of an approved asbestos dust mitigation plan are implemented; and

3. The owner/operator implements the provisions of the asbestos dust mitigation plan within fourteen (14) days following district approval of the plan.

(B) Mineral exploration activities: Mineral exploration activities as defined in the California Public Resources Code section 2714(d) in an area meeting any of the conditions of subsection (b) are not required to submit an asbestos dust mitigation plan but shall instead implement and maintain the following measures throughout the duration of the activity:

1. Limit vehicle speeds on the site to fifteen (15) miles per hour or less;

2. Apply sufficient water during any ground disturbance to prevent visible dust from crossing the property line;

3. Keep disturbed areas and storage piles adequately wetted until they are permanently stabilized;

4. Install a track-out prevention device designed to prevent track-out onto any paved public road;

5. Clean up any visible track-out at the end of the workday or at a minimum within twenty-four (24) hours; and

6. Cover, treat with a chemical dust suppressant, or otherwise stabilize any disturbed areas when operations cease for more than seven (7) days.

(2) The owner/operator of any quarry or surface mine that meets any of the criteria in subsection (b)(3) shall:

(A) Notify the APCO no later than the next business day of the discovery.

(B) Implement all the following measures within twenty-four (24) hours following the discovery:

1. Keep stock and working piles adequately wetted during the addition and removal of material;

2. Keep on-site unpaved roads, parking lots, and staging areas stabilized using one of the following measures:

i. Adequately wetted; or

ii. Controlled using dust palliatives or suppressants; or

iii. paving; or

iv. Covered to a depth of three (3) inches with gravel that contains less than 0.25 percent asbestos as determined using an approved asbestos bulk test method;

3. Keep exposed areas and inactive stockpiles that are prone to mechanical or wind disturbances:

i. Adequately wetted; or

ii. Controlled using dust palliatives or suppressants, paving, wind berms or breaks; or

iii. Covered with tarps or material that contains less than 0.25 percent asbestos as determined using an approved asbestos bulk test method;

4. Ensure that materials to be quarried, excavated, or graded are adequately wetted;

5. Ensure that all loads are adequately wetted before and during truck loading operations;

6. Ensure that all trucks transporting materials off-site meet the conditions of either paragraph i or paragraph ii at the time the truck leaves the site:

i. Loads are adequately wetted and covered with tarps; or

ii. Loads are adequately wetted and the material does not touch the front back or sides of the cargo compartment at any point less than six (6) inches from the top and no point of the load extends above the top of the cargo compartment; and

7. Limit vehicle speeds within the quarry or surface mining operation to fifteen (15) miles per hour or less.

(C) Implement all of the following measures within fourteen (14) days of the determination that the operation meets any of the criteria in subsection (b)(3).

1. Measures to ensure that material being excavated, crushed, screened, loaded, transferred or conveyed does not result in any dust that is visible crossing the property line.

2. Measures to ensure that no grinding mill, screening operation, or transfer point on a belt conveyor discharges into the air any visible emissions other than uncombined water vapor, for a period aggregating more than three minutes in any one hour which are:

i. Fifty percent as dark or darker in shade as that designated as number one on the Ringlemann Chart, as published by the United States Bureau of Mines; or

ii. Of such opacity as to obscure an observers view to a degree equal to or greater than smoke as described in subsection (f)(2)(C)2.i. or ten (10) percent opacity.

3. Measures to ensure that no crusher discharges into the air any visible emissions other than uncombined water vapor, for a period aggregating more than three minutes in any one hour which are:

i. Seventy-five percent as dark or darker in shade as that designated as number one on the Ringlemann Chart, as published by the United States Bureau of Mines; or

ii. Of such opacity as to obscure an observers view to a degree equal to or greater than smoke as described in subsection (f)(3)(C)3.i. or fifteen (15) percent opacity.

4. Measures for material handling sufficient to meet the requirements of subsections (f)(2)(C)1. through (f)(2)(C)3. Such measures may include the following:

i. Installation and operation of spraybars on all conveyors; and

ii. Installation of shrouds at all drop points.

5. Track-out control and prevention measures which shall include:

i. Installation of a gravel pad, grizzly, tire washing system, or paving at least fifty (50) feet of the access road, and

ii. Cleaning any visible track-out off the paved public road using wet sweeping or a HEPA filter equipped vacuum device at the end of each workday.

6. Stabilization of all on-site roads, parking lots, and staging areas open to the public by one of the following methods:

i. Pave with asphalt or concrete, or

ii. Treat with a chemical dust suppressant applied according to manufacturers directions, or

iii. Maintain a gravel cover that has a depth of at least three (3) inches and contains less than 0.25 percent asbestos as determined using an approved asbestos bulk test method.

(D) Submit an Asbestos Dust Mitigation Plan to the District within fourteen (14) days and maintain the measures specified in subsections (f)(2)(B) and (f)(2)(C) until the asbestos dust mitigation measures in the district-approved Asbestos Dust Mitigation Plan are implemented.

(3) An Asbestos Dust Mitigation Plan required by subsections (f)(1) and (f)(2)(D) must include sections which address each of the following topics.

(A) A Fugitive Dust Mitigation Component which shall, at a minimum, include the measures specified in subsections (f)(2)(B) and (f)(2)(C), unless the APCO determines that it is appropriate to add, omit, or modify these measures depending on site-specific parameters. The plan shall also require that:

1. Equipment and operations do not emit dust that is visible crossing the property line;

2. Crushers do not discharge into the air any visible emissions other than uncombined water vapor, for a period aggregating more than three minutes in any one hour, which is:

i. Seventy-five percent as dark or darker in shade as that designated as number one on the Ringlemann Chart, as published by the United States Bureau of Mines; or

ii. Of such opacity as to obscure an observers view to a degree equal to or greater than smoke as described in subsection (f)(3)(A)2.i. or fifteen (15) percent opacity; and

3. Grinding mills, screening operations, and transfer points on belt conveyors do not discharge into the air any visible emissions other than uncombined water vapor, for a period aggregating more than three minutes in any one hour, which is:

i. Fifty percent as dark or darker in shade as that designated as number one on the Ringlemann Chart, as published by the United States Bureau of Mines; or

ii. Of such opacity as to obscure an observers view to a degree equal to or greater than smoke as described in subsection (f)(3)(A)3.i. or ten (10) percent opacity.

(B) Air monitoring for asbestos (if required by the APCO).

1. If required by the district APCO, the plan must include an air monitoring component.

2. The air monitoring component shall specify the following:

i. Type of air sampling device(s);

ii. Siting of air sampling device(s);

iii. Sampling duration and frequency; and

iv. Analytical method.

(C) Frequency of reporting. The plan shall state how often the items specified in subsection (f)(5)(B), and any other items identified in the plan, will be reported to the district.

(4) Upon petition by the owner/operator the APCO may approve the use of requirements or restrictions established under other regulatory programs to meet the requirements of subsection (f) under the following conditions:

(A) The requirements or restrictions are equivalent to or more stringent than the requirements of subsection (f); and

(B) The requirements or restrictions are enforceable by the APCO.

(5) Recordkeeping and Reporting Requirements: The owner/operator of a surface mining or quarrying operation subject to this section must comply with the following recordkeeping and reporting requirements.

(A) Recordkeeping Requirements: The owner/operator shall maintain all of the following records for at least seven (7) years:

1. The results of any air monitoring conducted at the request of the APCO;

2. The documentation for any geologic evaluation conducted on the property for the purpose of obtaining an exemption except, the archive of collected rock samples which may be discarded at the expiration of the exemption or one (1) year after the district granted or denied the exemption, whichever comes first; and

3. The results of any asbestos bulk sampling that meets any of the following conditions:

i. The asbestos bulk sampling was conducted by the owner/operator to document the applicability of, or compliance with this section; or

ii. The asbestos bulk sampling was done at the request of the district APCO.

(B) Reporting Requirements: The owner/operator shall submit the following to the District:

1. The results of any air monitoring conducted at the request of the APCO;

2. The documentation of any geologic evaluation conducted on the property in question; and

3. The results of any asbestos bulk sampling that meets any of the following conditions:

i. Asbestos bulk sampling conducted by the owner/operator to document applicability of or compliance with this section; or

ii. Asbestos bulk sampling done at the request of the district APCO.

(g) Air Monitoring for Asbestos. Pursuant to the requirements of Health and Safety Code section 41511:

(1) Air monitoring may be required by the district APCO.

(2) The APCO may revise the asbestos dust mitigation plan on the basis of the results of the air monitoring.

(h) Test Methods.

(1) Ultramafic Rock: The ultramafic rock composition of any material shall be determined using standard analysis techniques including, but not limited to, color index assessment, microscopic examination, petrographic analysis or rock thin sections, or chemical analysis techniques, such as X-ray fluorescence spectrometry or inductively coupled plasma analysis.

(2) Bulk Sampling Methods: ARB Test Method 435, or an alternative asbestos bulk test method approved in writing by the Executive Officer of the California Air Resources Board, shall be used to determine the asbestos content of a bulk sample. For the purposes of determining compliance with this section, references in ARB Test Method 435 to "serpentine aggregate" shall mean "gravel" or other "bulk materials" to be tested for asbestos content.

(3) Analysis of Air Samples: Analysis of all air samples shall follow the analytical method specified by the United States Environmental Protection Agency, Asbestos Hazard Emergency Response Act (AHERA) criteria for asbestos (40 CFR, Part 763, subpart E, Appendix A, adopted October 30, 1987), with the following exceptions:

(A) The analytical sensitivity shall be 0.001 structures per cubic centimeter (0.001 s/cc); and

(B) All asbestos structures with an aspect ratio greater than three to one (3 to1) shall be counted irrespective of length.

(4) The results of the analysis of air samples shall be reported as transmission electron microscopy (TEM) asbestos structures per cubic centimeter (s/cc).

(5) Adequately Wetted: Field determination of "adequately wetted" shall be as follows:

(A) If the district-approved asbestos dust mitigation plan has specified a percent moisture content for specific materials the determination shall be as specified in the district-approved asbestos dust mitigation plan; or

(B) If no moisture threshold is specified in a district-approved asbestos dust mitigation plan, a sample of at least one (1) quart in volume shall be taken from the top three (3) inches of a road, or bare area or from the surface of a stockpile. The sample shall be poured out from a height of four (4) feet onto a clean hard surface. The material shall be considered to be adequately wetted if there is no observable dust emitted when the material is dropped.

(6) Surface Crusting: "Measurement of the stability of surface crusting on horizontal surfaces" shall be as follows:

(A) Where a visible crust exists, drop a steel ball with a diameter of 15.9 millimeters (0.625 inches) and a mass ranging from 16 to 17 grams from a distance of 30 centimeters (one foot) directly above (at a 90 degree angle perpendicular to) the ground surface. If blowsand (thin deposits of loose grains covering less than 50 percent of the surface that have not originated from the surface being tested) is present, clear the blowsand from the surfaces to be tested before dropping the steel ball.

(B) A sufficient crust is determined to exist if, when the ball is dropped according to subsection (h)(6)(A), the ball does not sink into the surface so that it is partially or fully surrounded by loose grains and, upon removing the ball, the surface on which it was dropped has not been pulverized so that loose grains are visible.

(C) Drop the ball three times each in three representative test areas within a survey area measuring 1 foot by 1 foot that represents a random portion of the surface being evaluated. The test area shall be deemed to have passed if at least two of the three times the ball was dropped, the results met the criteria in subsection (h)(6)(B). If all three test areas pass, the area shall be deemed to be "sufficiently crusted".

(i) Definitions. For the purposes of this section, the following definitions shall apply:

(1) "Access road" means any road extending from a public thoroughfare onto the property of a construction project, quarry, or surface mining operation.

(2) "Adequately wetted" means sufficiently moistened with water to minimize the release of particulate matter into the ambient air as determined by the test method(s) in subsection (h)(5).

(3) "Agricultural operation" means activities necessary for the growing and harvesting of crops or raising of fowl or animals.

(4) "APCO" means the executive officer, air pollution control officer, or the designee of the executive officer or air pollution control officer of any air pollution control or air quality management district created or continued in existence pursuant to Part 3 (commencing with section 40000), Division 26, Health and Safety Code.

(5) "Approved asbestos bulk test method" means ARB Test Method 435 or an alternative asbestos bulk test method approved in writing by the Executive Officer of the California Air Resources Board.

(6) "ARB" means the California Air Resources Board.

(7) "ARB Test Method 435" means the test method specified in title 17, California Code of Regulations, section 94147.

(8) "Asbestos" means asbestiforms of the following minerals: chrysotile (fibrous serpentine), crocidolite (fibrous riebeckite), amosite (fibrous cummingtonite--grunerite), fibrous tremolite, fibrous actinolite, and fibrous anthophyllite.

(9) "Asbestos-containing material" means any material that has an asbestos content of 0.25 percent or greater.

(10) "Asbestos Dust Mitigation Plan" means a detailed written document specifying measures that would be implemented to minimize the emissions of asbestos-laden dust.

(11) "Carry-out" or "track-out" means any bulk material that adheres to and agglomerates on the exterior surfaces of motor vehicles, haul trucks, and/or equipment, including tires, and that has fallen or been deposited onto a paved public roadway.

(12) "Construction," "grading," "construction or grading operation" and "construction or grading activity" mean any surface disturbance conducted with powered equipment or any related activity, including, but not limited to, all surface and subsurface cuts and fills, excavation, trenching, stockpiling, bulldozing, and landfills.

(13) "District" means any air pollution control or air quality management district created or continued in existence pursuant to Part 3 (commencing with section 40000), Division 26, Health and Safety Code.

(14) "Geographic ultramafic rock unit" means a geographic area that is designated as an ultramafic rock unit or ultrabasic rock unit, including the unit boundary line, on any of the maps referenced in Appendix A.

(15) "Geologic evaluation" means an evaluation of a property to determine the presence of various types of rocks, including ultramafic rock, serpentinite, or other metamorphic derivatives of ultramafic rock.

(16) "Gravel pad" means a layer of gravel, rock, or crushed rock which is at least one inch or larger in diameter and less than five (5) percent silt content, maintained at the point of intersection of a paved public roadway and a work site entrance to dislodge mud, dirt, and debris from tires of motor vehicles and haul trucks prior to leaving a worksite.

(17) "Grizzly" means a device used to dislodge mud, dirt, and debris from the tires and undercarriage of motor vehicles and haul trucks prior to leaving the work site.

(18) "HEPA filter" means a High Efficiency Particulate Air filter used to remove particles less than one (1) micron in aerodynamic diameter and operates at removal efficiencies of 99.9 percent or greater.

(19) "Naturally-occurring asbestos" means asbestos that has not been processed in an asbestos mill.

(20) "Owner/operator" or "person" includes, but is not limited to:

(A) An individual, trust, firm, joint stock company, business concern, partnership, limited liability company, association, or corporation including, but not limited to, a government corporation;

(B) Any city, county, district, commission, the state or any department, agency, or political subdivision thereof, any interstate body, and the federal government or any department or agency thereof to the extent permitted by law; or

(C) A project proponent and any of its contractors or subcontractors.

(21) "Paving" means creating a cover consisting of portland cement, asphalt concrete, or chip seal.

(22) "Project Boundaries" means the right-of-way and any construction easements adjacent to and necessary for the purposes of a specific road construction project or maintenance activity.

(23) "Property" means any real property including, but not limited to, any contiguous parcel or parcels of land and anything attached to, or erected on it.

(24) "Quarrying" means the act of obtaining stone from the earth by means of cutting, digging, excavating, or blasting and includes processes used to convert the excavated material into commercial products.

(25) "Registered geologist" means an individual that is currently licensed as a geologist with the State of California, Department of Consumer Affairs, Board of Geology and Geophysicists.

(26) "Remote location" means any location that is at least one (1.0) mile from the location of a receptor. "Receptor" includes, but is not limited to, any hospital, school, day care center, work site,

business, residence, and permanent campground. The distance to the nearest receptor is to be measured from the outermost limit of the area to be disturbed or road surface, whichever is closer.

(27) "Road Construction and Maintenance" means the activities undertaken to build roads, highways, railroads, bridges, culverts, drains and other works incidental to road or highway construction, and maintenance activities that involve grading or excavation. Road Construction and Maintenance does not include the construction of rest stops, maintenance buildings, or parking lots. These excluded activities are subject to the requirements of subsection (e).

(28) "Road surface" means the traveled way of a road and any shoulder which may extend up ten (10) feet from the edge of the traveled way.

(29) "Sand and Gravel Operation" means any facility operating in alluvial deposits.

(30) "Serpentine" means any form of the following hydrous magnesium silicate minerals: antigorite, lizardite, and chrysotile.

(31) "Serpentinite" means a rock consisting almost entirely of serpentine, although small amounts of other minerals such as magnetite, chromite, talc, brucite, and tremolite-actinolite may also be present. "Serpentinite" is a metamorphic derivative of the ultramafic rocks, peridotite, pyroxenite, or dunite.

(32) "Surface mining" means all, or any part of, the process involved in the mining of minerals on mined lands by removing overburden and mining directly from the mineral deposit, open-pit mining of minerals naturally exposed, mining by the auger method, dredging and quarrying, or surface work incident to an underground mine. "Surface mining" includes, but is not limited to, in place distillation or retorting or leaching, the production and disposal of mining waste, prospecting and exploratory activities or any activity subject to regulation under the Surface Mining and Reclamation Act of 1975, Public Resources Code section 2700 et seq.

(33) "Ultrabasic rock" means ultramafic rock.

(34) "Ultramafic rock" means an igneous rock composed of 90 percent or greater of one or a combination of the following iron/magnesium-rich, dark-colored silicate minerals: olivine, pyroxene, or more rarely amphibole. For the purposes of this section, "ultramafic rock" includes the following rock types: dunite, pyroxenite, and peridotite; and their metamorphic derivatives.

(35) "Visible emissions" means any particulate matter that is visually detectable without the aid of instruments other than corrective lenses.

## Appendix A

California Department of Conservation

Division of Mines and Geology

AVAILABLE GEOLOGIC MAPS FOR CALIFORNIA

GEOLOGIC ATLASES OF CALIFORNIA Scale 1:250,000

GEOLOGIC ATLAS OF CALIFORNIA: ALTURAS Compiled by Gay, T.E. and others, 1958

GEOLOGIC ATLAS OF CALIFORNIA: BAKERSFIELD Compiled by Smith, A.R., 1964 (reprinted 1992)

GEOLOGIC ATLAS OF CALIFORNIA: DEATH VALLEY Compiled by Streitz, R.L. and Stinson, M.C., 1974 (reprinted 1991)

GEOLOGIC ATLAS OF CALIFORNIA: FRESNO Compiled by Matthews, R.A. and Burnett, J.L, 1965 (reprinted 1991)

GEOLOGIC ATLAS OF CALIFORNIA: LONG BEACH Compiled by Jennings, C.W., 1962 (reprinted 1992)

GEOLOGIC ATLAS OF CALIFORNIA: LOS ANGELES Compiled by Jennings, C.W. and Strand, R.G., 1969 (reprinted 1991)

GEOLOGIC ATLAS OF CALIFORNIA: MARIPOSA Compiled by Strand, R.G., 1967 (reprinted 1991)

GEOLOGIC ATLAS OF CALIFORNIA: NEEDLES Compiled by Bishop, C.C., 1963 (reprinted 1992)

GEOLOGIC ATLAS OF CALIFORNIA: REDDING Compiled by Strand, R.G., 1962

GEOLOGIC ATLAS OF CALIFORNIA: SALTON SEA Compiled by Jennings, C.W., 1967 (reprinted 1992)

GEOLOGIC ATLAS OF CALIFORNIA: SAN LUIS OBISPO Compiled by Jennings, C.W., 1958 (reprinted 1992)

GEOLOGIC ATLAS OF CALIFORNIA: SAN DIEGO - EL CENTRO Compiled by Strand, R.G., 1962 (reprinted 1992)

GEOLOGIC ATLAS OF CALIFORNIA: SANTA ANA Compiled by Rogers, T.H., (reprinted 1992)

GEOLOGIC ATLAS OF CALIFORNIA: SANTA CRUZ Compiled by Jennings, C.W. and Strand, R.G., 1958 (reprinted 1992)

GEOLOGIC ATLAS OF CALIFORNIA: SANTA MARIA Compiled by Jennings, C.W., 1959 (reprinted 1992)

GEOLOGIC ATLAS OF CALIFORNIA: UKIAH Compiled by Jennings, C.W. and Strand, R.G., 1960 (reprinted 1992)

GEOLOGIC ATLAS OF CALIFORNIA: WALKER LAKE Compiled by Koenig, J.B., 1963 (reprinted 1992)

REGIONAL GEOLOGIC MAP SERIES Scale 1:250,000

GEOLOGIC MAP OF THE SACRAMENTO QUADRANGLE (set of four sheets) Compiled by Wagner, D.L. and others, 1981

GEOLOGIC MAP OF THE SANTA ROSA QUADRANGLE (set of five sheets) Compiled by Wagner and D.L., Bortugno, E.J. (reprinted 1999)

GEOLOGIC MAP OF THE SAN BERNARDINO QUADRANGLE (set of five sheets) Compiled by Bortugno, E.J., and Spittler, T.E. (reprinted 1998)

GEOLOGIC MAP OF THE WEED QUADRANGLE (set of four sheets) By Wagner, D.L. and Saucedo, G.J., 1987

GEOLOGIC MAP OF THE SAN FRANCISCO-SAN JOSE QUADRANGLE (set of five sheets) By Wagner, D.L., Bortugno, E.J. and McJunkin, R.D., 1990 Color-coded faults

LOCAL GEOLOGIC MAPS

AREAS MORE LIKELY TO CONTAIN NATURALLY-OCCURRING ASBESTOS IN WESTERN EL DORADO COUNTY, CALIFORNIA By Ron Churchill, March 2000 Scale 1:100,000

SERPINTINITE SURVEY OF LAKE COUNTY, CALIFORNIA - MAP A, ULTRAMAFIC, ULTRABASIC, AND SERPENTINE ROCK AND SOILS OF LAKE COUNTY, Adopted: March 2, 1992 Scale: 1:100,000

## ➡§ 93106. Asbestos Airborne Toxic Control Measure for Surfacing Applications.

(a) Effective Date. No later than November 13, 2001, each air pollution control and air quality management district must:

(1) Implement and enforce the requirements of this section, or

(2) Propose their own asbestos airborne toxic control measure as provided in Health and Safety Code section 39666(d).

(b) Applicability.

This section shall apply to any person who produces, sells, supplies, offers for sale or supply, uses, applies, or transports any of the following materials:

(1) Aggregate material extracted from property where any portion of the property is located in a geographic ultramafic rock unit (as defined in subsection (i)(9)); or

(2) Aggregate material extracted from property that is NOT located in a geographic ultramafic rock unit (as defined in subsection (i)(9)) if the material has been:

(A) Evaluated at the request of the Air Pollution Control Officer (APCO) and determined to be ultramafic rock or serpentine;

(B) Tested at the request of the APCO and determined to have an asbestos content of 0.25 percent or greater, as determined using an approved asbestos bulk test method; or

(C) Determined by the owner/operator of a facility to be ultramafic rock, or serpentine, or material that has an asbestos content of 0.25 percent or greater.

(3) Any mixture of aggregate material that contains ten percent (10%) or more of any of the materials listed above in subsection (b)(1) or (b)(2).

(c) Prohibition On the Use, Sale, and Supply of Restricted Aggregate Material.

Unless one of the exemptions in subsection (f) applies, no person shall use, apply, sell, supply, or offer for sale or supply any restricted material (as defined in subdivision (i)(20)) for surfacing, unless it has been tested using an approved asbestos bulk test method and determined to have an asbestos content that is less than 0.25 percent.

(d) Requirements to Provide Notice with Restricted Material.

(1) Requirements for Producers of Restricted Material for Surfacing Applications: Any producer who sells, supplies, or offers for sale or supply restricted material for surfacing that has been tested using an approved asbestos bulk test method and determined to have an asbestos content that is less than 0.25 percent must provide to the recipient of the restricted material a written receipt that contains the following information:

(A) The amount of restricted material that was sold or supplied;

(B) The date that the restricted material was sold or supplied;

(C) The dates that the restricted material was sampled and tested, or verification that the material is exempt under subsection (f)(7); and

(D) A statement that the asbestos content of the restricted material is less than 0.25 percent.

(2) Requirements for Persons - Other than Producers - Who Sell or Supply Restricted Material for Surfacing Applications: Any person, other than a producer, who sells, supplies, or offers for sale or supply restricted material for surfacing must provide to the recipient of the material a written receipt which specifies the following information:

(A) The amount of restricted material that was sold or supplied;

(B) The date that the restricted material was sold or supplied; and

(C) A statement that the asbestos content of the restricted material is less than 0.25 percent.

(3) Requirements for the Sale or Supply of Restricted Materials for Non-Surfacing Applications: Any person who sells, supplies, or offers for sale or supply restricted material for non-surfacing applications must provide with each sale or supply a written receipt containing the following statement:

"WARNING!

This material may contain asbestos.

It is unlawful to use this material for surfacing or any application in which it would remain exposed and subject to possible disturbances.

Extreme care should be taken when handling this material to minimize the generation of dust."

(e) Recordkeeping and Reporting Requirements.

(1) Recordkeeping Requirements for Persons Who Use Restricted Material for Surfacing: Any person who uses or applies restricted material for surfacing must retain any written receipt or other record verifying that the material has an asbestos content of less than 0.25 percent for a minimum period of seven years from the date of use or application.

(2) Recordkeeping Requirements for Persons Who Transport Restricted Material: Any person who transports restricted material must maintain a copy of all receipts or records required by subsection (d) with the material at all times during transit and application.

(3) Recordkeeping Requirements for Persons Who Sell or Supply Restricted Material: Any person who sells, supplies, or offers restricted material for sale or supply must retain copies of all receipts or records required by subsection (d) for a minimum period of seven years from the date of sale or supply.

(4) Reporting Requirements for Persons Who Use, Sell, or Supply Restricted Material: Any person who uses restricted material for surfacing, sells, supplies, or offers restricted material for sale or supply must provide receipts and test results to the APCO for review upon request.

(f) Exemptions.

(1) Sand and Gravel Operations: The requirements of subsections (c), (d), and (e) shall not apply to aggregate material extracted from a sand and gravel operation. A "sand and gravel operation" means any aggregate-producing facility operating in alluvial deposits.

(2) Roads Located at Quarries or Mines: The requirements of subsection (c) shall not apply to roads at quarries or mines that are located in a geographic ultramafic rock unit, an ultramafic rock deposit, or a serpentine deposit, provided that the aggregate material was obtained on site from the quarry or mine property.

(3) Maintenance Operations on Existing Roads: The requirements of subsections (c), (d), and (e) shall not apply to maintenance operations on any existing road surface if no additional restricted material is applied to the road surface.

(4) Emergency Road Repairs: The APCO may issue a temporary exemption from the requirements of subsections (c), (d), and (e) to an applicant who demonstrates that a road repair is necessary due to a landslide, flood, or other emergency, and that the use of aggregate material other than restricted material is not feasible for this repair. The APCO shall specify the time during which such exemption shall be effective; however, no exemption shall remain in effect longer than 90 days.

(5) Asphalt and Concrete Materials: The requirements of subsections (c), (d), and (e) shall not apply to restricted material that is an integral part of the production of asphalt concrete, portland cement concrete or other similarly cemented materials; or construction of an asphalt or a portland cement concrete surface as long as all of the restricted material is incorporated into or completely covered by the asphalt or portland cement concrete.

(6) Landfill Operations: The use and application requirements of subsection (c) shall not apply to landfill operations, except for the surfacing of public-access roads used by vehicular traffic.

(7) Geologic Evaluation: The APCO may provide an exemption from subsections (c), (d), and (e) for aggregate material extracted from within a geographic ultramafic rock unit if a registered geologist has conducted a geologic evaluation of the property from which the aggregate material is obtained and determined that serpentine or ultramafic rock is not likely to be found on the property. Before an exemption can be granted, the owner/operator must provide a copy of a report detailing the geologic evaluation to the APCO for his or her consideration.

(A) At a minimum, the geologic evaluation must include:

1. A general description of the property and the proposed use;

2. A detailed site characterization, which may include:

i. A physical site inspection;

ii. Offsite geologic evaluation of adjacent property;

iii. Evaluation of existing geological maps and studies of the site and surrounding area;

iv. Development of geologic maps of the site and vicinity;

v. Identification and description of geologic units, rock and soil types, and features that could be related to the presence of ultramafic rocks, serpentine, or asbestos mineralization;

vi. A subsurface investigation to evaluate the nature and extent of geologic materials in the subsurface where extensive vertical excavation is planned; methods of subsurface investigation may include, but are not limited to borings, test pits, trenching, and geophysical surveys;

3. A classification of rock types found must conform to the nomenclature based on the International Union of Geological Science system;

4. A description of the sampling procedures used;

5. A description of the analytical procedures used, which may include mineralogical analyses, petrographic analyses, chemical analyses, or analyses for asbestos content;

6. An archive of collected rock samples for third party examination; and

7. A geologic evaluation report documenting observations, methods, data, and findings; the format and content of the report should follow the Guidelines for Engineering Geologic Reports issued by the State Board of Registration for Geologists and Geophysicists.

(B) The APCO shall respond to a request for an exemption within 90 days of the receipt of the application.

(C) If the request for an exemption is denied, the APCO shall provide written reasons for the denial.

(D) Expiration of the Geologic Exemption: If the owner/operator discovers any ultramafic rock or serpentine on the property after the exemption is granted, then:

1. The owner/operator must comply with the requirements of subsections (c), (d), and (e) immediately following the discovery; and

2. The owner/operator must report the discovery of ultramafic rock or serpentine to the APCO within 24 hours; and

3. The exemption under subsection (f)(7) shall expire and cease to be effective.

(8) Limited Access Surfaces: The APCO may provide an exemption from the requirements of subsection (c) for the use of restricted material on limited access surfaces, if the owner/operator can demonstrate that:

(A) No alternative aggregate materials are reasonably available; and

(B) The surface is not located in an area zoned or identified in a land use plan for residential, recreational, or commercial use.

(C) The APCO shall respond to a request for an exemption within 90 days of the receipt of the application.

(D) If the request for an exemption is denied, the APCO shall provide written reasons for the denial.

"Limited access surface" means any surface not subject to vehicular travel or pedestrian access that has an incline of twenty (20) percent or greater.

(9) Surfacing Applications in Remote Locations:

(A) The APCO may provide an exemption from the requirements of subsection (c) if the owner/operator can demonstrate that:

1. The surface is located in a remote location (as defined in subsection (i)(19)); and

2. No alternative aggregate materials are reasonably available; and

3. All aggregate material used for surfacing has been tested according to an approved asbestos bulk test method and determined to have an asbestos content of one (1.0) percent or less; except that the APCO may allow the use of restricted material with an asbestos content up to five (5.0) percent if the owner/operator can demonstrate that restricted material with an asbestos content of one (1.0) percent or less is not reasonably available.

(B) Before providing this exemption, the APCO shall:

1. Consider the following information: county land use plans, the current use of the surrounding land, and the current and anticipated zoning designations;

2. Provide public notice and solicit comments for a 30-day period;

3. Require that any surface exempted pursuant to this subsection be posted with a permanent sign alerting the public to potential asbestos exposures; and

4. Require that any exemption shall be valid for no longer than three years; but if the owner/operator cannot demonstrate that all the criteria listed in subdivision (f)(9)(A) are met at the time of reapplication, the exemption shall not be renewed.

(C) The APCO may grant an exemption when the distance from the road or other surface to the nearest receptor is less than one mile if ALL of the following criteria are met:

1. The criteria listed above in subsections (f)(9)(A)2. and 3., and subsection (f)(9)(B) must be met:

2. Any receptor located within one mile from the road or other surface must NOT be any of the following:

i. A permanent resident (i.e., a person that resides at the receptor point for six months or more in a year), or

ii. A permanent business (i.e., business that operates at the receptor point for six months or more in a year), or

iii. A school or daycare center;

3. The road or other surface must be located on private property;

4. The entrance points to the road or other surface from any public thoroughfare must be gated and posted with a sign as required in subsection (f)(9)(B)3.;

5. The applicant for the exemption must provide to the APCO an estimate of the average traffic volume on the road or other surface and the methodology used to make the estimate; and

6. Whenever the traffic volume exceeds or is anticipated to exceed 20 vehicle passes per day, the owner/operator must;

i. Treat the road or other surface with a dust control method that is at least 70 percent effective; and

ii. Maintain records of the application and type of the dust control method for a minimum period of seven years; and

iii. Provide the records of the applications of the dust control method to the APCO upon request.

(D) The APCO shall respond to any application for an exemption within 90 days of the receipt of the application.

(E) If the request for an exemption is denied, the APCO shall provide written reasons for the denial.

(10) Roads Located at Construction Sites: The requirements of subsections (c), (d), and (e) shall not apply to restricted material used for the construction of temporary road surfaces located at on-going construction sites where vehicle traffic is limited to construction personnel and equipment. This exemption does not apply to the use of restricted material for temporary roads for public use.

(11) Riprap: The requirements of subsection (c) (d), and (e) shall not apply to restricted material used for riprap. "Riprap" means the material used to construct a loose assemblage of stones along a water course or shoreline to prevent erosion or provide stability.

(g) Requirements to Perform a Geologic Evaluation or Asbestos Testing.

Pursuant to the requirements of Health and Safety Code section 41511, the APCO or the Executive Officer of the ARB may require an owner/operator to perform:

(1) A geologic evaluation for the presence of ultramafic rock or serpentine on any property from which aggregate material is extracted; or

(2) Testing for the asbestos content of any aggregate material sold, supplied, offered for sale or supply, or used for surfacing.

(h) Applicable Test Methods.

(1) Ultramafic Rock: The ultramafic rock composition of any material shall be determined using a standard analysis technique including, but not limited to, color index assessment, microscopic examination, petrographic analysis or rock thin sections, or chemical analysis techniques, such as X-ray fluorescence spectrometry or inductively coupled plasma analysis.

(2) Asbestos Testing: ARB Test Method 435 or an alternative asbestos bulk test method approved in writing by the Executive Officer of the Air Resources Board shall be used to determine compliance with this section. For the purposes of determining compliance with this section, references in ARB Test Method 435 to "serpentine aggregate" shall mean "aggregate material."

(3) Averaging of Test Results: If ARB Test Method 435 or an alternative approved asbestos bulk test method has been used to perform two or more tests on any one volume of aggregate material, whether by the same or a different person, the arithmetic average of these test results shall be used to determine the asbestos content of the aggregate material.

(4) Sampling Frequency: For the purposes of this section, the sampling frequency required for determining the asbestos content of any aggregate material shall be no less than one composite sample per 1000 tons of aggregate material processed, as specified in ARB Test Method 435, unless the APCO approves an alternative sampling frequency as follows:

(A) The APCO may approve an alternative sampling frequency after reviewing and verifying the authenticity of the following information, which shall be provided by the owner/operator of the quarry:

1. An established history of analytical test results demonstrating that no aggregate material sampled and tested in accordance with an approved asbestos bulk test method had an asbestos content that was 0.25 percent or greater;

2. The established history of analytical test results must include:

i. Test results from ten percent of the expected total yield over the life of the quarry, as stated in any permit issued pursuant to the California Surface Mining and Reclamation Act, Public Resources Code, Division 2, Chapter 9, Section 2710 et seq.; or

ii. Test results that cover at least two years of production of surfacing material; this production amount must be verified with sales receipts and testing results as required in subsection (e)(3);

3. A geologic evaluation of the quarry that has been conducted in accordance with the provisions in subsection (f)(7);

4. Any permits issued pursuant to the California Surface Mining and Reclamation Act, Public Resources Code, Division 2, Chapter 9, Section 2710 et seq.;

5. Sales receipts retained by the quarry pursuant to subsections (d) and (e)(3).

(B) The APCO shall not approve any alternate sampling frequency that requires less than one test per 100,000 tons of aggregate material processed for surfacing.

(C) If any of the aggregate material tested is determined to have an asbestos content of 0.25 percent or greater using an alternative sampling frequency approved by the APCO, the owner/operator must:

1. Resume the sampling frequency specified in ARB Test Method 435 immediately after receiving the test results; and

2. Report the detection of asbestos and provide a copy of the analytical test results to the APCO within 48 hours after receiving the test results.

(i) Definitions. For the purposes of this section, the following definitions shall apply:

(1) "Aggregate" means a mixture of mineral fragments, sand, gravel, cobbles, rocks, stones, or similar minerals that may or may not be crushed or screened. "Aggregate" does not include elemental metals, gemstones, petroleum products, organic materials, or mineral ore to be processed offsite of the property from which it was extracted.

(2) "Alluvial deposit" means any deposit of sediments laid down by running water including, but not limited to, streams and rivers.

(3) "APCO" means the executive officer, air pollution control officer; or the designee of the executive officer or air pollution control officer of any air pollution control or air quality management district created or continued in existence pursuant to Part 3 (commencing with section 40000), Division 26, Health and Safety Code;

(4) "Approved asbestos bulk test method" means ARB Test Method 435 or an alternative asbestos bulk test method approved in writing by the Executive Officer of the Air Resources Board.

(5) "ARB" means the California Air Resources Board.

(6) "ARB Test Method 435" means the test method specified in title 17, California Code of Regulations, section 94147.

(7) "Asbestos" means asbestiforms of the following minerals: chrysotile (fibrous serpentine), crocidolite (fibrous riebeckite), amosite (fibrous cummingtonite--grunerite), fibrous tremolite, fibrous actinolite, and fibrous anthophyllite.

(8) "Decoration/landscaping" means the application or use of aggregate materials for aesthetic purposes.

(9) "Geographic ultramafic rock unit" means a geographic area that is designated as an ultramafic rock unit or ultrabasic rock unit, including the unit boundary line, on any of the maps referenced in Appendix A.

(10) "Geologic evaluation" means an evaluation of a property, as specified in subsection (f)(7), to determine the presence of various rock types, including ultramafic rock, serpentinite, or other metamorphic derivatives of ultramafic rock.

(11) "Limited access surface" means any surface not subject to vehicular travel or pedestrian access that has an incline greater than twenty (20) percent.

(12) "Non-surfacing applications" means any application of aggregate material that will not remain a part of the uppermost layer, such as fill, base rock, or drain rock.

(13) "Owner/operator" or "person" includes, but is not limited to:

(A) An individual, trust, firm, joint stock company, business concern, partnership, limited liability company, association, or corporation including, but not limited to, a government corporation;

(B) Any city, county, district, commission, the state or any department, agency, or political subdivision thereof, any interstate body, and the federal government or any department or agency thereof to the extent permitted by law; or

(C) A project proponent and any of its contractors or subcontractors.

(14) "Producer" means any person that extracts and processes aggregate material from the ground.

(15) "Property" means any real property including, but not limited to, any contiguous parcel or parcels of land and anything attached to, or erected on it.

(16) "Quarry" means a facility or operation that obtains stone from the earth by means of cutting, digging, excavating, or blasting.

(17) "Receipt" means any written acknowledgement that a specified amount of restricted material was received, delivered, or purchased. Receipts include, but are not limited to, bills of sale, bills of lading, and notices of transfer.

(18) "Registered geologist" means an individual that is currently licensed as a geologist with the State of California, Department of Consumer Affairs, Board of Geology and Geophysicists.

(19) "Remote location" means any location that is at least one (1.0) mile from the location of a receptor. "Receptor" includes, but is not limited to, any hospital, school, day care center, work site, business, residence, and permanent campground. The distance to the nearest receptor is to be measured from the outermost limit of the area to be disturbed or road surface, whichever is closer.

(20) "Restricted material" means any of the following:

(A) Aggregate material extracted from property where any portion of the property is located in a geographic ultramafic rock unit (as defined in subsection (i)(9)); and

(B) Aggregate material extracted from property that is NOT located in a geographic ultramafic rock unit (as defined in subsection (i)(9)) if the material has been:

1. Evaluated at the request of the Air Pollution Control Officer (APCO) and determined to be ultramafic rock or serpentine;

2. Tested at the request of the APCO and determined to have an asbestos content of 0.25 percent or greater; or

3. Determined by the owner/operator of a facility to be ultramafic rock, serpentine, or aggregate material that has an asbestos content of 0.25 percent or greater.

(C) Any mixture of aggregate material that contains ten percent (10%) or more of any of the materials listed above in subsections (i)(20)(A) or (i)(20)(B), or any combination thereof, shall also be considered "restricted material."

(21) "Riprap" means material used to construct a loose assemblage of stones along a water course or shoreline to prevent erosion or provide stability.

(22) "Road surface" means the traveled way of a road and any shoulder which extends up to ten (10) feet from the edge of the traveled way.

(23) "Sand and gravel operation" means any aggregate-producing facility operating in alluvial deposits.

(24) "Serpentine" means any form of the following hydrous magnesium silicate minerals: antigorite, lizardite, and chrysotile.

(25) "Serpentinite" means a rock consisting almost entirely of serpentine, although small amounts of other minerals such as magnetite, chromite, talc, brucite, and tremolite-actinolite may also be present. "Serpentinite" is a metamorphic derivative of the ultramafic rocks, peridotite, pyroxenite, or dunite.

(26) "Surfacing" means the act of providing or creating a temporary or permanent covering for a surface used for pedestrians, motor vehicles, non-motor vehicles, decoration, landscaping, soil

stabilization, or erosion control. Examples of surfaces include, but are not limited to, roads, road shoulders, streets, access roads, alleys, lanes, driveways, parking lots, playgrounds, trails, squares, plazas, and fairgrounds. For the purposes of this section, "surfacing" does not include creating a covering composed of asphalt concrete or portland cement concrete.

(27) "Ultrabasic rock" means ultramafic rock.

(28) "Ultramafic rock" means an igneous rock composed of 90 percent or greater of one or a combination of the following iron/magnesium-rich, dark-colored silicate minerals: olivine, pyroxene, or more rarely amphibole. For the purposes of this section, "ultramafic rock" includes the following rock types: dunite, pyroxenite, and peridotite; and their metamorphic derivatives.

Appendix A

California Department of Conservation

Division of Mines and Geology

AVAILABLE GEOLOGIC MAPS FOR CALIFORNIA

GEOLOGIC ATLASES OF CALIFORNIA Scale 1:250,000

GEOLOGIC ATLAS OF CALIFORNIA: ALTURAS Compiled by Gay, T.E. and others, 1958

GEOLOGIC ATLAS OF CALIFORNIA: BAKERSFIELD Compiled by Smith, A.R., 1964 (reprinted 1992)

GEOLOGIC ATLAS OF CALIFORNIA: DEATH VALLEY Compiled by Streitz, R.L. and Stinson, M.C., 1974 (reprinted 1991)

GEOLOGIC ATLAS OF CALIFORNIA: FRESNO Compiled by Matthews, R.A. and Burnett, J.L, 1965 (reprinted 1991)

GEOLOGIC ATLAS OF CALIFORNIA: LONG BEACH Compiled by Jennings, C.W., 1962 (reprinted 1992)

GEOLOGIC ATLAS OF CALIFORNIA: LOS ANGELES Compiled by Jennings, C.W. and Strand, R.G., 1969 (reprinted 1991)

GEOLOGIC ATLAS OF CALIFORNIA: MARIPOSA Compiled by Strand, R.G., 1967 (reprinted 1991)

GEOLOGIC ATLAS OF CALIFORNIA: NEEDLES Compiled by Bishop, C.C., 1963 (reprinted 1992)

GEOLOGIC ATLAS OF CALIFORNIA: REDDING Compiled by Strand, R.G., 1962

GEOLOGIC ATLAS OF CALIFORNIA: SALTON SEA Compiled by Jennings, C.W., 1967 (reprinted 1992)

GEOLOGIC ATLAS OF CALIFORNIA: SAN LUIS OBISPO Compiled by Jennings, C.W., 1958 (reprinted 1992)

GEOLOGIC ATLAS OF CALIFORNIA: SAN DIEGO - EL CENTRO Compiled by Strand, R.G., 1962 (reprinted 1992)

GEOLOGIC ATLAS OF CALIFORNIA: SANTA ANA Compiled by Rogers, T.H., (reprinted 1992)

GEOLOGIC ATLAS OF CALIFORNIA: SANTA CRUZ Compiled by Jennings, C.W. and Strand, R.G., 1958 (reprinted 1992)

GEOLOGIC ATLAS OF CALIFORNIA: SANTA MARIA Compiled by Jennings, C.W., 1959 (reprinted 1992)

GEOLOGIC ATLAS OF CALIFORNIA: UKIAH Compiled by Jennings, C.W. and Strand, R.G., 1960 (reprinted 1992)

GEOLOGIC ATLAS OF CALIFORNIA: WALKER LAKE Compiled by Koenig, J.B., 1963 (reprinted 1992)

REGIONAL GEOLOGIC MAP SERIES Scale 1:250,000

GEOLOGIC MAP OF THE SACRAMENTO QUADRANGLE (set of four sheets) Compiled by Wagner, D.L. and others, 1981

GEOLOGIC MAP OF THE SANTA ROSA QUADRANGLE (set of five sheets) Compiled by Wagner and D.L., Bortugno, E.J. (reprinted 1999)

GEOLOGIC MAP OF THE SAN BERNARDINO QUADRANGLE (set of five sheets) Compiled by Bortugno, E.J., and Spittler, T.E. (reprinted 1998)

GEOLOGIC MAP OF THE WEED QUADRANGLE (set of four sheets) By Wagner, D.L. and Saucedo, G.J., 1987

GEOLOGIC MAP OF THE SAN FRANCISCO-SAN JOSE QUADRANGLE (set of five sheets) By Wagner, D.L., Bortugno, E.J. and McJunkin, R.D., 1990 Color-coded faults

LOCAL GEOLOGIC MAPS

AREAS MORE LIKELY TO CONTAIN NATURALLY-OCCURRING ASBESTOS IN WESTERN EL DORADO COUNTY, CALIFORNIA By Ron Churchill, March 2000 Scale 1:100,000

SERPINTINITE SURVEY OF LAKE COUNTY, CALIFORNIA - MAP A, ULTRAMAFIC, ULTRABASIC, AND SERPENTINE ROCK AND SOILS OF LAKE COUNTY, Adopted: March 2, 1992 Scale: 1:100,000

**➡§ 93107. Airborne Toxic Control Measure for Emissions of Toxic Metals from Non-Ferrous Metal Melting.**

(a) Definitions. For the purposes of this section, the following definitions shall apply:

(1) "Aluminum and aluminum-based alloys" means any metal that is at least 80% aluminum by weight.

(2) "ARB Test Method 5" means the test method specified in Title 17, California Code of Regulations, section 94105.

(3) "Clean Aluminum Scrap" means scrap that is composed solely of aluminum or aluminum alloys (including anodized aluminum) and that is free of paints, coatings, rubber, or plastics.

(4) "Copper or copper-based alloy" means any metal that is more than 50 percent copper by weight, including but not limited to brass and bronze.

(5) "District" means the air quality management district or air pollution control district with jurisdiction over the facility.

(6) "Dust forming material" means any material containing more than 15 percent by weight of particulate matter less than 0.84 millimeter (mm) equivalent diameter as determined by ASTM C136-84a "Standard Method for Sieve Analysis of Fine and Coarse Aggregates" using a number 20 U.S. Bureau of Standards sieve with 0.84-mm square openings or an alternate method deemed acceptable by the district Air Pollution Control Officer or Executive Officer.

(7) "Emission collection system" means equipment which is installed for the purpose of directing, taking in, confining, and conveying an air contaminant and which conforms to specifications for design and operation given in Industrial Ventilation, Manual of Recommended Practices, 20th edition, 1988, published by the American Conference of Government and Industrial Hygienists, which is incorporated by reference herein.

(8) "Emission point" means any location where molten metal is or can be exposed to air, including but not limited to, furnaces, crucibles, refining kettles, ladles, tap holes, pouring spouts, and slag channels. A mold or die in which metal is cooling is not considered an emission point.

(9) "Enclosed storage area" means nay space used to contain materials that has a wall or partition on at least three sides or three-quarters of its circumference and that screens the material stored therein to prevent emissions of the material to the air.

(10) "Facility" means any real or personal property being used for metal melting activities, which is located on one or more contiguous or adjacent parcels of property in actual contact or separated only by a public roadway or other public right-of-way, and owned or operated by the same person or persons, corporation, government agency, public district, public officer, association, joint venture, partnership, or any combination of such entities.

(11) "Fugitive emission control" means any equipment, activity, or process carried out to reduce emissions resulting either from the storage or handling of dust forming materials or material collected by a particulate matter control system or the removal of particulate matter from metal melting or pouring that has settled on the ground or other surfaces, or that has escaped from a properly designed and operated emission collection system.

(12) "Good Operating Practice" means specific activities necessary to maintain the original collection and control efficiencies of the air pollution control equipment as designed. These activities include but are not limited to verifying operating specifications such as cleaning cycles, air flow, and velocity; and inspecting equipment such as duct work, blowers, and components of the control equipment through a general maintenance and inspection program.

(13) "Hard Lead" means any alloy containing at least 90 percent lead and more than 0.001 percent arsenic by weight or 0.001 percent cadmium weight.

(14) "Molten metal" means metal or metal alloy in a liquid state, in which a cohesive mass of metal will flow under atmospheric pressure and take the shape of a container in which it is placed.

(15) "Metal melting furnace" means any apparatus in which metal in a container is brought to a liquid state, including but not limited to reverberatory, cupola, induction, direct arc furnaces, sweat furnaces, and refining kettles. "Metal melting furnace" does not include any apparatus in which the metal is heated but does not reach a molten state such as a sintering furnace or an annealing furnace.

(16) "New sand" means any sand not exposed to the casting process.

(17) "Non-ferrous metal" means lead, copper, zinc, cadmium, arsenic, aluminum, and their alloys.

(18) "Particulate matter" or "PM" means any solid material except uncombined water, which exists in a finely divided form at standard conditions of temperature and pressure (293 K and 760 mm mercury).

(19) "Particulate matter control system" means any device or series of devices designed and operated in a manner intended to remove fine particulate matter (< 10 um) from an air or gas stream.

(20) "Person" shall have the same meaning as defined in Health and Safety Code section 39047.

(21) "Process emission control" means any equipment installed and operated to control emissions of toxic metals from any emission point as defined in subsection (a)(8).

(22) "Pure Lead" means any alloy that is at least 90 percent lead and contains no more than 0.001 percent cadmium by weight and 0.001 percent arsenic by weight.

(23) "Ringlemann Chart" means the Ringlemann Chart published in the United States Review of Mine Information Circular No. 1C8333, (May 1967), as specified in Health and Safety Code section 41701(b).

(24) "Scrap" means any metal or metal-containing material that has been discarded or removed from the use for which it was produced or manufactured and which is intended for reprocessing. "Scrap" does not include sprues, gates, risers, foundry returns, and similar material intended for remelting that has been generated at the facility as a consequence of casting or forming processes but has not been coated or surfaced with any material containing cadmium, arsenic, or nickel.

(25) "Solder" means any metal in which the sum of the lead and the tin is greater than 50 percent by weight and which is used for the purpose of joining two metals or of joining a metal to any other material.

(26) "Type Metal" means any lead-based alloy used for linotype machines.

(b) Requirements

No person shall operate a non-ferrous metal melting furnace unless the facility is in compliance with all the requirements specified in subsections (b)(1) through (b)(3).

(1) Emission Collection System

(A) All emission points shall be equipped with an emission collection system designed and operated according to criteria specified in subsection (a)(7). The design criteria and operating parameters shall be specified as conditions of the authority to construct and the permit to operate granted by the district to the source for the equipment.

(B) Good operating practices shall be used by the facility, and demonstrated through a maintenance plan or procedures approved by the district, to maintain air movement and emission collection efficiency by the system consistent with the design criteria for the system. The maintenance plan shall specify at a minimum the following:

(i) Maximum allowable variation from designed values of operating parameters, such as air velocity in the hood and ducts and pressure drop across the control device.

(ii) Areas to be visually inspected such as the clean side of the baghouse and ducts operating under positive pressure, and the required frequency of such inspections.

(iii) Methods of documenting compliance with these requirements such as a log of such inspections and records of observations and measurements.

(2) Process Emission Control

The gas stream from the emission collection system required by subsection (b)(1) shall be ducted to a particulate matter control device meeting the requirements of this section.

(A) The particulate matter control device shall reduce particulate matter emissions by 99 percent or more.

(B) The temperature of the gas stream entering any particulate matter control device that is part of an emission collection system shall not exceed 360 degrees F. A device to be used for making this measurement shall be maintained at the facility and shall be made available to a district representative upon his or her request.

(C) The owner or operator of the facility shall demonstrate compliance with subsection (b)(2)(A), by conducting an initial source test to verify the 99 percent reduction in particulate matter as determined by means of an emissions test conducted in accordance with ARB Test Method 5. The district Air Pollution Control Officer or Executive Officer may require additional source testing to verify continued compliance or when the process is changed. Particulate matter reduction shall be calculated using the following equation:

( Mass in - Mass out ) X 100 = particulate matter

( ---------- )

( Mass in ) reduction

where:

Mass in = Mass of particulate matter at the inlet to the control device

Mass out = Mass of particulate matter at the outlet of the control device

Mass = Sum of filter catch, probe catch, impinger catch, and solvent extract.

$$\left[\frac{\text{Mass in} - \text{Mass out}}{\text{Mass in}}\right] \text{X } 100 = \text{particulate matter reduction}$$

(D) Testing Access

The owner or operator of any facility subject to subsection (b)(2) of this regulation shall provide access and sampling ports sufficient to perform testing in accordance with ARB Testing Method 5. Ducts and stacks shall have sampling ports so placed as to satisfy minimum requirement for method 5 testing with regard to flow disturbances, or acceptable alternative requirements as approved by the Air Pollution Control Officer or Executive Officer of the district.

(3) Fugitive Emission Control

(A) No activity associated with metal melting at a facility including furnace operation, casting, emission control system operation, and the storage, handling, or transfer of any materials (except new sand) shall discharge into the air any air contaminant, other than uncombined water vapor, for a period aggregating more than three minutes in any one hour which is:

(i) Half as dark or darker in shade as that designated as Number 1 on the Ringlemann Chart, as published by the United States Bureau of Mines, or

(ii) Of such opacity as to obscure an observer's view to a degree equal to or greater than smoke as described in subsection (b)(3)(A)(i) or 10% opacity.

(B) Dust-forming material including, but not limited to, dross, ash, or feed material shall be stored in an enclosed storage area or stored in a manner which meets the requirements of subsection (b)(3)(A).

(C) Material collected by a particulate matter control system shall be discharged into closed containers or an enclosed system that is completely sealed to prevent any dust from getting out.

(D) Surfaces that are subject to vehicular or foot traffic shall be vacuumed, wet mopped, or otherwise maintained in accordance with a district-approved maintenance plan. The plan shall specify, at a minimum: the areas to be cleaned, the method to be used, the required frequency of the cleaning

activities, and a method of documenting the completion of the required activities. The plan shall be designed and carried out in a way which will meet the requirements of subsection (b)(3)(A).

(c) Exemptions

(1) Small Quantity Exemptions. Facilities are exempt from subsections (b)(1), (b)(2), and (b)(3) if they meet either of the following conditions:

(A) melt a total of no more than one ton per year of all metals, or

(B) melt no more than the listed quantities of any one of the specific metals listed in Table I.

Table I

| Metal | Exemption Limit (tons per year) |
|---|---|
| Pure Lead | 400 |
| Hard Lead | 200 |
| Aluminum Scrap | 125 |
| Aluminum Ingot containing more than 0.004 percent cadmium or 0.002 percent arsenic | 125 |
| Solder | 100 |
| Zinc Scrap | 30 |
| Copper or copper-based alloys (except scrap) containing more than 0.004 percent cadmium or 0.002 percent arsenic | 30 |
| Type Metal (lead for linotype machines) | 25 |

Table I

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| Copper or copper-based alloys (except scrap) containing more than 0.004 percent cadmium or 0.002 percent arsenic | 30 |
| Type Metal (lead for linotype machines) | 25 |


(i) For facilities melting more than one of the metals listed in Table I, eligibility for exemption shall be determined using the following calculation:

For each metal listed in table I, divide the quantity melted by the specific exemption limit listed.

Sum the resulting fractions for all the metals.

If the sum does not exceed 1.0, the facility qualifies for exemption under subsection (c)(1).

(2) Metal or Alloy Purity Exemption. Facilities or furnaces which do not melt scrap except clean aluminum scrap and which melt a metal or alloy (other than the metals listed in Table I) which is shown by the facility operator to have a content of no more than 0.004 percent of cadmium and no more than 0.002 percent of arsenic are exempt from subsections (b)(1), (b)(2), and (b)(3). A facility granted an exemption under subsection (c)(1)(B) may also be granted exemption for all metals that meet the purity limits in this subsection.

(3) Clean Aluminum Scrap Exemption. Furnaces used exclusively to process clean aluminum scrap or a mixture of clean aluminum scrap and aluminum ingot to produce extrusion billet are exempt from subsections (b)(1) and (b)(2).

(4) Exemption for Aluminum Furnaces. The combustion chamber in a reverberatory furnace is exempt from the requirements of subsections (b)(1) and (b)(2) if the furnace meets both of the following conditions:

(A) The furnace is used solely to produce aluminum and aluminum-based alloys, and

(B) The furnace is constructed with a charging well or similar device in which feed is added to molten metal in a separate chamber.

(5) Aluminum Pouring Exemption. Ladles, launders or other equipment used to convey aluminum from a melting or holding furnace to casting equipment is exempt from the requirements of subsections (b)(1) and (b)(2).

(d) Compliance Schedule

(1) Application for exemption from control requirements. Facilities seeking exemption under subsections (c)(1) or (c)(2) or (c)(3) shall apply and submit evidence of eligibility for exemption to the district no later than six months after the district adopts regulations enacting this control measure.

(2) Emission control requirements. Facilities subject to this section shall apply to the district for an authority to construct the emission collection system and the air pollution control equipment necessary to comply with subsection (b) no later than 12 months after the district adopts the regulations enacting this control measure. These facilities shall be in compliance no later than 24 months after the district adopts the regulations enacting this control measure. These facilities shall be in compliance no later than 24 months after the district adopts the regulations enacting this control measure.

(e) Recordkeeping

(1) Facilities subject to subsection (b) shall maintain on site for a period of two years, and make available to a district representative upon request, a record of:

(A) The results of any source testing required by the district to demonstrate that the particulate matter control device(s) are operating as required by subsection (b)(2)(A).

(2) Facilities seeking exemption under subsections (c)(1) or (c)(2) or (c)(3) shall maintain for two years a record of the amount and type of metal processed in those furnaces including results of analyses as required to support exemption under subsection (c)(2). These records shall be made available to a representative of the district upon request.

(f) Applicable Material Testing Methods.

One of the following methods or an alternate method deemed acceptable by the district Air Pollution Control Officer or Executive Officer and by the Executive Officer of the Air Resources Board shall be used.

Sampling for these methods shall comply with ASTM E 88-58 (1986), "Standard Practice for Sampling Nonferrous Metals and Alloys in Cast Form for Determination of Chemical Composition".

(1) To determine the composition of alloys defined in section (a)(1) and to determine the cadmium content of aluminum alloys to evaluate eligibility for exemption under section (c)(2) one of the following shall be used:

(A) ASTM E 227-67 (1982), "Standard Method for Optical Emission Spectrometric Analysis of Aluminum and Aluminum Alloys by the Point-to-Plane Technique";

(B) ASTM E 607-90, "Standard Test Method for Optical Emission Spectrometric Analysis of Aluminum and Aluminum Alloys by the Point-to-Plane Technique, Nitrogen Atmosphere"; or

(C) ASTM E 1251-88, "Standard Test Method for Optical Emission Spectrometric Analysis of Aluminum and Aluminum Alloys by the Argon Atmosphere, Point-to-Plane, Unipolar Self-Initiating Capacitor Discharge".

(2) To determine alloy composition as defined in subsections (a)(13) and (a)(22), ASTM E 117-64 (1985), "Standard Test Method for Spectrographic Analysis of Pig Lead by the Point-to-Plane Technique" shall be used.

(3) To determine alloy composition as defined in section (a)(25), ASTM E 46- 87, "Test Method for Chemical Analysis of Lead- and Tin-Base Solder" shall be used.

(4) To determine cadmium concentration in zinc and zinc alloys to evaluate eligibility for exemption under section (c)(2), ASTM E 536-84 (1988), "Standard Test Method for Chemical Analysis of Zinc and Zinc Alloys" shall be used.

(5) To determine cadmium concentration in copper and copper-based alloys to evaluate eligibility for exemption under section (c)(2), ASTM E 53-86a, "Standard Test Methods for Chemical Analysis of Copper" shall be used.

(6) To determine arsenic concentration in copper or copper-based alloys to evaluate eligibility for exemption under section (c)(2), ASTM E 62-89, "Standard Test Method for Chemical Analysis of Copper and Copper Alloys" shall be used.

(7) To determine arsenic content in aluminum or zinc (or any other alloy in which determination of arsenic by spectrochemical methods is compromised by interference) to evaluate eligibility for exemption under section (c)(2), EPA method 7061 (Revision 1, December, 1987), "Arsenic (Atomic Absorption, Gaseous Hydride)", published in U.S.EPA Test Methods for Evaluating Solid Waste Physical and Chemical Methods. First Update (3rd Edition), January, 1988; EPA/530/SW-846.3-1; PB 89-14876, shall be used in the following manner.

(A) For aluminum alloys, sample digestion shall employ the hydroxide digestion technique given in appendix A to this control measure.

(g) Alternative Compliance Option.

A district may approve an alternative approach to compliance proposed by the facility operator, if the facility operator demonstrates to the satisfaction of the district Executive Officer or Air Pollution Control Officer that the alternative is enforceable, achieves the same or better reductions in emissions and risk, and achieves these reductions within the same time period as required by this airborne toxic control measure. The alternative approach shall also be consistent with the federal Clean Air Act. The district shall revoke this approval if the facility operator fails to adequately implement the alternative approach or the alternative approach does not reduce emissions as required. The district shall notify the state board whenever it proposes to approve an alternative approach to compliance to this airborne toxic control measure.

**➡§ 93108. Ethylene Oxide Airborne Toxic Control Measure -Part 1 - Non-Commercial Sterilizers and Aerators and Commercial Sterilizers and Aerators Using Less Than 2,000 Pounds of Ethylene Oxide per 12 Consecutive Months.**

(a) Definitions. For the purposes of this section, the following definitions shall apply:

(1) "Acute care facility" means any facility currently licensed by the California Department of Health Services as a general acute care hospital (as defined in title 22, CCR, section 70005), or any military hospital.

(2) "Aeration" is the process during which residual ethylene oxide dissipates, whether under forced air flow, natural or mechanically assisted convection, or other means, from previously sterilized materials after the sterilizer cycle is complete.

(3) "Aeration-only facility" means a facility which performs aeration on materials which have been sterilized with ethylene oxide at another facility.

(4) "Aerator" means any equipment or space in which materials previously sterilized with ethylene oxide are placed or remain for the purpose of aeration. An aerator is not any equipment or space in which materials that have previously undergone ethylene oxide sterilization and aeration can be handled, stored, and transported in the same manner as similar materials that have not been sterilized with ethylene oxide.

(5) "Aerator exhaust stream" means all ethylene oxide-contaminated air which is emitted from an aerator.

(6) "Back-draft valve exhaust stream" is the air stream which results from collection of ethylene oxide-contaminated air which may be removed from the sterilizer through a back-draft valve or rear chamber exhaust system during unloading of the sterilized materials.

(7) "Commercial sterilizer" means any facility which as its principal business sterilizes products or equipment manufactured elsewhere, or a facility which sterilizes products or equipment it manufactures. A commercial sterilizer is also a non-medical facility that sterilizes items used in conducting its business.

(8) "Control device" means an article, machine, equipment, or contrivance which reduces the amount of ethylene oxide between its inlet and outlet and which is sized, installed, operated, and maintained according to good engineering practices, as determined by the district.

(9) "Control efficiency" is the ethylene oxide (EtO) mass or concentration reduction efficiency of a control device, as measured with ARB Test Method 431 (title 17, CCR, section 94143) according to the source testing requirements herein, and expressed as a percentage calculated across the control device as follows:

```
<sigma> EtO in - EtO out x 100 = % Control Efficiency
------------------------
   <sigma> EtO in
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(10) "District" means the local air pollution control district or air quality management district.

(11) "Ethylene oxide (EtO)" is the substance identified as a toxic air contaminant by the Air Resources Board in 17 CCR section 93000.

(12) "Facility" means any entity or entities which: own or operate a sterilizer or aerator, are owned or operated by the same person or persons, and are located on the same parcel or contiguous parcels of land.

(13) "Facility-wide pounds of ethylene oxide used per year" is the total pounds of ethylene oxide used in all of the sterilizers at the facility during a one-year period.

(14) "Leak-free" refers to that state which exists when the concentration of sterilant gas measured 1 cm. away from any portion of the exhaust system of a sterilizer or aerator, during conditions of maximum sterilant gas mass flow, is less than:

(A) 30 ppm for sterilant gas composed of 12% ethylene oxide/88% chlorofluorocarbon-12 by weight; and

(B) 10 ppm for other compositions of sterilant gas, as determined by ARB Test Method 21 (title 17, CCR, section 94124) using a portable flame ionization detector or a non-dispersive infrared analyzer, calibrated with methane, or an acceptable alternative method or analytical instrument approved by the district. A chlorofluorocarbon-12 specific audible detector using a metal oxide semi-conductor sensor shall be considered an acceptable alternative for exhaust systems carrying a sterilant gas mixture of ethylene oxide and chlorofluorocarbon-12.

(15) "Local medical emergency" means an unexpected occurrence in the area served by the acute care facility resulting in a sudden increase in the amount of medical treatments which require a significant increase in the operation of a sterilizer or aerator.

(16) "Non-commercial sterilizer" means a facility other than a commercial facility at which ethylene oxide is used for sterilizing or fumigation, or at which aeration occurs.

(17) "Sterilant gas" means ethylene oxide or any combination of ethylene oxide and (an)other gas(es) used in a sterilizer.

(18) "Sterilizer" means any equipment in which ethylene oxide is used as a biocide to destroy bacteria, viruses, fungi, and other unwanted organisms on materials. Equipment in which ethylene oxide is used to fumigate foodstuffs is considered a sterilizer.

(19) "Sterilizer cycle" means the process which begins when ethylene oxide is introduced into the sterilizer, includes the initial purge or evacuation after sterilization and subsequent air, steam or other washes, and ends after evacuation of the final wash.

(20) "Sterilizer door hood exhaust stream" is the air stream which results from collection of fugitive ethylene oxide emissions, by means of an existing hood over the sterilizer door, during the time that the sterilizer door is open after the sterilizer cycle has been completed.

(21) "Sterilizer exhaust stream" is all ethylene oxide-contaminated air which is intentionally removed from the sterilizer during the sterilizer cycle.

(22) "Sterilizer exhaust vacuum pump" means a device used to evacuate the sterilant gas during the sterilizer cycle, including any associated heat exchanger. A sterilizer exhaust vacuum pump is not a device used solely to evacuate a sterilizer prior to the introduction of ethylene oxide.

(b) Applicability. Effective January 28, 1999, any person who owns or operates any non-commercial sterilizer or aerator or any person who owns or operates a commercial sterilizer or an aerator that uses less than 2,000 pounds of EtO per consecutive 12-month period after December 6, 1996, must comply with Part I of this regulation, section 93108.

(c) Notification. Any person subject to this regulation must provide the district with the following information, in writing, within 30 days of the date of district adoption:

(1) the name(s) of the owner and operator of the facility;

(2) the location of the facility;

(3) the number of sterilizers and aerators at the facility; and

(4) an estimate of the total pounds of ethylene oxide and sterilant gas used by the facility, in all sterilizers, during the previous calendar year, as determined by a method approved by the district.

A district may exempt a source from this requirement if the district maintains current equivalent information on the source.

(d) Reporting. Any person who owns or operates a sterilizer shall furnish a written report to the district annually on the date specified by the district, or, at the district's discretion, shall maintain such a report and make it available to the district upon request. Commercial sterilizers shall maintain copies of these reports on site for 5 years. This report shall include one of the following, as determined by the district:

(1) the number of sterilizer cycles and the pounds of ethylene oxide used per cycle for each sterilizer during the reporting period, as determined by a method approved by the district; or

(2) the total pounds of sterilant gas and the total pounds of ethylene oxide purchased, used, and returned in the previous calendar year, as determined by a method approved by the district.

(e) Requirements. No person shall operate a sterilizer or aerator unless all of the following requirements are satisfied:

(1) the exhaust systems and EtO supply system including, but not limited to, any piping, ducting, fittings, valves, or flanges, through which ethylene oxide-contaminated air is conveyed between the sterilizer, aerator and the control device shall be leak-free;

(2) all of the control requirements shown in Table I below for the applicable control category are met;

(3) the average concentration of ethylene oxide shall not exceed:

(A) 30 m g/ml in any liquid discharge associated with the sterilization cycle; and

(B) 10 m g/ml in any liquid discharge associated with the aeration cycle for those facilities where Table I requires aeration control;

Table I Control and Compliance Requirements

| Control Category | Requirements | | |
|---|---|---|---|
| Facility-wide Pounds of Ethylene Oxide Used Annually | (a) Exhaust Streams to be Controlled | (b) Exhaust Streams To be Tested | (c) Control Efficiency (%) |
| Less than or equal to 25 | None | None | None |
| More than 25 and less than or equal to 600 | Sterilizer | Sterilizer | 99.0 |
| More than 600 and less than or equal to 5,000 | Sterilizer | Sterilizer | 99.9 |
| | Aerator | Aerator | 95.0 |
| | Sterilizer/Aerator | Sterilizer/Aerator | 99.7 |
| | Back-draft Valve | | N/A [FNa1] |
| More than 5,000 | Sterilizer | Sterilizer | 99.9 |
| | Aerator | Aerator | 99.0 |
| | Sterilizer Door Hood & | | N/A [FNa1] |
| | Back-draft Valve | | N/A [FNa1] |
| Aeration-only Facilities | Aerator | Aerator | 95.0 |

[FNa1] Not Applicable

(4) for facilities using more than 600 pounds of ethylene oxide per year, the back-draft valve is ducted to the control device used to control the sterilizer exhaust stream or the aerator exhaust stream; and

(5) for facilities using more than 5,000 pounds of ethylene oxide per year, the sterilizer door hood exhaust stream is ducted to the control device used to control the aerator exhaust stream.

(f) Exemptions:

(1) The requirements set forth in subsection (e) above do not apply to any facility which treats materials in a sterilizer and which uses a total of 25 pounds or less of ethylene oxide per calendar year.

(2) The district hearing board may grant an emergency variance from items (a) and (c) in Table I of Part 1 subsection (e), Requirements, to a person who owns or operates an acute care facility if response to a local medical emergency requires increased operation of a sterilizer or aerator such that the requirements cannot be met.

The demonstrated need for such increased operation shall constitute "good cause" pursuant to Health and Safety Code section 42359.5. The emergency variance shall be granted in accordance with this section and any applicable district rule regarding the issuance of emergency variances for such occurrences, including the requirement that the emergency variance shall not remain in effect longer than 30 days; however, the emergency variance shall be granted only for the period of time during which increased operation of a sterilizer or aerator is necessary to respond to the local medical emergency.

(g) Compliance. For the purpose of determining compliance with the control efficiency requirement set forth in column (c) of Table I, subsection (e), if a reduction in the amount of ethylene oxide across the control device is demonstrated, but the control efficiency cannot be affirmatively demonstrated because the concentration of ethylene oxide measured in the outlet of the control device is below 0.2 parts per million ethylene oxide, the facility shall be considered to be in compliance with this requirement.

(h) Source Testing. Source testing shall be conducted according to ARB Test Method 431 (title 17, CCR, section 94143) and the method evaluations cited therein or an acceptable source test method approved by the district with the concurrence of the Executive Officer of the Air Resources Board. Specific requirements for application are given below.

(1) All ethylene oxide emission points shall be sampled during the entire testing period.

(2) If the efficiency is being determined by inlet and outlet sampling, the inlet and outlet of the control device shall be sampled simultaneously during testing.

(3) The efficiency of each control device shall be determined under conditions of maximum ethylene oxide mass flow to the device, under normal operating conditions. To measure the control efficiency of the control device on the sterilizer exhaust stream, sampling shall be done during the entire duration of the first sterilizer evacuation after ethylene oxide has been introduced. To measure the control efficiency of the control device on an aerator exhaust stream with a constant air flow, sampling shall be done during a period of at least 60 minutes, starting 15 minutes after aeration begins. To measure the control efficiency of the control device on an aerator exhaust stream with a non-constant air flow, sampling shall be done during the entire duration of the first aerator evacuation after aeration begins.

(4) There shall be no dilution of the air stream between the inlet and outlet test points during testing.

**➡§ 93108.5. Ethylene Oxide Airborne Toxic Control Measure -Part 2 - Commercial Sterilizers and Aerators Using 2,000 Pounds or More of Ethylene Oxide per 12 Consecutive Months.**

(a) Definitions. For the purposes of this section, the definitions set forth in section 93108 (a) shall apply unless otherwise specified below:

(1) "Administrator" means the Administrator of the United States Environmental Protection Agency (or the implementing agency in accordance with any delegation of authority to approve alternatives from the U. S. Environmental Protection Agency).

(2) "Back-draft valve/chamber exhaust stream" is the air stream which results from collection of ethylene oxide-contaminated air which may be removed from the sterilizer through a back-draft valve or rear chamber exhaust system during unloading of the sterilized materials.

(3) "Baseline temperature" means the range of temperatures at the outlet point of a catalytic oxidation control device or at the exhaust point from the combustion chamber for a thermal oxidation control device established during the performance test at which the unit achieves at least 99 percent control of ethylene oxide emissions.

(4) "Manifolding emissions" means combining ethylene oxide emissions from two or more vent types for the purpose of controlling these emissions with a single control device.

(5) "Maximum ethylene glycol concentration" means the concentration of ethylene glycol in the scrubber liquor of an acid-water scrubber control device established during a performance test when the scrubber achieves at least 99 percent control of ethylene oxide emissions.

(6) "Maximum liquor tank level" means the level of scrubber liquor in the acid- water scrubber liquor recirculation tank established during a performance test when the scrubber achieves at least 99 percent control of ethylene oxide emissions.

(7) "Modification" means either (A) any physical change in, method of operation of, or addition to, an existing permit unit that requires an application for a permit to construct and/or operate. Routine maintenance and/or repair shall not be considered a physical change. A change in the method of operation of equipment, unless previously limited by an enforceable permit condition, shall not include:

1. an increase in the production rate, unless such increases will cause the maximum design capacity of the equipment to be exceeded; or

2. an increase in the hours of operation; or,

3. a change in ownership of a source; or,

(B) the addition of any new permit unit at an existing source; or,

(C) the replacement of components if the fixed capital cost of the components exceeds 50 percent of the fixed capital cost that would be required to construct a comparable new source.

(8) "Oxidation temperature" means the temperature at the outlet point of a catalytic oxidation device or at the exhaust point from the combustion chamber for a thermal oxidation device.

(9) "Parametric monitoring" means monitoring of a specific operating parameter or parameters of a control device established to demonstrate that the control device is operating under conditions that meet a performance standard.

(b) Applicability. Effective January 28, 1999, any person who owns or operates a commercial sterilizer or an aerator using 2,000 pounds or more of ethylene oxide in any 12 consecutive month period after December 6, 1996, must comply with this section.

(c) Initial Notification. Any person subject to this regulation must provide the following information, in writing, within 30 days after the source becomes subject to the regulation, to the district and the Administrator unless the Administrator has waived this requirement:

(1) The name(s) and address of the owner and operator of the facility;

(2)The location of the facility;

(3) The number of sterilizers and aerators at the facility;

(4) An estimate of the facility-wide pounds of ethylene oxide used per year;

(5) A brief description of the nature, size, design, design operating capacity, expected control efficiency, and method of operation of the source, and control equipment, including operating design capacity, bypass valves, and an identification of each point of emission;

(6) Facilities complying with this regulation with a control technology other than acid-water scrubbers or catalytic or thermal oxidizers must provide information describing the design and operation of the air pollution control system including recommendations for the operating parameters to be monitored that will indicate proper operation and maintenance, where the site specific operating, reporting and monitoring parameters will be determined during the performance test;

(7) A statement of whether the source is a major or area source to the Administrator (If the source is a new major source or a major source undergoing modification, it must receive written approval in advance from the Administrator. The source may use the "Application for Construction or Modification" in Appendix 2 to satisfy the initial notification requirements); and

(8) An identification of the relevant standard, or other requirement, that is the basis of the notification and the source's compliance date.

(d) Requirements. No person subjected to these standards shall operate a sterilizer or aerator, unless all of the following requirements are satisfied:

(1) all ethylene oxide released from the sterilizer and aerator shall be controlled to meet the requirements shown in Table I for the applicable control category;

Table I Emissions Standards for Commercial Facilities

| Control Category (Facility-wide Pounds of Ethylene Oxide used per 12 consecutive months | Requirements for Ethylene Oxide Sterilizer Facilities (a) Emission Streams to be Controlled | (b) Emission Streams to be Tested | (c) Control Efficiency (%) or Outlet Concentration |
|---|---|---|---|
| equal to or greater than 2,000 and less than 5,000 | Sterilizer | Sterilizer | 99.9 |
| | Aerator | Aerator | 95.0 |
| | Back-draft Valve | | [FNa1] |
| | Aeration Only | | 95.0 |
| equal to or greater than 5,000 and less than 20,000 | Sterilizer | Sterilizer | 99.9 |
| | Aerator | Aerator | 99.0 |
| | Sterilizer Door Hood | | [FNa1] |
| | & Back-draft Valve | | [FNa1] |
| | Aeration Only | | 95.0 |
| Equal to or more than 20,000 | Sterilizer | Sterilizer | 99.9 |
| | Aerator | Aerator | 99.0 or 1 ppm max |
| | Sterilizer Door Hood | | [FNa1] |
| | Back-draft Valve | | 99.0 [FNa1] |
| | Aeration Only | | 99.0 |

[FNa1] Sources may show compliance by manifolding emissions to control device used to comply with sterilizer or aerator requirement.

(2) the exhaust systems and EtO supply including, but not limited to, any piping, ducting, fittings, valves, or flanges, through which ethylene oxide is conveyed to and from the sterilizer, aerator and the control device shall be leak-free; and

(3) Facilities must obtain a title V permit from the Administrator.

(e) Compliance Procedures.

(1) Compliance Testing Notification

The facility shall notify the Administrator 60 days before the date and time of any performance tests and monitoring system evaluations. In the event the source is unable to conduct the test on the date specified in the notification, the source shall notify the Administrator within 5 days prior to the scheduled performance test date.

(2) Compliance Testing

(A) Source testing conducted for the purpose of demonstrating compliance must be according to ARB Test Method 431 (title 17, CCR, section 94143) and the method evaluations cited therein or an acceptable source test method approved by the district with the concurrence of the Executive Officer of the Air Resources Board, and the Administrator. Before conducting a required source test, the source shall develop a site-specific test program summary, the test schedule, data quality objectives, and both an internal and external quality assurance program.

(B) The following procedures shall be used to determine the monitored parameters for acid-water scrubbers:

1. For determining the ethylene glycol concentration, the facility owner or operator shall establish the maximum ethylene glycol concentration as the ethylene glycol concentration averaged over three test runs; the sampling and analysis procedures in ASTM D 3695-88, Standard Test Method for Volatile Alcohols in Water by Direct Aqueous- Injection Gas Chromatography (1988).

2. For determining the scrubber liquor tank level, the sterilization facility owner or operator shall establish the maximum liquor tank level based on a single measurement of the liquor tank level during one test run.

(C) The following procedures shall be used to demonstrate the baseline temperature for catalytic oxidation units or thermal oxidation units and to continuously monitor the oxidation temperature as required by this measure.

1. The baseline temperature for the sterilization chamber vent shall be the temperature for the catalytic oxidation unit or oxidation temperature at the exhaust point from the thermal oxidation unit averaged over three test runs using the procedures in Test Method 431, and subsection (f)(2)(A).

2. The baseline temperature for the aeration room vent shall be the temperature for the catalytic oxidation unit or the oxidation temperature at the exhaust point from the thermal oxidation unit averaged over three test runs using the procedures in Test Method 431, and subsection (f)(2)(B).

3. The baseline temperature for the chamber exhaust vent shall be the temperature for the catalytic oxidation unit or oxidation temperature at the exhaust point from the thermal oxidation unit averaged over three test runs using the procedures in Test Method 431, and subsection (f)(2)(C).

(D) A facility seeking to demonstrate compliance with the standards with a control device other than an acid-water scrubber or catalytic or thermal oxidation unit shall submit: a description of the device; tests results collected in accordance with the test method cited within or an approved method verifying the performance of the device for controlling ethylene oxide emissions to the levels required by the applicable standards; the appropriate operating parameters that will be monitored; and the frequency of measuring and recording to establish continuous compliance with the standards. The

monitoring plan is subject to the Administrator's approval. The owner or operator of the sterilization facility shall install, calibrate, operate, and maintain the monitor(s) approved by the Administrator based on the information submitted by the owner or operator. The owner or operator shall include in the information submitted to the Administrator proposed performance specifications and quality assurance procedures for their monitors.

(E) A facility seeking to demonstrate compliance with the standards with a monitoring device or procedure other than a gas chromatograph shall provide to the Administrator information describing the operation of the monitoring device or procedure and the parameter(s) that would indicate proper operation and maintenance of the device or procedure.

(3) Compliance Testing Report

(A) The facility shall send the district and the Administrator an initial statement of compliance and test results within 60 days following the performance test.

(B) The facility shall submit (before a title V permit is issued) to the Administrator:

1. The methods that were used to determine compliance;

2. The results of any performance tests, continuous monitoring system (CMS) performance evaluations, and/or other monitoring procedures or methods that were conducted;

3. The methods that will be used for determining continuing compliance, including a description of monitoring and reporting requirements and test methods; and

4. A statement by the owner or operator of the affected existing, new, or modified source as to whether the source has complied with the relevant standard or other requirements.

(f) Monitoring Requirements. The owner or operator of a sterilizer or aerator shall monitor the parameters of the control system specified in this section to show compliance with the provisions of this regulation. If continuous monitoring systems are required, Appendix 1 shall be consulted for their application. All monitoring equipment shall be installed such that representative measurements of emissions or process parameters which affect emissions from the source are obtained. For monitoring equipment purchased from a vendor, verification of the operational status of the monitoring equipment shall include, at a minimum, completion of the manufacturer's written specifications or recommendations for installation, operation, maintenance, and calibration of the system.

(1) For sterilization facilities complying with the emissions standard through the use of an acid-water scrubber, the owner or operator shall either:

(A) Sample the scrubber liquor and analyze and record once per week the ethylene glycol concentration using the test procedures in subsection (e)(2)(B)1. Monitoring is required only if the scrubber unit has been operated during that week; or

(B) Measure and record once per week the level of the scrubber liquor in the recirculation tank. The owner or operator shall install, maintain, calibrate, and use a liquid level indicator to measure the scrubber liquor tank level (i.e., a visible depth gauge, a dipstick, a magnetic indicator, etc.).

(C) Operation of the facility with an ethylene glycol concentration in the scrubber liquor in excess of the maximum liquor tank level shall constitute a violation of the chamber exhaust vent standard for sources using 20,000 pounds or more of ethylene oxide per 12 consecutive months.

(2) For sterilization facilities complying with the emissions standards through the use of catalytic oxidation or thermal oxidation, the owner or operator shall continuously monitor and record the oxidation temperature at the outlet to the catalyst bed or at the exhaust point from the thermal combustion chamber using a temperature monitor. The temperature monitor shall be installed, calibrated, operated, and maintained to an accuracy within + 5.6° C ( + 10° F). The owner or operator shall verify the accuracy of the temperature monitor twice each calendar year with a

reference temperature monitor (traceable to National Institute of Standards and Technology (NIST) standard, or with an independent temperature measurement device dedicated for this purpose). During accuracy checking, the probe of the reference device shall be at the same location as that of the temperature monitor being tested.

For sources using 20,000 pounds or more of ethylene oxide per 12 consecutive months, operation of the facility with the oxidation temperature, averaged over the cycle, more than 5.6° C(10° F) below the baseline temperature shall constitute a violation of the chamber exhaust vent standard.

(A) For the sterilization chamber vent, a data acquisition system for the temperature monitor shall compute and record an average oxidation temperature over the length of the cycle (based on the length of the cycle used during the performance test) and a three-cycle block average every third cycle.

(B) For the aeration room vent, a data acquisition system for the temperature monitor shall compute and record an average oxidation temperature each hour and a 3-hour block average every third hour.

(C) For the back draft valve (chamber exhaust vent), a data acquisition system for the temperature monitor shall compute and record an average oxidation temperature over the length of the cycle (based on the length of the cycle used during the performance test).

(3) For sterilization facilities complying with the emission standards with the use of a control device other than acid-water scrubbers or catalytic or thermal oxidizers, the owner or operator shall monitor the parameters as approved by the Administrator.

(4) For facilities continuously measuring the ethylene oxide concentration from the aeration room (after a control device) or in the sterilization chamber immediately prior to the operation of the chamber exhaust, the owner or operator shall follow either paragraph (A) or (B) of this subsection:

(A) Measure and record once per hour the ethylene oxide concentration at the outlet to the atmosphere from the aeration room vent after any control device. The owner or operator shall compute and record a 3-hour average every third hour. The owner or operator will install, calibrate, operate, and maintain a gas chromatograph to measure ethylene oxide. The daily calibration requirements are required only on days when ethylene oxide emissions are vented to the control device from the aeration room vent.

(B) Measure and record the ethylene oxide concentration in the sterilization chamber immediately before the chamber exhaust is activated. The owner or operator shall install, calibrate, operate, and maintain a gas chromatograph to measure ethylene oxide concentration. The daily calibration requirements are required only on days when the chamber exhaust is activated.

(5) At facilities using 20,000 pounds or more of ethylene oxide per consecutive 12 months, seeking to comply with the standard by manifolding emissions from the chamber exhaust vent to a control device controlling emissions from another vent type (sterilization chamber vent and/or aeration room vent), shall monitor the control device to which emissions from the chamber exhaust vent are manifolded.

(g) Recordkeeping.

(1) The owner or operator of a sterilizer or aerator subject to the emissions standards in subsection (d) Table I shall maintain records of all reports and notifications (including compliance notifications) in a form suitable and readily available for expeditious inspection and review. The files shall be retained for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report or record. At a minimum the most recent 2 years of data shall be retained on site. The files shall contain:

(A) The occurrence and duration of each malfunction of the air pollution control equipment;

(B) All required measurements needed to demonstrate compliance with the standard (including, but not limited to, 15-minute averages of CMS data, raw performance testing measurements, and raw performance evaluation measurements, that support data that the source is required to report);

(C) All measurements as may be necessary to determine the conditions of performance tests and performance evaluations; and

(D) Any information demonstrating whether a source is meeting the requirements for a waiver of recordkeeping or reporting requirements.

(2) The source may apply for a waiver of recordkeeping or reporting requirements by submitting a written application to the Administrator. Until the waiver is granted, the source remains subject to the requirements of this section. The application must contain at a minimum:

(A) A request for an extension of compliance (if applicable);

(B) All required compliance progress reports or compliance status reports;

(C) Any excess emissions and CMS performance report; and

(D) Information to convince the administrator that a waiver of recordkeeping or reporting is warranted.

(h) Reporting. Any person who owns or operates a sterilizer shall furnish the following written report to the Administrator and to the district within thirty days after the date specified by the district.

(1) An annual report that demonstrates that the facility is a major or area source. The report shall contain at a minimum;

(A) the number of sterilizer cycles and the pounds of ethylene oxide used per cycle for each sterilizer during the consecutive 12-month reporting period from the district permit; or

(B) the total pounds of sterilant gas and the total pounds of ethylene oxide purchased, used, and returned in the consecutive 12-months from the date of the permit.

(2) Facilities shall provide semi-annual compliance reports to the Administrator that contain information on the compliance status of the source. This report should also contain the summary report in Appendix 1, (i). The report shall be signed by the responsible official who shall certify its accuracy.

(i) Construction or Modification.

The requirements of this section apply to sources subject to the emission standards in Table I. No person may construct or modify a source, without obtaining written approval, in advance, from the district and from the Administrator. For major sources, the application for approval of construction or modification may be used to fulfill the notification requirements. For specific requirements, see Appendix 2. In lieu of complying with requirements in Appendix 2, a facility may fulfill these requirements by complying with the permitting agency's new source review rule or policy, provided similar information is obtained.

**➡§ 93109. Airborne Toxic Control Measure for Emissions of Perchloroethylene from Dry Cleaning and Water-Repelling Operations.**

(a) Purpose.

The purpose of this control measure is to phase-out the use of perchloroethylene (Perc) from dry cleaning and water-repelling operations. Eliminating these emissions will further protect the public health, especially for Californians who live or work near dry cleaning and water-repelling facilities.

(b) Applicability.

This section applies to any person who sells or distributes Perc to California dry cleaners or who sells, distributes, installs, owns, or operates dry cleaning equipment in California that uses any solvent that contains Perc.

(c) Severability.

Each part of this section is deemed severable, and in the event that part of this section is held to be invalid, the remainder of this section shall continue in full force and effect.

(d) Definitions. The definitions in Health and Safety Code division 26, part 1, chapter 2, commencing with section 39010, shall apply, with the following additions:

(1) "Add-on secondary control machine" means a closed-loop machine with a secondary control system that is designed or offered as a separate retrofit system for use on multiple machine makes and models.

(2) "Adsorptive cartridge filter" means a replaceable cartridge filter that contains diatomaceous earth or activated clay as the filter medium.

(3) "Carbon adsorber" means an air cleaning device that consists of an inlet for exhaust gases from a dry cleaning machine; activated carbon in the form of a fixed bed, cartridge, or canister, as an adsorbent; an outlet for exhaust gases; and a system to regenerate or reclaim saturated adsorbent.

(4) "Cartridge filter" means a replaceable cartridge filter that contains one of the following as the filter medium: paper, activated carbon, or paper and activated carbon. A cartridge filter contains no diatomaceous earth or activated clay. Cartridge filters include, but are not limited to: standard filters, split filters, "jumbo" filters, and all carbon polishing filters.

(5) "Closed-loop machine" means dry cleaning equipment in which washing, extraction, and drying are all performed in the same single unit (also known as dry-to-dry) and which recirculates Perc-laden vapor through a primary control system with or without a secondary control system with no exhaust to the atmosphere during the drying cycle. A closed-loop machine may allow for venting to the ambient air through a fugitive control system after the drying cycle is complete and only while the machine door is open. A closed-loop machine includes a primary control machine, an add-on secondary control machine, or an integral secondary control machine.

(6) "Co-residential" means sharing a common wall, floor, or ceiling with a residence or located within the same building.

(7) "Contact information" means name, mailing address, facility location, phone number, and if applicable, email address and fax number.

(8) "Converted machine" means an existing vented machine that has been modified to be a closed-loop machine by eliminating the aeration step, installing a primary control system, and providing for recirculation of the Perc-laden vapor with no exhaust to the atmosphere or workroom during the drying cycle. A converted machine may allow for venting to the ambient air through a fugitive control system after the drying cycle is complete and only while the machine door is open.

(9) "Cool-down" means the portion of the drying cycle that begins when the heating mechanism deactivates and the refrigerated condenser continues to reduce the temperature of the air recirculating through the drum to reduce the concentration of Perc in the drum.

(10) "Desorption" means regeneration of an activated carbon bed, or any other type of vapor adsorber by removal of the adsorbed solvent using hot air, steam, or other means.

(11) "Dip tank operations" means the immersion of materials in a solution that contains Perc, for purposes other than dry cleaning, in a tank or container that is separate from the dry cleaning equipment.

(12) "District" means an air pollution control or air quality management district as defined in Health and Safety Code section 39025.

(13) "Drum" means the rotating cylinder or wheel of the dry cleaning machine that holds the materials being cleaned.

(14) "Dry cleaning" means the process used to remove soil, greases, paints, and other unwanted substances from materials with Perc.

(15) "Dry cleaning equipment" means any machine, device, or apparatus that uses Perc to dry clean materials or to remove residual solvent from previously cleaned materials. Dry cleaning equipment may include, but is not limited to a transfer machine, a vented machine, a self-service machine, a converted machine, a closed-loop machine, a reclaimer, a drying cabinet, or a dip tank.

(16) "Dry cleaning machine" means any dry cleaning equipment that is used to dry clean materials. A dry cleaning machine may include, but is not limited to a transfer machine, a vented machine, a self-service machine, or a closed-loop machine.

(17) "Dry cleaning system" means all of the following equipment, devices, or apparatus associated with any dry cleaning process: dry cleaning equipment; filter or purification systems; waste holding, treatment, or disposal systems; solvent supply systems; dip tanks; pumps; gaskets; piping, ducting, fittings, valves, or flanges that convey Perc vapors; and control systems.

(18) "Drying cabinet" means a housing in which materials previously cleaned with Perc are placed to dry and which is used only to dry materials that would otherwise be damaged by the heat and tumbling action of the drying cycle.

(19) "Drying cycle" means the process used to actively remove the Perc remaining in the materials after washing and extraction. For closed-loop machines, the heated portion of the cycle is followed by cool-down and may be extended beyond cool-down by the activation of a control system. The drying cycle begins when heating coils are activated and ends when the machine ceases rotation of the drum for a converted or primary control machine, or at the end of the adsorption cycle for a secondary control machine.

(20) "Environmental training program" means an initial course or a refresher course of the environmental training program for Perc dry cleaning operations that has been authorized by the Air Resources Board according to the requirements of title 17, California Code of Regulations, section 93110.

(21) "Existing facility" means any facility that operated dry cleaning equipment prior to January 1, 2008.

(22) "Facility" means an establishment where dry cleaning equipment is operated.

(23) "Fugitive control system" means a device or apparatus that collects fugitive Perc vapors from the machine door, button and lint traps, still, or other intentional openings of the dry cleaning equipment and routes those vapors to a device that reduces the mass of Perc prior to exhaust of the vapor to the atmosphere.

(24) "Gallons of perchloroethylene purchased" means the volume of Perc, in gallons, purchased for use with the dry cleaning equipment.

(25) "Halogenated-hydrocarbon detector" means a portable device capable of detecting vapor concentrations of Perc of 25 ppmv or less and indicating an increasing concentration by emitting an audible signal or visual indicator that varies as the concentration changes.

(26) "Integral secondary control machine" means a closed-loop machine that is designed and offered with an integral secondary control system.

(27) "Integral secondary control system" means a carbon adsorber, or an equivalent device that is designed and offered as an integral part of a production package with a specific make and model of dry cleaning machine and primary control system.

(28) "Liquid leak" means a leak of liquid containing Perc of more than 1 drop every 3 minutes.

(29) "Materials" means wearing apparel, draperies, linens, fabrics, textiles, rugs, leather, and other goods that are dry cleaned.

(30) "Muck cooker" means a device for heating Perc-laden waste material to volatilize and recover Perc.

(31) "New distributor" means any person who begins the sale of Perc, directly or indirectly, to dry cleaners in California after January 1, 2008.

(32) "New facility" means a facility that did not operate any dry cleaning equipment prior to January 1, 2008. Facilities that are relocated to another district shall be considered new facilities for the purposes of this control measure.

(33) "Perc distributor" means any person who, directly or indirectly, sells Perc or recycled Perc to California dry cleaners.

(34) "Perc manufacturer" means any person who produces and sells Perc for use in California.

(35) "Perchloroethylene (Perc)" means the substance with the chemical formula '$C_2$ $Cl_4$', also known by the name 'tetrachloroethylene', which has been identified by the Air Resources Board and listed as a toxic air contaminant in title 17, California Code of Regulations, section 93000.

(36) "Pounds of materials cleaned per load" means the total dry weight, in pounds, of the materials in each load dry cleaned at the facility, as determined by weighing each load on a scale prior to dry cleaning and recording the value.

(37) "Primary control machine" means a closed loop machine used for dry cleaning that is equipped with a primary control system.

(38) "Primary control system" means a refrigerated condenser, or an equivalent closed-loop vapor recovery system that reduces the concentration of Perc in the recirculating air.

(39) "Reasonably available", as it applies to a course for the environmental training program, means that the course is offered within 200 miles of the district boundaries and that all such courses have a capacity, in the aggregate, that is adequate to accommodate at least one person from each facility in the district required to certify a trained operator at that time.

(40) "Reclaimer" means a machine, device, or apparatus used only to remove residual Perc from materials that have been previously cleaned in a separate piece of dry cleaning equipment.

(41) "Recycled Perc" means Perc solvent that is recovered after initial use.

(42) "Refrigerated condenser" means a closed-loop vapor recovery system into which Perc vapors are introduced and recovered by cooling below the dew point of the Perc.

(43) "Relocated facilities" means a facility that moves from one location to another location within the boundaries of the same district.

(44) "Remove from service" means remove from the facility or render the dry cleaning equipment inoperable.

(45) "Residence" means any dwelling or housing which is owned, rented, or occupied by the same person for a period of 180 days or more, excluding short-term housing such as a motel or hotel room rented and occupied by the same person for a period of less than 180 days.

(46) "Secondary control system" means a device or apparatus (typically a carbon adsorber), that reduces the concentration of Perc in the recirculating air at the end of the drying cycle beyond the level achievable with a refrigerated condenser alone.

(47) "Self-service machine" means a dry cleaning machine that is loaded, activated, or unloaded by the customer.

(48) "Separator" means any device used to recover Perc from a water-Perc mixture.

(49) "Solvent" means a liquid substance other than water used in dry cleaning equipment.

(50) "Trained operator" means the owner, the operator, or an employee of the facility, who holds a record of completion for the initial course of an environmental training program and maintains her/his status by successfully completing the refresher courses as required.

(51) "Transfer machine" means a combination of dry cleaning equipment in which washing and extraction are performed in one unit and drying is performed in a separate unit.

(52) "Vapor adsorber" means a bed of activated carbon or other adsorbent into which Perc vapors are introduced and trapped for subsequent desorption.

(53) "Vapor leak" means an emission of Perc vapor from unintended openings in the dry cleaning system, as indicated by a rapid audible signal or visual signal from a halogenated-hydrocarbon detector or a concentration of Perc exceeding 50 ppmv as Perc as indicated by a portable analyzer.

(54) "Vented machine" means dry cleaning equipment in which washing, extraction, and drying are all performed in the same single unit and in which fresh air is introduced into the drum in the last step of the drying cycle and exhausted to the atmosphere, either directly or through a control device.

(55) "Wastewater treatment unit" means a device that treats Perc-contaminated wastewater through the addition of thermal or chemical energy, or through physical action, such as carbon or another type of adsorbent filtration system.

(56) "Water-repelling operations" means the treatment of materials with a Perc-containing solution for the purpose of making the material water resistant or water-repelling.

(57) "Workday" means any consecutive 24-hour period commencing at the same time each calendar day as defined in California Labor Code section 500(a).

(e) Prohibitions.

(1) No person shall sell, offer for sale, or initiate a new lease of any Perc dry cleaning machine for use in California on or after January 1, 2008.

(2) Transfer, vented, and self service Perc machines shall remain prohibited as they have been since November 1998.

(f) Requirements for New Facilities.

No person shall install or operate any Perc dry cleaning machine or engage in Perc water-repelling operations at a new facility on or after January 1, 2008.

(g) Relocated Facilities.

Upon approval by the district, existing facilities may relocate their Perc dry cleaning equipment for the purpose of moving from one location to another location within the boundaries of the same district.

(h) Requirements for Existing Facilities. The owner/operator of each existing facility shall meet the following applicable requirements as follows and as shown in Table 1.

(1) By January 1, 2008, drying cabinets and dip tanks shall not be used for Perc dry cleaning.

(2) By July 1, 2010, existing facilities shall remove from service all Perc converted machines.

(3) By July 1, 2010, existing facilities shall remove from service all Perc dry cleaning machines at co-residential locations.

(4) By July 1, 2010, or 15 years after the date of manufacture, whichever comes later, existing facilities shall remove from service all Perc closed-loop machines including primary control, add-on secondary control, and integral secondary control machines. If the age of the machine cannot be obtained, the machine shall be removed from service by July 1, 2010.

(5) By January 1, 2023, existing facilities shall remove from service all Perc dry cleaning machines, if not required to be removed from service earlier.

(i) Required Good Operating Practices. No person shall operate Perc dry cleaning equipment unless all of the following requirements are met:

(1)Environmental training requirements. Each Perc facility shall have one or more trained operators.

(A) A trained operator shall be the owner, the operator, or another employee of the facility, who successfully completes the initial course of an environmental training program to become a trained operator. Evidence of successful completion of the initial course shall be the original record of completion issued pursuant to title 17, California Code of Regulations, Section 93110.

(B) The trained operator shall be on site while the dry cleaning equipment is in operation.

(C) Each trained operator shall successfully complete the refresher course of an environmental training program at least once every three years. Evidence of successful completion of each refresher course shall be the date of the course and the instructor's signature on the original record of completion.

(D) If the Perc facility has only one trained operator and the trained operator leaves the employ of the facility, the facility shall:

1. Notify the district in writing within 15 days of the departure of the trained operator; and

2. Obtain certification for a replacement trained operator within 3 months.

3. If the district determines that the initial course of an environmental training program is not reasonably available, the district may extend the certification period for a replacement trained operator until 1 month after the course is reasonably available.

(2)Operation and maintenance requirements. The trained operator shall operate and maintain all components of the Perc dry cleaning system in accordance with the requirements of this section and the conditions specified in the facility's operating permit. For operations not specifically addressed, the components shall be operated and maintained in accordance with the manufacturer's recommendations.

(A) The district shall provide an operation and maintenance checklist to the Perc facility. Each operation and maintenance function and the date performed shall be recorded on the checklist. The operation and maintenance checklist shall include, at a minimum, the following requirements:

1. Refrigerated condensers shall be operated to ensure that exhaust gases are recirculated until the air-vapor stream temperature on the outlet side of the refrigerated condenser, downstream of any bypass, is less than or equal to 45$^o$ F (7.2$^o$ C).

i. Refrigerated condensers shall have a graduated or digital thermometer with a minimum range from 0$^o$ F (-18$^o$ C) to 150$^o$ F (66$^o$ C), which measures the temperature of the outlet vapor stream, downstream of any bypass of the condenser, and is easily visible to the operator.

2. Vapor adsorbers used as a primary control system or a secondary control system shall be operated to ensure that exhaust gases are recirculated at the temperature specified by the district, based on the manufacturer's recommendations for optimum adsorption. These vapor adsorbers shall be desorbed according to the conditions specified by the district in the facility's operating permit, including a requirement that no Perc vapors shall be routed to the atmosphere during routine operation or desorption.

3. Cartridge filters and adsorptive cartridge filters shall be handled using one of the following methods:

a. Drained in the filter housing, before disposal, for no less than: 24 hours for cartridge filters and 48 hours for adsorptive cartridge filters. If the filters are then transferred to a separate device to further reduce the volume of Perc, this treatment shall be done in a system that routes any vapor to a primary control system, with no exhaust to the atmosphere or workroom; or

b. Dried, stripped, sparged, or otherwise treated, within the sealed filter housing, to reduce the volume of Perc contained in the filter.

4. A still, and any muck cooker, shall not exceed 75 percent of its capacity, or an alternative level recommended by the manufacturer. A still, and any muck cooker, shall cool to 100$^o$ F (38$^o$ C) or less before emptying or cleaning.

5. Button and lint traps shall be cleaned and inspected for damage each workday and the lint placed in a tightly sealed container.

6. The facility owner/operator shall keep on site a spare set of gaskets for the loading door, still, lint trap, button trap, and water separator.

7. The facility owner/operator shall keep on site a spare lint filter.

8. All parts of the dry cleaning system where Perc may be exposed to the atmosphere or workroom shall be kept closed at all times except when access is required for proper operation and maintenance.

9. Wastewater treatment units shall be operated to ensure that no liquid Perc or visible emulsion is allowed to vaporize.

10. Carbon adsorbers in secondary control machines must be stripped or desorbed in accordance with manufacturer's instructions or at least weekly, whichever is more frequent.

(3)Leak check and repair requirements. The trained operator shall inspect the Perc dry cleaning system for vapor leaks. The district shall provide a leak inspection checklist to the Perc facility. The trained operator shall record the status of each component on the checklist.

(A)Weekly Leak Checks. The Perc dry cleaning system shall be inspected at least once per week for both liquid leaks and vapor leaks, using one of the following techniques:

1. A halogenated-hydrocarbon detector; or

2. A portable gas analyzer or an alternative method approved by the district.

(B)Annual Leak Checks. The Perc dry cleaning system shall be inspected at least once per calendar year for liquid and vapor leaks using a portable detector which gives quantitative results with less than ten (10) percent uncertainty at 50 ppmv of Perc. Upon request, a district may approve an annual leak check extension of 12 months or less.

(C) Any liquid leak or vapor leak that has been detected by the operator shall be noted on the checklist and repaired according to the requirements of this subsection. If the leak is not repaired at the time of detection, the leaking component shall be physically marked or tagged in a manner that is readily observable by a district inspector.

(D) Any liquid leak or vapor leak detected by the district, which has not been so noted on the checklist and marked on the leaking component of the dry cleaning system, shall constitute a violation of this section. For enforcement purposes, the district shall identify the presence of a vapor leak by determining the concentration of Perc with a portable analyzer according to ARB Test Method 21 (title 17, California Code of Regulations, section 94124).

(E) Any liquid leak or vapor leak shall be repaired immediately upon detection. For the purposes of this section a business day shall mean Monday through Friday, except holidays, as provided in Government Code of Regulation section 6700 and following.

1. If repair parts are not available at the facility, the parts shall be ordered within the next business day of detecting such a leak. Such repair parts shall be installed within two business days after receipt. A facility with a leak that has not been repaired by the end of the 7$^{th}$ business day after detection shall not operate the dry cleaning machine, until the leak is repaired, without a leak-repair extension from the district.

2. A district may grant a leak-repair extension to a facility, for a single period of 30 days or less, if the district makes the following findings:

a. The delay in repairing the leak could not have been avoided by action on the part of the facility;

b. The facility used reasonable preventive measures and acted promptly to initiate the repair;

c. The leak would not significantly increase exposure to Perc near the facility; and

d. The facility is in compliance with all other requirements of this section and has a history of compliance.

(j) Recordkeeping Requirements.

(1) The following records shall be retained by all Perc facilities for at least 5 years:

(A) For each dry cleaning machine, a log showing the date and the pounds of materials cleaned per load;

(B) Purchase and delivery receipts for the dry cleaning solvent indicating the volume in gallons;

(C) For add-on or integral secondary control machine operations: the start time and finish time of each regeneration; and the temperature of chilled air on the outlet side of the refrigerated condenser;

(D) The operation and maintenance checklists required by subsection (i)(2)(A) and the completed leak inspection checklists required by subsection (i)(3); and

(E) For liquid leaks or vapor leaks that were not repaired at the time of detection, a record of the leaking component(s) of the dry cleaning system awaiting repair and the action(s) taken to complete

the repair. The record shall include copies of purchase orders or other written records showing when the repair parts were ordered and/or service was requested.

(2) The manufacturer's operating manual for all components of the dry cleaning system shall be retained for the life of the equipment.

(3) The original record of completion of the environmental training program for each trained operator shall be retained during the employment of that person. A copy of the record of completion shall be retained for an additional period of two years beyond the separation of that person from employment at the facility.

(4) All records, or copies thereof, shall be maintained in English and shall be accessible at the facility at all times.

(k) Reporting Requirements.

(1) The owner or operator of each Perc facility shall prepare an annual report which covers the period of January 1 through December 31 of each year. The facility owner or operator shall furnish this annual report to the district by the date specified by the district. The annual report shall include the following information:

(A) A copy of the record of completion of the environmental training program for each trained operator;

(B) The total of the pounds of materials cleaned;

(C) The gallons of solvent purchased in the reporting period;

(D) The make, model, serial number, and date of manufacture of the dry cleaning machine;

(2) A district may exempt a source from subsection (k)(1) if the district maintains current equivalent information on the facility.

(*l*) Water-repelling Operations.

No person shall perform Perc water-repelling operations unless all materials are treated in a converted, primary control, add-on secondary control, or integral secondary control machine. Persons conducting water-repelling operations shall comply with the prohibitions and requirements in subsections (e), (f), (g), and (h).

Table 1. Summary of Perc Equipment Compliance Times for Existing Facilities

| Facility or Equipment Type | Date of Compliance[1] |
|---|---|
| Drying Cabinet, or Dip Tank | January 1, 2008 |
| Converted Machine | July 1, 2010 |
| Dry Cleaning Machines at Co-residential Facility | July 1, 2010 |
| **Facility or Equipment Type** | **Date of Compliance[1]** |
| Closed-loop Machines: Primary Control Machine; Add-on Secondary Control Machine; or Integral Secondary Control Machine | July 1, 2010 or 15 years after the date of manufacture, whichever comes later. July 1, 2010 if age of machine cannot be determined. |
| All Perc Dry Cleaning Machines | January 1, 2023 |

[1.] Final date(s) by which equipment shall be removed from service or use.

## ➡§ 93109.1. Requirements for Perc Manufacturers.

(a) Recordkeeping Requirement.

Perc manufacturers shall keep monthly sales records (with invoices) of the gallons of Perc sold for use in dry cleaning in California. These records shall be retained for at least 5 years and shall be made available to ARB or the district upon request.

(b) Reporting Requirement.

By January 1, 2008, Perc manufacturers shall report to ARB contact information for all their distributors who sell Perc for use in dry cleaning in California. If there are changes to their list of distributors, Perc manufacturers shall report the change(s) to ARB within 30 calendar days after the change has occurred.

(c) The provision of title 17, California Code of Regulation, section 93109, paragraphs (a), (b), (c), and (d) shall apply to this section.

## ➡§ 93109.2. Requirements for Perc Distributors.

(a) Recordkeeping Requirements.

(1) The following records shall be retained for at least 5 years and shall be made available to the ARB or the district upon request.

(A) For each dry cleaning facility, Perc distributors shall keep monthly sales records (with invoices) of the gallons of Perc and recycled Perc sold for use in dry cleaning in California.

(B) Perc distributors shall keep monthly purchase records (with invoices) of the gallons of Perc purchased for use in dry cleaning in California.

(C) Perc distributors shall keep contact information for each California dry cleaner that purchased Perc and recycled Perc.

(D) Perc distributors shall keep contact information for all their distributors who sell Perc and recycled Perc in California.

(b) Reporting Requirements.

(1) By January 1, 2008, Perc distributors shall report to ARB their contact information and, if applicable, the contact information for all their distributors who sell Perc and recycled Perc in California.

(2) Perc distributors shall report to ARB any change(s) in their contact information reported under (b)(1) above within 30 calendar days.

(3) By January 31 of each year, Perc distributors shall report to ARB the annual gallons of Perc and recycled Perc sold to California dry cleaners from January 1 through December 31 of the previous year.

(c) No later than 30 days after the issuance of an invoice from ARB, Perc distributors shall pay fees, based on the fee invoice schedule shown in Table 2.

(d) The provision of title 17, California Code of Regulation, section 93109, paragraphs (a), (b), (c), and (d) shall apply to this section.

Table 2. Perc Fee Invoice Schedule

| Year | Perc Fee per Gallon Sold (in U.S. Dollars) | Invoice Cycle | Approximate Invoice Date |
|---|---|---|---|
| 2004 | $3.00 | August 16, 2004 through December 31, 2004 | January 2005 |
| 2005 | $4.00 | January 1, 2005 through June 30, 2005<br>July 1, 2005 through December 31, 2005 | July 2005<br>January 2006 |
| 2006 | $5.00 | January 1, 2006 through December 31, 2006 | January 2007 |
| 2007 | $6.00 | January 1, 2007 through December 31, 2007 | February 2008 |
| 2008 | $7.00 | January 1, 2008 through December 31, 2008 | February 2009 |
| 2009 | $8.00 | January 1, 2009 through December 31, 2009 | February 2010 |
| 2010 | $9.00 | January 1, 2010 through December 31, 2010 | February 2011 |
| 2011 | $10.00 | January 1, 2011 through December 31, 2011 | February 2012 |
| 2012 | $11.00 | January 1, 2012 through December 31, 2012 | February 2013 |
| 2013 | $12.00 | January 1, 2013 through December 31, 2013 | February 2014 |
| 2014–2022 | $12.00 | January 1, 2014 through December 31, 2014, and each subsequent calendar year through 2022 | February 2015 and each February thereafter through February 2023 |


| *Year* | *Perc Fee per Gallon Sold (in U.S. Dollars)* | *Invoice Cycle* | *Approximate Invoice Date* |
|---|---|---|---|
| 2004 | $3.00 | August 16, 2004 *through* December 31, 2004 | January 2005 |
| 2005 | $4.00 | January 1, 2005 *through* June 30, 2005<br>July 1, 2005 *through* December 31, 2005 | July 2005<br>January 2006 |
| 2006 | $5.00 | January 1, 2006 *through* December 31, 2006 | January 2007 |
| 2007 | $6.00 | January 1, 2007 *through* December 31, 2007 | February 2008 |
| 2008 | $7.00 | January 1, 2008 *through* December 31, 2008 | February 2009 |
| 2009 | $8.00 | January 1, 2009 *through* December 31, 2009 | February 2010 |
| 2010 | $9.00 | January 1, 2010 *through* December 31, 2010 | February 2011 |
| 2011 | $10.00 | January 1, 2011 *through* December 31, 2011 | February 2012 |
| 2012 | $11.00 | January 1, 2012 *through* December 31, 2012 | February 2013 |
| 2013 | $12.00 | January 1, 2013 *through* December 31, 2013 | February 2014 |
| 2014–2022 | $12.00 | January 1, 2014 *through* December 31, 2014, and each subsequent calendar year *through* 2022 | February 2015 and each February thereafter *through* February 2023 |


**➡§ 93110. Environmental Training Program for Perchloroethylene Dry Cleaning Operations.**

(a) Definitions. For the purposes of this section, the definitions in 17 CCR, Section 93109 and the following definitions shall apply:

(1) "Course authorization request" means a written request topresent the initial course or refresher course which includes the items specified in subsection (c)(1).

(2) "Identification" means a document that includes a picture and a signature, such as a driver's license, State identification card, or passport.

(3) "Initial course" means training presented in accordance with the requirements of this section for the purpose of achieving the training objectives in subsection (g).

(4) "Instructor" means a person responsible for presenting the curriculum and verifying the identification of trainees.

(5) "Record of completion" means a certificate issued to a trainee who completes the initial course.

(6) "Refresher course" means training presented in accordance with the requirements of this section for the purpose of achieving the training objectives in subsection (h).

(7) "Trainee" means an individual who is taking the initial course or the refresher course.

(b) General Provisions.

(1) The Executive Officer of the ARB may authorize persons or organizations to present courses for individuals seeking to qualify, or maintain their qualification, as trained operators as required in 17 CCR, Section 93109(f)(3).

(2) Persons or organizations shall apply to ARB for authorization to present the initial course, the refresher course, or both courses. Applicants for authorization to present both courses shall file separate course authorization requests for each course.

(3) Authorization to present the course is granted to the person or organization that completes the authorization process and shall not be sold, traded, or transferred to any other person or organization.

(4) Persons or organizations authorized to offer these courses shall not require membership in an association or purchase of a product as a prerequisite to enrollment or successful completion of the course.

(5) Persons or organizations shall not represent any course as an authorized course unless the course is presented in accordance with the provisions of subsection (d) and the person or organization has been authorized by ARB to present the course.

(6) Failure to comply with the requirements of this section shall be cause for ARB to cancel authorization to present the course. Cancellation shall be effective 10 days following notice of cancellation. Such notice shall state the reasons for cancellation.

(7) Each authorization shall be effective for three years unless cancelled in accordance with the provisions of subsection (b)(6).

(c) Requirements for Authorization to Present Course(s).

(1) All of the following information and related materials shall be included in the course authorization request to be prepared and submitted to the ARB by any person or organization desiring to present an initial or refresher course:

(A) The minimum and maximum number of courses and locations of courses, by city or county, that the applicant will present, and the language in which they will be presented.

(B) A description of the instructional equipment and visual aids to be used.

(C) A statement of each instructor's qualifications. Instructors shall have demonstrated background in, and knowledge of, the following: operation and maintenance of dry cleaning systems, pollution prevention procedures, and environmental regulations pertaining to dry cleaning operations in California.

(D) A summary of topics to be presented, an hourly schedule indicating time to be spent on each topic, and the proposed instructor for each topic (including any special qualifications for that topic, if applicable).

(E) A copy of the proposed curriculum to be used if not using an ARB-developed curriculum.

(F) A written policy regarding refunds of prepaid fees, in the event the course is cancelled, rescheduled, or relocated.

(G) The method to be used to determine the identity of the trainee.

(H) Projected class size and a plan for achieving the trainee/instructor ratio specified in (d)(1)(C). If a greater ratio is proposed, a demonstration that the course objectives can be satisfied with the ratio.

(2) Review of course authorization requests.

(A) Within 30 calendar days of receipt of a course authorization request or receipt of additional information requested by the ARB in accordance with subsection (c)(2)(B), the ARB shall review the course authorization request and shall notify the applicant, in writing, that the request is either complete or incomplete.

(B) If incomplete, the ARB shall inform the applicant of the information which must be submitted to complete the request. If the applicant does not provide the information necessary to complete the request within 90 days of the date of notification, the application shall be automatically denied.

(C) The ARB shall evaluate each complete course authorization request in accordance with the requirements of subsection (c)(2)(D). Within 60 days of notification that the request is complete, the ARB shall notify the applicant in writing that the course is approved or disapproved. Notice of disapproval shall state the reasons for disapproval.

(D) The ARB shall evaluate each request for authorization to present a course in accordance with all of the following factors:

1. Adequacy of the information submitted pursuant to subsection (c)(1). The ARB shall be permitted to conduct an individual interview to verify instructor qualifications.

2. Conformity of course content with the training objectives in subsection (g) for the initial course and in subsection (h) for the refresher course.

3. Incorporation of trainee participation and hands-on training with halogenated-hydrocarbon detectors.

(d) Requirements for Presenting the Course.

(1) The authorized person or organization shall do all of the following:

(A) Ensure that the course incorporates all of the training objectives, specified in subsection (g) for an initial course and in subsection (h) for a refresher course.

(B) Ensure that the course is taught by an instructor whose qualifications have been approved by the ARB.

(C) Ensure that class size does not exceed 30 trainees per instructor or an alternative ratio approved by the ARB.

(D) Provide a copy of the fee refund policy to each trainee prior to registration.

(E) Verify the identify of the trainee.

(F) Provide a copy of the course manual to each trainee to keep.

(G) Distribute records of completion within 10 working days to persons who have completed the course. The records shall bear all the following:

1. The name of the person who completed the course.

2. The identification number and type of document presented to verify identity.

3. The date the initial course was completed.

4. The signature of the instructor who verified the trainee's identity and attendance for the initial course.

5. The date each refresher course was completed and the signature of the instructor for the refresher course.

(2) Within 10 working days after each course presentation, the authorized person or organization shall submit to ARB the information specified in subsection (e)(2) and a certification that the instructor verified the identify and attendance of each trainee.

(e) Records of Completion.

(1) ARB shall provide validated record blanks to the person or organization authorized to present training. Validated record blanks shall bear the seal of the State of California and a unique number. All damaged or unused records shall be returned to the ARB.

(2) ARB shall maintain all of the following information on each trained operator:

(A) The trained operator's full name.

(B) The type and document number of identification provided by the trainee and noted on the record of completion.

(C) The number of the record issued to the trained operator.

(D) The date the initial course was completed and the course instructor.

(E) The date each refresher course was completed and the course instructor.

(3) Replacement of lost records:

(A) A trained operator may request a replacement record from the ARB. The request shall be in writing and shall include all of the following information:

1. The full name and current mailing address of the trained operator.

2. The type and document number of the identification provided at the initial course.

3. The number of the original record issued to the trained operator.

4. The date and instructor of the most recent refresher course.

(B) Within 30 working days after receiving a complete request for a replacement record, ARB shall issue a replacement record or notify the applicant of reasons for not issuing a record.

(f) Appeals Process.

(1) A decision regarding denial of authorization may be appealed to the Executive Officer of the ARB. The appeal and all supporting documentation shall be submitted in writing to the Executive Officer within 30 days of the date of the notice of denial.

(2) Within 30 calendar days of receipt of the appeal, the Executive Officer shall respond to the appellant in writing with a decision and associated reasons upon which the decision is based.

(g) Training Objectives for the Initial Course. The primary objectives of the training course shall be to promote understanding of the airborne toxic control measure for emissions of perchloroethylene from dry cleaning operations (17 CCR, Section 93109), how to comply with that control measure, and the advantages of minimizing releases of perchloroethylene to the environment. The training shall include all of the following topics and shall be designed to help trainees develop the knowledge and ability to do all of the following:

(1) Determine and keep records, according to the requirements of 17 CCR, Section 93109, of:

(A) The pounds of materials cleaned per load,

(B) The gallons of perchloroethylene used,

(C) The facility mileage achieved, and

(D) Repairs made to leaking components of the dry cleaning system.

(2) Check for and recognize liquid leaks and vapor leaks, according to the requirements of 17 CCR, Section 93109.

(3) Complete a leak inspection checklist.

(4) Inspect the components of the dry cleaning system and identify maintenance needs.

(5) Operate and maintain the dry cleaning system, according to the requirements of 17 CCR, Section 93109.

(6) Properly operate waste water evaporators, according to the requirements of 17 CCR, Section 93109.

(7) Complete an operation and maintenance checklist.

(8) Prevent, contain, and properly clean up perchloroethylene spills.

(9) Identify and utilize waste disposal practices that minimize perchloroethylene loss to the environment.

(10) Understand how to achieve and maintain good perchloroethylene mileage.

(11) Distinguish between a transfer machine, a vented machine, a converted machine, and a closed-loop machine.

(12) Identify perchloroethylene health effects, recognize signs of excessive exposure, and know when personal protective equipment may be necessary to meet workers safety regulations.

(13) Use the course manual as a reference tool to determine applicable environmental regulations established by:

(A) ARB,

(B) Districts,

(C) Department of Toxic Substances Control,

(D) Water Resources Control Board and Regional Water Quality Control Boards.

(E) Local sanitation districts, and

(F) Department of Industrial Relations, Division of Occupational Safety and Health (Cal/OSHA regulations in Title 8 CCR).

(14) Recognize the purpose and types of the following:

(A) Refrigerated condensers,

(B) Vapor adsorbers,

(C) Secondary control systems,

(D) Fugitive control systems,

(E) Spill containment systems,

(F) Filtration systems, and

(G) Stills.

(h) Training Objectives for the Refresher Course. The refresher course shall include all of the following topics and activities:

(1) Improvements in dry cleaning equipment.

(2) Improvements in waste handling techniques and equipment.

(3) Improvements in perchloroethylene reclamation processes and equipment.

(4) Improvements in leak detectors.

(5) Updated environmental regulations.

(6) Other topics of interest to dry cleaners.

(7) Updates to the course manual.

**➡§ 93111. Chlorinated Toxic Air Contaminants Airborne Toxic Control Measure--Automotive Maintenance and Repair Activities.**

(a) Applicability

(1) Except as provided in subdivision (b), this section applies to any person who sells, supplies, offers for sale, or manufactures automotive consumer products for use in automotive maintenance or repair activities in California.

(2) This section also applies to the owner or operator of any automotive maintenance facility or automotive repair facility that uses automotive consumer products in California.

(b) Exemptions

(1) This section does not apply to any automotive consumer product manufactured in California for shipment and use outside of California.

(2) This section does not apply to a manufacturer or distributor who sells, supplies or offers for sale in California an automotive consumer product that does not comply with the standards specified in subdivision (d) if the manufacturer or distributor can demonstrate to the satisfaction of the Executive Officer both of the following: (A) the automotive consumer product is intended for shipment and use outside of California, and (B) the manufacturer or distributor has taken reasonable prudent precautions to assure that the automotive consumer product is not sold, offered for sale, or distributed in California. This subdivision (2) does not apply to manufacturers or distributors of automotive consumer products if the products are sold, supplied, or offered for sale by any person to retail outlets in California.

(3) This section does not apply to solvent cleaning machines or to liquid products as defined in subsection (c)(17) that are designed, labeled, promoted and advertised (expressed or implied) solely for use in a solvent cleaning machine.

(c) Definitions. For the purposes of this section, the following definitions apply:

(1) "Aerosol Product" means a pressurized spray system that dispenses product ingredients by means of a propellant or mechanically induced force. Any user-pressurized system that uses compressed air as a propellant is considered to be an "Aerosol Product". "Aerosol Product" does not include pump sprayers.

(2) "ASTM" means the American Society for Testing and Materials.

(3) "Automotive Consumer Product" for the purposes of this section, means any of the following chemically formulated aerosol products or liquid products used in automotive maintenance or repair activities: (A) brake cleaners, (B) carburetor or fuel-injection air intake cleaners, (C) engine degreasers, and (D) general purpose degreasers intended for use in automotive maintenance or repair activities.

(4) "Automotive Maintenance Facility or Automotive Repair Facility (Facility)" means any establishment at which a person repairs, rebuilds, reconditions, services, or maintains in any way, motor vehicles. "Facility" includes entities required to be registered by the California Department of Consumer Affairs, Bureau of Automotive Repair, and entities that service or repair a fleet of ten or more motor vehicles. "Facility" does not include private residences or entities that are involved only in motor vehicle body work or painting.

(5) "Automotive Maintenance or Repair Activities" means any service, repair, restoration, or modification activity to a motor vehicle in which cleaning or degreasing products could be used including, but not limited to, brake work, engine work, machining operations, and general degreasing of engines, motor vehicles, parts, or tools.

(6) "Brake Cleaner" means a cleaning product designed, labeled, promoted or advertised (expressed or implied) to remove oil, grease, brake fluid, brake pad material or dirt from motor vehicle brake mechanisms and parts.

(7) "Carburetor or Fuel-Injection Air Intake Cleaner" means a product designed, labeled, promoted or advertised (expressed or implied) to remove fuel deposits, dirt, or other contaminants from a carburetor, choke, throttle body of a fuel-injection system, or associated linkages. "Carburetor or fuel-injection air intake cleaner" does not include products designed exclusively to be introduced directly into the fuel lines or fuel storage tank prior to introduction into the carburetor or fuel injectors.

(8) "CAS Registry Number" is a unique accession number assigned by the Chemical Abstracts Service, a division of the American Chemical Society.

(9) "Chlorinated Toxic Air Contaminant" for the purposes of this section, means methylene chloride, perchloroethylene, or trichloroethylene.

(10) "Consumer" means any person who seeks, purchases, or acquires any automotive consumer product for use in automotive maintenance and repair activities. Persons acquiring an automotive consumer product for resale are not "consumers" for that product.

(11) "Distributor" means any person to whom an automotive consumer product is sold or supplied for the purposes of resale or distribution in commerce, except that manufacturers, retailers, and consumers are not distributors.

(12) "Engine Degreaser" means a cleaning product designed, labeled, promoted or advertised (expressed or implied) to remove grease, grime, oil or other contaminants from the external surfaces of engines and other mechanical parts.

(13) "Executive Officer" means the Executive Officer of the California Air Resources Board, or his or her delegate.

(14) "General Purpose Cleaner" means a product designed for general all-purpose cleaning, in contrast to cleaning products designed to clean specific substrates in certain situations. "General Purpose Cleaner" includes products designed for general floor cleaning, kitchen or counter top cleaning, and cleaners designed to be used on a variety of hard surfaces.

(15) "General Purpose Degreaser" means any product designed, labeled, promoted or advertised (expressed or implied) to remove or dissolve grease, grime, oil and other oil-based contaminants from a variety of motor vehicle substrates or surfaces or miscellaneous metallic parts. "General Purpose Degreaser" does not include "Engine Degreaser" or "General Purpose Cleaner".

(16) "Liquid" means a substance or mixture of substances which is capable of a visually detectable flow as determined under ASTM D-4359-90 which is incorporated by reference. "Liquid" does not include powders or other materials that are composed entirely of solid particles.

(17) "Liquid Product" means any product that is packaged and sold as a bulk liquid including liquid delivered by pump sprayers.

(18) "Manufacturer" means any person who imports, manufactures, assembles, produces, packages, repackages, or relabels an automotive consumer product.

(19) "Methylene Chloride" (CAS Registry Number 75-09-2) means the compound with the chemical formula '$CH_2$ $Cl_2$', also known by the name 'dichloromethane', which has been identified by the Air Resources Board and listed as a toxic air contaminant in section 93000, and which is a hazardous air pollutant designated as a toxic air contaminant in section 93001.

(20) "Motor Vehicle" means a self-propelled device by which any person or property may be propelled, moved, or drawn upon a highway, excepting a device moved exclusively by human power or used exclusively upon stationary rails or tracks. "Motor vehicle" does not include a self-propelled wheelchair, invalid tricycle, or motorized quadricycle when operated by a person who, by reason of physical disability, is otherwise unable to move about as a pedestrian.

(21) "Owner or Operator" means a person who is the owner or the operator of an automotive maintenance facility or an automotive repair facility.

(22) "Perchloroethylene (Perc)" (CAS Registry Number 127-18-4) means the compound with the chemical formula '$C_2$ $Cl_4$', also known by the name 'tetrachloroethylene', which has been identified by the Air Resources Board and listed as a toxic air contaminant in section 93000, and which is a hazardous air pollutant designated as a toxic air contaminant in section 93001.

(23) "Person" means "person" as defined in Health and Safety Code section 39047.

(24) "Pump Sprayer" means a packaging system in which the product ingredients within the container are not under pressure and in which the product is expelled only while a pumping action is applied to a button, trigger or other actuator.

(25) "Retailer" means any person who sells, supplies, or offers for sale automotive consumer products directly to consumers.

(26) "Retail Outlet" means any establishment at which automotive consumer products are sold, supplied, or offered for sale directly to consumers.

(27) "Solvent Cleaning Machine" means any device or piece of equipment with a capacity greater than 7.6 liters (2 gallons) that uses methylene chloride, perchloroethylene, or trichloroethylene to remove or dissolve grease, grime, oil and other oil-based contaminants from a variety of motor vehicle substrates or surfaces or miscellaneous metallic parts.

(28) "Trichloroethylene" (CAS Registry Number 79-01-6) means the compound with the chemical formula '$C_2$ $HCl_3$', also known by the name 'TCE', which has been identified by the Air Resources Board and listed as a toxic air contaminant in section 93000, and which is a hazardous air pollutant designated as a toxic air contaminant in section 93001.

(d) Standards for Automotive Consumer Products

(1) Except as provided in subdivision (b), subdivision (e) and subdivision (g), after the effective dates specified in the following Table of Standards no person shall sell, supply, offer for sale, or manufacture for sale in California any automotive consumer product that, at the time of sale or manufacture, contains methylene chloride, perchloroethylene or trichloroethylene.

Table of Standards

| Product Category | Effective Date |
|---|---|
| Brake Cleaner | June 30, 2001 |
| Carburetor or Fuel-injection Air Intake Cleaners | June 30, 2001 |
| Engine Degreaser | June 30, 2001 |
| General Purpose Degreaser | June 30, 2001 |

(2) For the purposes of subdivision (d)(1), a product "contains methylene chloride, perchloroethylene or trichloroethylene" if the product contains 1.0 percent or more by weight (exclusive of the container or packaging) of any one of the compounds methylene chloride, perchloroethylene, or trichloroethylene as determined by the test method specified in subdivision (h).

(3) No owner or operator of an automotive maintenance facility or automotive repair facility shall use an automotive consumer product prohibited under subdivision (d)(1) after December 31, 2002.

(e) Sell-through of products

(1) Notwithstanding the provisions of subdivisions (d)(1) and (d)(2), an automotive consumer product manufactured prior to the effective date specified for that product category in the Table of Standards may be sold, supplied, or offered for sale for up to 12 months after the specified effective date.

(2) This subdivision (e) does not apply to any automotive consumer product if that product does not display, on the product container or package, the date on which the product was manufactured or a code indicating such date.

(f) Administrative Requirements - Code-Dating

(1) Each manufacturer of an automotive consumer product subject to this section shall clearly display on each automotive consumer product container or package, the day, month, and year on which the

product was manufactured, or a code indicating the day, month, and year of manufacture. This date or code-date shall be displayed on each automotive consumer product container or package manufactured on or after May 4, 2001. No person shall erase, alter, deface or otherwise remove or make illegible any date or code-date from any regulated product container or package without the express authorization of the manufacturer.

(2) If a manufacturer uses a code indicating the date of manufacture for any automotive consumer product subject to this section, the manufacturer shall file an explanation of the code with the Executive Officer of the ARB no later than May 4, 2001.

(g) Variances

(1) Applications for variances.Any person who cannot comply with the requirements set forth in subdivision (d) because of extraordinary reasons beyond the person's reasonable control may apply in writing to the Executive Officer for a variance. The variance application shall set forth:

(A) the specific grounds upon which the variance is sought;

(B) the proposed date(s) by which compliance with the provisions of subdivision (d) will be achieved; and

(C) a compliance report reasonably detailing the method(s) by which compliance will be achieved.

(2) Notices and public hearings for variances. Upon receipt of a variance application containing the information required in subdivision (g)(1), the Executive Officer will hold a public hearing to determine whether, under what conditions, and to what extent, a variance from the requirements in subdivision (d) is necessary and will be permitted. The Executive Officer will initiate a hearing no later than 75 days after receipt of a variance application. The Executive Officer will send notice of the time and place of the hearing to the applicant by certified mail not less than 30 days prior to the hearing. The Executive Officer will submit notice of the hearing for publication in the California Regulatory Notice Register, and not less than 30 days prior to the hearing, the Executive Officer will send a notice to every person who requests such notice. The notice will state that the parties may, but need not, be represented by counsel at the hearing. At least 30 days prior to the hearing, the Executive Officer will make the variance application available to the public for inspection. The Executive Officer will allow interested members of the public a reasonable opportunity to testify at the hearing and will consider their testimony.

(3) Treatment of confidential information. Information submitted to the Executive Officer by a variance applicant may be claimed as confidential, and such information will be handled in accordance with the procedures specified in sections 91000-91022. The Executive Officer may consider such confidential information in reaching a decision on a variance application.

(4) Necessary findings for granting variances. The Executive Officer will not grant a variance unless the Executive Officer finds that:

(A) because of reasons beyond the reasonable control of the applicant, requiring compliance with subdivision (d) would result in extraordinary economic hardship to the applicant; and

(B) the public interest in mitigating the extraordinary hardship to the applicant by issuing the variance outweighs the public interest in avoiding any increased emissions of toxic air contaminants that would result from issuing the variance; and

(C) the compliance report proposed by the applicant can reasonably be implemented and will achieve compliance as expeditiously as possible.

(5) Variance orders. Any variance order will specify a final compliance date by which the requirements of subdivision (d) will be achieved. Any variance order will contain a condition that specifies increments of progress necessary to assure timely compliance, and such other conditions that the

Executive Officer, in consideration of the testimony received at the hearing, finds necessary to carry out the purposes of Division 26 of the Health and Safety Code.

(6) Situations in which variances will cease to be effective . A variance will cease to be effective upon failure of the party to whom the variance was granted to comply with any term or condition of the variance.

(7) Modification and revocation of variances Upon the application of any person, the Executive Officer may review, and for good cause, modify or revoke a variance from requirements of subdivision (d) after holding a public hearing in accordance with the provisions of subdivision (g)(2).

(h) Test Methods

(1) Air Resources Board Method 310, Determination of Volatile Organic Compounds (VOC) in Consumer Products, adopted September 25, 1997, and as last amended on September 3, 1999, is incorporated herein by reference. Sections 3.5 and 3.7 will be used to perform the testing to determine compliance with the requirements of this section.

(2) For the purposes of determining compliance with this section, "VOC" in Method 310 mean "chlorinated toxic air contaminant" as defined in this section.

(3) Alternative methods which are shown to accurately determine the concentration of methylene chloride, perchloroethylene, or trichloroethylene in a subject product or its emissions may be used upon written approval of the Executive Officer.

**➡§ 93112. Hexavalent Chromium and Cadmium Airborne Toxic Control Measure - Motor Vehicle and Mobile Equipment Coatings.**

(a) Applicability

(1) Except as provided in subdivision (b), this section applies to any person who sells, supplies, offers for sale, distributes, or manufactures coatings for use in motor vehicle and/or mobile equipment coating activities in California.

(2) This section also applies to the owner or operator of any motor vehicle and/or mobile equipment coating facility that uses motor vehicle and/or mobile equipment coatings in California.

(3) This section does not affect the sale, supply, or distribution of any new or used motor vehicles and/or mobile equipment or their component parts in or outside of California, regardless of the coatings that have been applied.

(b) Exemptions

(1) This section shall not apply to any motor vehicle and/or mobile equipment coatings manufactured in California for shipment and use outside of California.

(2) This section shall not apply to a manufacturer or distributor who sells, supplies, or offers for sale in California a motor vehicle and/or mobile equipment coating that does not comply with the standards specified in subdivision (d), as long as the manufacturer or distributor can demonstrate both that the motor vehicle and/or mobile equipment coating is for shipment and use outside of California, and that the manufacturer or distributor has taken adequate precautions to assure that the motor vehicle and/or mobile equipment coating is not distributed to California. This subsection (2) does not apply to motor vehicle and/or mobile equipment coatings that are sold, supplied, or offered for sale by any person to retail outlets in California.

(c) Definitions. For the purposes of this section, the following definitions apply:

(1) "Air Pollution Control Officer" means the Air Pollution Control Officer, or his or her delegate.

(2) "ASTM" means the American Society for Testing and Materials.

(3) "Cadmium" (Cd) means elemental cadmium and any compounds that contain cadmium.

(4) "Coating" means a material which is applied to a surface and which forms a film in order to beautify, preserve, repair, or protect such a surface.

(5) "Consumer" means any person who seeks, purchases, or acquires any motor vehicle and mobile equipment coating for use in motor vehicle and mobile equipment maintenance and repair activities. Persons acquiring a motor vehicle and mobile equipment coating for resale are not "consumers" of that coating.

(6) "Distributor" means any person to whom a motor vehicle and mobile equipment coating is sold or supplied for the purposes of resale or distribution in commerce, except that manufacturers, retailers, and consumers are not distributors.

(7) "Hexavalent Chromium" ($Cr^{+6}$) means elemental chromium in the +6 oxidation state and any compounds which contain chromium in the +6 oxidation state.

(8) "Highway" has the same meaning as defined in section 360 of the Vehicle Code.

(9) "Manufacturer" means any person who imports, manufactures, assembles, produces, packages, repackages, or relabels a motor vehicle or mobile equipment coating.

(10) "Mobile Equipment" means any equipment that is designed to be physically capable of being driven or drawn upon rails or a roadway, except for motor vehicles, and components for and from such equipment. Examples of Mobile Equipment include mobile cranes; bulldozers; concrete mixers; tractors; plows; pesticide sprayers; street cleaners; golf carts; hauling equipment used inside and around an airport, dock, depot, and industrial and commercial plants; trains; railcars; truck trailers; implements of husbandry; aircraft ground support equipment; all terrain vehicles; self-propelled wheelchairs, invalid tricycles, and invalid quadricycles.

(11) "Motor Vehicle" means passenger cars, truck cabs and chassis, vans, motorcycles, and buses.

(12) "Motor Vehicle and/or Mobile Equipment Coating Activity" means any manufacturing, service, maintenance, repair, restoration, or modification involving the application of coatings to motor vehicles and/or mobile equipment, except plating activities.

(13) "Motor Vehicle and/or Mobile Equipment Coating" means any coating used or advertised for use in motor vehicle and/or mobile equipment coating activities.

(14) "Motor Vehicle and/or Mobile Equipment Coating Facility (Facility)" means any establishment at which coatings are applied to motor vehicles and/or mobile equipment, including, but not limited to, OEM facilities, autobody repair/paint shops, production autobody paint shops, new car dealer repair/paint shops, fleet operator repair/paint shops, custom-made car fabrication facilities, truck body-builders, and residences.

(15) "OEM" means Original Equipment Manufacturer.

(16) "Owner or Operator" means a person who is the owner or the operator of a motor vehicle and/or mobile equipment coating facility.

(17) "Person" means "person" as defined in Health and Safety Code section 39047.

(18) "Retailer" means any person who sells, supplies, or offers for sale motor vehicle and/or mobile equipment coatings directly to consumers.

(19) "Retail Outlet" means any establishment at which motor vehicle and/or mobile equipment coatings are sold, supplied, or offered for sale directly to consumers.

(d) Standards for Motor Vehicle and/or Mobile Equipment Coatings

(1) Except as provided in subdivision (e), no person shall sell, supply, offer for sale, or manufacture for sale in California any motor vehicle and/or mobile equipment coating that contains hexavalent chromium or cadmium.

(2) No owner or operator of a motor vehicle and/or mobile equipment coating facility shall use or possess a motor vehicle and/or mobile equipment coating prohibited under subdivision (d)(1) after December 31, 2003.

(3) For the purposes of subdivision (d)(1), a coating "contains hexavalent chromium or cadmium" if hexavalent chromium or cadmium was introduced as a pigment or as an agent that imparts any property or characteristic to the coating during manufacturing, distribution, or use of the applicable coating.

(e) Sell-through of Coatings. Notwithstanding the provisions of subdivisions (d)(1) and (d)(2), a motor vehicle and/or mobile equipment coating manufactured prior to January 1, 2003, may be sold, supplied, or offered for sale through June 30, 2003. This subdivision does not apply to any motor vehicle and/or mobile equipment coating which does not display on the coating container or package the date on which the coating was manufactured, or a code indicating such date.

(f) Administrative Requirements - Code-Dating

(1) Each manufacturer of a motor vehicle and/or mobile equipment coating subject to section 93112 shall clearly display on each coating container or package, the day, month, and year on which the coating was manufactured, or a code indicating such date. No person shall erase, alter, deface or otherwise remove or make illegible any date or code-date from any regulated coating container or package without the express authorization of the manufacturer.

(2) If a manufacturer uses a code indicating the date of manufacture for any motor vehicle and/or mobile equipment coating subject to section 93112, an explanation of the code must be filed with the Air Pollution Control Officer no later than 30 days after the effective date of section 93112.

(g) Test Methods. The following test methods are incorporated by reference herein, and shall be used to test coatings subject to the provisions of this rule.

(1) American Society for Testing and Materials (ASTM) Method D3335-85a (1999), Standard Test Method for Low Concentrations of Lead, Cadmium, and Cobalt in paint by Atomic Absorption Spectroscopy.

(2) United States Environmental Protection Agency test method 7196A (July 1992), Chromium, Hexavalent (Calorimetric) and Test Method 3060A (December 1996), Alkaline Digestion for Hexavalent Chromium.

(3) Alternative methods which are shown to accurately determine the concentration of hexavalent chromium or cadmium compounds in a subject coating or its emissions may be used upon written approval of the Air Pollution Control Officer.

**➡§ 93113. Airborne Toxic Control Measure to Reduce Emissions of Toxic Air Contaminants from Outdoor Residential Waste Burning.**

(a) Applicability.

(1) Notwithstanding section 41806(a) of the Health and Safety Code, this regulation shall apply to persons conducting outdoor burning of combustible or flammable waste generated from inside residences and from outdoor activities associated with a residence, for the purpose of disposing of the waste.

(2) This regulation shall apply to persons lighting fires that burn combustible or flammable waste, as defined, outdoors in enclosed or partially enclosed vessels, such as incinerators or burn barrels, or in an open outdoor fire, such as in pits or in piles on the ground. This regulation shall not apply to persons lighting fires at the direction of a public officer in an emergency situation for public health or fire safety reasons, in accordance with section 41801 of the Health and Safety Code or other provisions of law.

(3) Except as provided in (a)(1) and (a)(2) above, nothing in this regulation shall affect the applicability of the provisions of article 2 and article 3, respectively, of chapter 3 of part 4 of division 26 of the Health and Safety Code.

(b) Definitions.

Terms used shall have the same definitions as in Health and Safety Code section 39010 et. seq., unless otherwise indicated. For purposes of this regulation, the following additional definitions shall apply:

(1) "Air Pollution Control District" (APCD), "Air Quality Management District" (AQMD), "air district," or "district" means an air pollution control district or an air quality management district created or continued in existence pursuant to Health and Safety Code section 40000 et seq.

(2) "APCO" means the Air Pollution Control Officer or the chief executive officer of the respective local air pollution control district or local air quality management district where the property is located, or a designated representative.

(3) "ARB" means the State of California Air Resources Board.

(4) "Air Toxic" means toxic air contaminants as defined in section 39655(a) of the Health and Safety Code.

(5) "Allowable Combustibles" means dry natural vegetation waste originating on the premises and reasonably free of dirt, soil and visible surface moisture.

(6) "Approved ignition device" means an instrument or material that will ignite open fires without the production of black smoke by the ignition device, as approved by the APCO.

(7) "Burn Barrel" means a metal container used to hold combustible or flammable waste materials so that they can be ignited outdoors for the purpose of disposal.

(8) "Census zip code" means a Zip CodeRtabulation area, a statistical geographic entity that approximates the delivery area for a U.S. Postal Service five-digit Zip Code. Census zip codes are aggregations of census blocks that have the same predominate Zip Code associated with the mailing addresses in the U.S. Census Bureau's Master Address File. Census zip codes do not precisely depict Zip Code delivery areas, and do not include all Zip Codes used for mail delivery. For the purposes of this regulation, census zip codes are referenced to the most recent national decennial census completed by the U.S. Census Bureau.

(9) "Chief fire official" means the ranking officer in the authority having jurisdiction with responsibility for fire protection within a defined geographic region of an air district, or his or her designee. The chief fire official may be a federal, state, county or municipal employee, depending on the extent of the fire jurisdiction within the exemption area. In State or Federal Responsibility Areas for wildland protection, the state or federal official's determination overrides county authority with regard to burn permits and the use of burn barrels or incinerators in exemption areas.

(10) "Combustible" means any substance capable of burning or any substance that will readily burn.

(11) "Disallowed Combustibles" means any waste or manufactured material, including but not limited to petroleum products and petroleum wastes; construction and demolition debris; coated wire; putrescible wastes; tires; tar; tarpaper; non-natural wood waste; processed or treated wood and wood products; metals; motor vehicle bodies and parts; rubber; synthetics; plastics, including plastic film, twine and pipe; fiberglass; styrofoam; garbage; trash; refuse; rubbish; disposable diapers; ashes; glass; industrial wastes; manufactured products; equipment; instruments; utensils; appliances; furniture; cloth; rags; paper or paper products; cardboard; boxes; crates; excelsior; offal; swill; carcass of a dead animal; manure; human or animal parts or wastes, including blood; and fecal- and food-contaminated material. For purposes of this regulation, dry, natural vegetation waste from yard maintenance is not a disallowed combustible, if reasonably free of dirt, soil and surface moisture.

(12) "Flammable" means capable of catching fire easily, or combustible.

(13) "Incinerator" means any device constructed of nonflammable materials, including containers commonly known as burn barrels, for the purpose of burning therein trash, debris, and other flammable materials for volume reduction or destruction.

(14) "Incorporated place" means the city, town, municipality or village reported to the U.S. Census Bureau as being legally in existence under California law at the time of the most recent national decennial census completed by the U.S. Census Bureau. For the purposes of calculating population density for this regulation, incorporated places include the FIPS Place Class Codes C1, C7 and C8, as defined by the U.S. Census Bureau in Technical Documentation, Summary File 1, October 2002.

(15) "Natural vegetation" means all plants, including but not limited to grasses, forbs, trees, shrubs, flowers, or vines that grow in the wild or under cultivation. Natural vegetation excludes vegetative materials that have been processed, treated or preserved with chemicals for subsequent human or animal use, including but not limited to chemically-treated lumber, wood products or paper products.

(16) "Open outdoor fire" means the combustion of combustible material of any type outdoors in the open, not in any enclosure, where the products of combustion are not directed through a flue.

(17) "Permissive burn day" or "burn day" means any day on which agricultural burning, including prescribed burning, is not prohibited by the ARB and agricultural and prescribed burning is authorized by the air district consistent with the Smoke Management Guidelines for Agricultural and Prescribed Burning, set forth in sections 80100-80330 of title 17 of the California Code of Regulations.

(18) "Population density" means the number of people per square mile within a census zip code. It is calculated as the number of people within a census zip code divided by the area of the census zip code after subtracting the population and area of all incorporated places within the census zip code.

(19) "Processed or treated wood and wood products" means wood that has been chemically treated to retard rot or decay or wood that has been modified with glues, laminates, stains, finishes, paints or glosses for use in furniture or for construction purposes, including but not limited to plywood, particle board, fencing or railroad ties. For the purposes of this regulation, dimensional lumber that has been air-dried or kiln-dried, with no preservatives or finishes added, is not considered processed or treated wood.

(20) "Residence" means a single- or two-family dwelling unit and the land and ancillary structures surrounding it.

(21) "Residential waste burning" means the disposal of the combustible or flammable waste from a single- or two-family dwelling unit or residence by burning outdoors. Residential waste burning is not agricultural, including prescribed, burning.

(22) "Waste" means all discarded putrescible and non-putrescible solid, semisolid, and liquid materials, including but not limited to petroleum products and petroleum wastes; construction and demolition debris; coated wire; tires; tar; tarpaper; wood waste; processed or treated wood and wood

products; metals; motor vehicle bodies and parts; rubber; synthetics; plastics, including plastic film, twine and pipe; fiberglass; styrofoam; garbage; trash; refuse; rubbish; disposable diapers; ashes; glass; industrial wastes; manufactured products; equipment; instruments; utensils; appliances; furniture; cloth; rags; paper or paper products; cardboard; boxes; crates; excelsior; offal; swill; carcass of a dead animal; manure; human or animal parts or wastes, including blood; fecal- and food-contaminated material; felled trees; tree stumps; brush; plant cuttings and prunings; branches; garden waste; weeds; grass clippings, pine needles, leaves and other natural vegetation waste.

(c) Prohibitions.

(1) No person shall burn disallowed combustibles from any property for the purpose of disposing of waste material outdoors at a residence, except as provided under subsection (e), "Exemptions", below.

(2) No person shall dispose of allowable combustibles from any property by burning them in a burn barrel or incinerator outdoors, except as provided under subsection (e), "Exemptions", below.

(3) No person shall ignite, or allow to become ignited, allowable combustibles unless using an approved ignition device.

(4) No person shall ignite, or allow to become ignited, allowable combustibles unless it is a permissive burn day in the air district where the residential waste burning is to take place.

(d) Compliance Schedule.

(1) For the purposes of Section 39666(d) of the Health and Safety Code, the date of adoption of this regulation shall be February 3, 2003.

(2) Unless an air district adopts an earlier effective date in accordance with section 39666(d) of the Health and Safety Code, the prohibitions set forth in subsection (c), above, shall become effective on January 1, 2004.

(3) The ARB shall conduct a public education and outreach program with respect to the regulation, the public health impacts of residential waste burning, and available alternatives to burning.

(e) Exemptions.

(1) No exemption from the prohibitions set forth in subsections (c)(1) and (c)(2) is available for an incorporated place in any census zip code or census zip code sub-area.

(2) Where the population density of the unincorporated area is less than or equal to 3.0 within the boundaries of any census zip code within an air district, the following exemptions apply:

(A) dry non-glossy paper and cardboard may be burned.

(B) burn barrels or incinerators may be used.

(3) Where the population density of the unincorporated area is greater than 3.0 but less than or equal to 10.0 within the boundaries of any census zip code within an air district, an air district may file a Request for Exemption to allow the burning of dry non-glossy paper and cardboard, or the use of burn barrels or incinerators, or both, subject to the provisions of (e)(10).

(4) As part of any Request for Exemption submitted under subsection (e)(3), an air district may create sub-areas within a census zip code where the prohibitions set forth in subsections (c)(1) and (c)(2) shall still apply, subject to the provisions of (e)(10).

(5) Where the population density is greater than 10.0 within the boundaries of any census zip code within an air district, an air district may file a Request for Exemption to create sub-areas within a

census zip code to allow the burning of dry non-glossy paper and cardboard, or the use of burn barrels or incinerators, or both, subject to the provisions of subsection (e)(10), provided the unincorporated sub-area has a population density of less than or equal to 3.0.

(6) The prohibition contained in subsection (c)(2) of this regulation shall not apply in any jurisdiction where a local ordinance or other enforceable mechanism is in effect on January 4, 2002 requiring the use of a burn barrel or incinerator to burn allowable combustibles, unless the local ordinance or other enforceable mechanism is subsequently rescinded or revoked.

(7) No air district shall file a Request for Exemption from subsection (c)(1) to allow the burning of dry non-glossy paper and cardboard if it is prohibited by air district rules in effect on January 4, 2002, or thereafter, or within a geographic area where is it prohibited by a local ordinance or other enforceable mechanism in effect January 4, 2002, or thereafter.

(8) No air district shall file a Request for Exemption from subsection (c)(2) to allow the use of a burn barrel or incinerator outdoors at a residence if it is prohibited by air district rules in effect on January 4, 2002, or thereafter, or within a geographic area where the use of a burn barrel or incinerator is prohibited by a local ordinance or other enforceable mechanism in effect January 4, 2002, or thereafter.

(9) On or before May 1, 2003, and every ten years thereafter, the ARB shall provide the air districts with a listing of all incorporated places and the population density within the boundaries of each census zip code contained within each air district.

(10) Any Request for Exemption by an air district shall be submitted in writing to the ARB on or before August 1, 2003, and every ten years thereafter, and shall include all of the following:

(A) a resolution, board order, or other enforceable mechanism adopted by the air district's Governing Board at a formal public meeting approving the Request for Exemption; and

(B) a written commitment from the air district to provide information on the hazards associated with residential waste burning, and ways to minimize these hazards, to all persons conducting residential waste burning by using either an air district or appropriate fire protection agency permit program for residential waste burning, or other equivalent mechanism; and

(C) to allow the burning of dry non-glossy paper and cardboard where the population density is greater than 3.0 but less than or equal to 10.0 within the boundaries of census zip codes within an air district, a finding by the air district that the exemption is necessary; and

(D) to allow the use of burn barrels or incinerators where the population density is greater than 3.0 but less than or equal to 10.0 within the boundaries of census zip codes within an air district, written documentation from the chief fire official with primary jurisdiction over fire safety within the area contained within the census zip code, including references to fire codes (where applicable), that an unacceptable fire risk would occur if the prohibition set forth in subsection (c)(2) for that area remained in effect; and

(E) for census zip code sub-areas, documentation showing the population, land area, and population density of each census zip code sub-area and providing specific, enforceable, geographic boundaries; and

(F) a list of the specific exemptions requested, for each applicable census zip code and census zip code sub-area, that are included in the Request for Exemption; and

(G) a finding that all incorporated places within the boundaries of the census zip code or census zip code sub-area within an air district are excluded from the Request for Exemption; and

(H) a finding that the air district considered the health risks to all populated communities that are within exempted areas; and

(I) a statement in the resolution, board order, or other enforceable mechanism specifying that there is no air district rule, local ordinance, or other enforceable mechanism that was in effect on January 4, 2002, or thereafter, that would otherwise prohibit the burning of dry-non-glossy paper and cardboard; and

(J) a statement in the resolution, board order, or other enforceable mechanism specifying that there is no air district rule, local ordinance, or other enforceable mechanism that was in effect on January 4, 2002, or thereafter, that would otherwise prohibit the use of a burn barrel or incinerator.

(11) The ARB shall review the air district's Request for Exemption for completeness and approve or reject the Request for Exemption, in writing, within 60 days after submittal.

(12) If the air district's Request for Exemption is not complete, the ARB shall return the Request for Exemption to the air district for amendment. The air district shall have an additional 30 days to submit a revised Request for Exemption.

(13) By January 1, 2004, and every ten years thereafter, the ARB shall make available a listing of all census zip codes and census zip code sub-areas within each air district that are exempt in accordance with the criteria specified in subsections (e)(2), (e)(3) and (e)(5) and as approved by the ARB, if required.

(14)(A) Except as provided in subsection (e)(14)(B), all exemptions shall terminate on December 31, 2013, and as appropriate every ten years thereafter, unless renewed by the air district pursuant to the procedures set forth in subsections (e)(10) through (e)(12).

(B) An exemption provided in accordance with subsection (e)(5) shall terminate on December 31, 2008, and as appropriate every five years thereafter, unless renewed by the air district pursuant to the procedures set forth in subsections (e)(10) through (e)(12).

**➡§ 93114. Airborne Toxic Control Measure To Reduce Particulate Emissions from Diesel-Fueled Engines - Standards for Nonvehicular Diesel Fuel.**

(a) Effective Date.

(1) No later than December 12, 2004, each air pollution control and air quality management district must:

(A) Implement and enforce the requirements of this section; or

(B) Propose its own airborne toxic control measure to reduce particulate emissions from diesel-fueled engines through standards for nonvehicular diesel fuel as provided in Health and Safety Code section 39666(d).

(b) Requirements. California nonvehicular diesel fuel is subject to all of the requirements of sections 2281 (sulfur content), 2282 (aromatic hydrocarbons content) and 2284 (lubricity) applicable to vehicular diesel fuel, and shall be treated under those sections as if it were vehicular diesel fuel; provided that these requirements do not apply to California diesel fuel offered, sold, or supplied solely for use in locomotives or marine vessels.

(c) Definitions.

(1) "California nonvehicular diesel fuel" means any diesel fuel that is not vehicular diesel fuel as defined respectively in sections 2281(b), 2282(b), or 2284(b) and that is sold or made available for use in engines in California.

(2) "Diesel fuel" means any fuel that is commonly or commercially known, sold or represented as diesel fuel, including any mixture of primarily liquid hydrocarbons that is sold or represented as suitable for use in an internal combustion, compression-ignition engine.

(3) "Marine vessel" has the meaning set forth in section 39037.1 of the Health and Safety Code.

### ➡§ 93115. Airborne Toxic Control Measure for Stationary Compression Ignition (CI) Engines.

The Air Toxic Control Measure (ATCM) for Stationary Compression Ignition (CI) Engines is set forth in sections 93115 through 93115.15, title 17, California Code of Regulations.

### ➡§ 93115.1. ATCM for Stationary CI Engines - Purpose.

The purpose of this airborne toxic control measure (ATCM) is to reduce diesel particulate matter (PM) and criteria pollutant emissions from stationary diesel-fueled compression ignition (CI) engines.

### ➡§ 93115.2. ATCM for Stationary CI Engines - Applicability.

(a) Except as provided in section 93115.3, this ATCM applies to any person who either sells a stationary CI engine, offers a stationary CI engine for sale, leases a stationary CI engine, or purchases a stationary CI engine for use in California, unless such engine is:

(1) a portable CI engine,

(2) a CI engine used to provide motive power,

(3) an auxiliary CI engine used on a marine vessel, or

(4) an agricultural wind machine as defined in section 93115.4.

(b) Except as provided in sections 93115.3 and 93115.9, this ATCM applies to any person who owns or operates a stationary CI engine in California with a rated brake horsepower greater than 50 (>50 bhp).

### ➡§ 93115.3. ATCM for Stationary CI Engines - Exemptions.

(a) The in-use stationary diesel agricultural emission standard and other requirements of section 93115.8(b) do not apply to agricultural emergency standby generator set engines equipped with nonresettable hour meters with a minimum display capability of 9,999 hours or remotely-located agricultural engines provided the owners or operators of such engines comply with the registration requirements of section 93115.8(c) and (d) and the applicable recordkeeping and reporting requirements of section 93115.10.

(b) The requirements specified in sections 93115.6, 93115.7, and 93115.10(a) do not apply to new or in-use stationary diesel-fueled CI engines used in agricultural operations.

(c) The requirements specified in section 93115.9 do not apply to single cylinder cetane test engines used exclusively to determine the cetane number of diesel fuels in accordance with American Society for Testing and Materials (ASTM) Standard D 613-03b, "Standard Test Method for Cetane Number of Diesel Fuel Oil," as modified on June 10, 2003, which is incorporated herein by reference.

(d) The requirements specified in sections 93115.6(b)(3) and 93115.7(b)(1) do not apply to in-use stationary diesel-fueled CI engines used in emergency standby or prime applications that, prior to January 1, 2005, were required in writing by the district to meet and comply with either minimum technology requirements or performance standards implemented by the district from the "Risk Management Guidance for the Permitting of New Stationary Diesel-Fueled Engines," October 2000, which is incorporated herein by reference.

(e) The requirements specified in section 93115.6(b)(3) do not apply to permitted in-use stationary emergency standby diesel-fueled CI engines that will be removed from service or replaced prior to January 1, 2009, in accordance with an approved Office of Statewide Health Planning Development (OSHPD) Compliance Plan that has been approved prior to January 1, 2009, except that this exemption does not apply to replacement engines for the engines that are removed from service under the OSHPD plan.

(f) The requirements in sections 93115.5 and 93115.7 do not apply to any stationary diesel-fueled CI engine used solely for the training and testing of United States Department of Defense (U.S. DoD) students or personnel of any U.S. military branch in the operation, maintenance, repair and rebuilding of engines when such training engines are required to be configured and designed similarly to counterpart engines used by the U.S. DoD, U.S. Military services or North Atlantic Treaty Organization (NATO) forces in combat, combat support, combat service support, tactical or relief operations used on land or at sea.

(g) The requirements specified in sections 93115.5 through 93115.8 do not apply to stationary diesel-fueled CI engines used solely on San Nicolas or San Clemente Islands. The Ventura County Air Pollution Control District Air Pollution Control Officer (APCO) and the South Coast Air Quality Management District APCO shall review the land use plans for the island in their jurisdiction at least once every five (5) years and withdraw this exemption if the land use plans are changed to allow use by the general public of the islands.

(h) The requirements specified in sections 93115.6 and 93115.7 do not apply to stationary diesel-fueled engines used solely on outer continental shelf (OCS) platforms located within 25 miles of California's seaward boundary.

(i) Exemption for Emergency Engines at Nuclear Facilities. The requirements in section 93115.6(b)(3) do not apply to any in-use stationary diesel-fueled CI engines for which all of the following criteria are met:

(1) the engine is an emergency standby engine;

(2) the engine is subject to the requirements of the U.S. Nuclear Regulatory Commission;

(3) the engine is used solely for the safe shutdown and maintenance of a nuclear facility when normal power service fails or is lost; and

(4) the engine undergoes maintenance and testing operations for no more than 200 hours cumulatively per calendar year.

(j) Request for Exemption for Low-Use Prime Engines Outside of School Boundaries. The district APCO may approve a Request for Exemption from the provisions of section 93115.7(b)(1) for any in-use stationary diesel-fueled CI engine located beyond school boundaries, provided the approval is in writing, and the writing specifies all of the following conditions to be met by the owner or operator:

(1) the engine is a prime engine;

(2) the engine is located more than 500 feet from a school at all times;

(3) the engine operates no more than 20 hours cumulatively per year. The district APCO may use a different number of hours for applying this exemption if the diesel-fueled CI engine is used solely to start a combustion gas turbine engine, provided the number of hours used for this exemption is justified by the district, on a case-by-case basis, with consideration of factors including, at a minimum, the operational requirements of a facility using a combustion gas turbine engine and the impacts of the emissions from the engine at any receptor location.

(k) The requirements in sections 93115.6(b)(3), 93115.7(b)(1), and 93115.8(b)(1) through (3) do not apply to in-use dual-fueled diesel pilot CI engines that use an alternative fuel or an alternative diesel fuel.

(l) The requirements in sections 93115.5, 93115.6(a)(3), 93115.6(b)(3), 93115.7(a)(1), 93115.7(b)(1), 93115.8(a)(1), 93115.8(b)(1) through (3), and 93115.9 do not apply to dual-fueled diesel pilot CI engines that use diesel fuel and digester gas or landfill gas.

(m) The requirements in sections 93115.6(b)(3), 93115.6(c)(2), 93115.7(b)(1), and 93115.8(b)(1) through (3) do not apply to in-use stationary diesel-fueled CI engines that have selective catalytic reduction systems.

(n) The requirements of section 93115.6(b)(3) do not apply to in-use emergency fire pump assemblies that are driven directly by stationary diesel-fueled CI engines and only operated the number of hours necessary to comply with the testing requirements of National Fire Protection Association (NFPA) 25 "Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems," 2002 edition, which is incorporated herein by reference.

(o) The requirements of sections 93115.5, 93115.6(a)(3), 93115.6(b)(3), 93115.7(a), and 93115.7(b) do not apply to any stationary diesel-fueled CI engine used to power equipment that is owned by the National Aeronautics and Space Administration (NASA) and used solely at manned-space flight facilities including launch, tracking, and landing sites, provided the District APCO approves this exemption in writing. This exemption only applies to diesel engines that power equipment which is maintained in the same configuration as similar equipment at all manned space flight facilities.

(p) Request for Delay in Implementation for Remotely Located In-Use Prime Engines. Prior to January 1, 2011, the district APCO may approve a Request for Delay in Implementation from the provisions of 93115.7(b)(1) until January 1, 2011, for any in-use stationary diesel-fueled CI engine, provided the approval is in writing, and the writing specifies all the following conditions to be met by the owner or operator:

(1) the engine is a prime engine, and

(2) the engine is located more than one mile from any receptor location, and

(3) the impacts of the emissions from the engine at any receptor location result in:

(A) a prioritization score of less than 1.0; and

(B) a maximum cancer risk of less than 1 in a million; and

(C) a maximum Hazard Index Value of less than 0.1.

(q) Request for Delay in Implementation of Fuel Requirements. Prior to January 1, 2006, the district may approve a Request for Delay in implementation from the provisions of 93115.5 until a date as determined by the district, for any new or in-use stationary diesel-fueled CI engine, provided the approval is in writing, and the writing specifies the following information:

(1) the engine is a new stationary CI engine or an in-use stationary

diesel-fueled CI engine, and

(2) the engine's fuel consumption rate, and

(3) the identification of the fuel in the fuel tank at the time of approval, and

(4) the specification of the fuel in the fuel tank at the time of approval; and

(5) the amount of fuel in the fuel tank at the time of approval; and

(6) the anticipated number of hours per year the engine is planned to be operated; and

(7) the date when compliance with the fuel use requirements specified in section 93115.5 is required.

(r) The operational restrictions in section 93115.6(a)(1) and 93115.6(b)(2) for engines located at or near school grounds do not apply to engines located at or near school grounds that also serve as the students' place of residence, e.g. boarding schools.

(s) The District may exempt any stock engine from the new stationary diesel-fueled engine emission standards in sections 93115.6(a), 93115.7(a), 93115.8(a), and 93115.9 provided the seller and the owner or operator demonstrate to the District's satisfaction that the following conditions are met:

(1) Seller:Any stationary diesel-fueled engine greater than 50 bhp shall meet the following standards and conditions:

(A) The stationary diesel-fueled engine emission standards in sections 93115.6(b), 93115.7(b), or 93115.8(b), or

(B) The Off-Road CI Engine Certification Standards (title 13, CCR, section 2423) immediately preceding the transition to new standards for an off-road CI engine of the same model year and maximum rated power, and

(C) The engine was delivered to California no more than twelve months immediately preceding the transition to new standards for an off-road CI engine of the same model year and maximum rated power, and

(D) The engine was sold no later than six months after the effective date of the new standards for an off-road CI engine of the same model year and maximum rated power,

(2) Owner/operator:

(A) The date of acquisition of the stock engine is no later than six months from the date an emission standard applicable to new engines becomes more stringent than the emission standard to which the stock engine is certified.

(B) The date the District determines the application is complete for an Authority to Construct permit is no later than six months after the date of acquisition of the stock engine.

(t) The requirements of section 93115.6(b)(3) do not apply to any stationary diesel-fueled emergency standby engine primarily used by the United States Department of Defense located at Command Destruct (CT) sites until December 31, 2009. Each stationary diesel-fueled emergency standby engine at a CT site will be allowed a maximum of 100 total annual hours of operation for maintenance and testing.

(u) Upon the prior written approval of the APCO, the requirements of this ATCM do not apply to stationary CI engines used exclusively:

(1) as engine test cells and test stands for testing burners, CI engines, or CI engine components, e.g., turbochargers;

(2) for operation or performance testing of fuels, fuel additives, or emission control devices at research and development facilities; or

(3) for maintenance, repair, or rebuild training at educational facilities.

(v) If the Executive Officer or District finds, based on verifiable information from the engine manufacturer, distributor, or dealer, that current model year engines meeting the current emission standards are not available or not available in sufficient numbers or in a sufficient range of makes, models, and horsepower ratings, then the Executive Officer or the District may allow the sale, purchase, or installation of a new stock engine meeting the emission standards from the previous model year to meet the new stationary diesel-fueled engine emission standards pursuant to title 13 of the California Code of Regulations or 40 CFR part 89.

**➡§ 93115.4. ATCM for Stationary CI Engines - Definitions.**

(a) For purposes of this ATCM, the following definitions apply:

(1) "Agricultural Operations" means the growing and harvesting of crops or the raising of fowl or animals for the primary purpose of making a profit, providing a livelihood, or conducting agricultural research or instruction by an educational institution. Agricultural operations do not include activities involving the processing or distribution of crops or fowl.

(2) "Agricultural Wind Machine" means a stationary CI engine-powered fan used exclusively in agricultural operations to provide protection to crops during cold weather by mixing warmer atmospheric air with the colder air surrounding a crop.

(3) "Air Pollution Control Officer (APCO)" means the person appointed pursuant to section 40750 of the Health and Safety Code, or his or her designated representative.

(4) "Alternative Fuel" means natural gas, propane, ethanol, or methanol.

(5) "Alternative Diesel Fuel" means any fuel used in a CI engine that is not commonly or commercially known, sold, or represented by the supplier as diesel fuel No. 1-D or No. 2-D, pursuant to the specifications in ASTM D 975-81, "Standard Specification for Diesel Fuel Oils," as modified in May 1982, which is incorporated herein by reference, or an alternative fuel, and does not require engine or fuel system modifications for the engine to operate, although minor modifications (e.g., recalibration of the engine fuel control) may enhance performance. Examples of alternative diesel fuels include, but are not limited to, biodiesel and biodiesel blends that do not meet the definition of CARB diesel fuel; Fischer-Tropsch fuels; emulsions of water in diesel fuel; and fuels with a fuel additive, unless:

(A) the additive is supplied to the engine fuel by an on-board dosing mechanism, or

(B) the additive is directly mixed into the base fuel inside the fuel tank of the engine, or

(C) the additive and base fuel are not mixed until engine fueling commences, and no more additive plus base fuel combination is mixed than required for a single fueling of a single engine.

(6) "Approach Light System with Sequenced Flasher Lights in Category 1 and Category 2 Configurations (ALSF-1 and ALSF-2)" means high intensity approach lighting systems with sequenced flashers used at airports to illuminate specified runways during category II or III weather conditions, where category II means a decision height of 100 feet and runway visual range of 1,200 feet, and category III means no decision height or decision height below 100 feet and runway visual range of 700 feet.

(7) "Baseline" or "Baseline Emissions" means the emissions level of a diesel-fueled engine using CARB diesel fuel as configured upon initial installation or by January 1, 2003, whichever is later.

(8) "California Air Resources Board (CARB) Diesel Fuel" means any diesel fuel that meets the specifications of vehicular diesel fuel, as defined in title 13, CCR, sections 2281 and 2282.

(9) "Cancer Risk" means the characterization of the probability of developing cancer from exposure to environmental chemical hazards, in accordance with the methodologies specified in "The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments," Office of Environmental Health Hazard Assessment, August 2003, which is incorporated herein by reference.

(10) "Carbon Monoxide (CO)" is a colorless, odorless gas resulting from the incomplete combustion of hydrocarbon fuels.

(11) "Certified Engine" means a CI engine that is certified to meet the Tier 1, Tier 2, Tier 3, or Tier 4 Off-Road CI Certification Standards as specified in title 13, California Code of Regulations, section 2423.

(12) "Combustion Gas Turbine Engine" means an internal combustion gas or liquid-fueled device consisting of compressor, combustor, and power turbine used to power an electrical generator.

(13) "Compression Ignition (CI) Engine" means an internal combustion engine with operating characteristics significantly similar to the theoretical diesel combustion cycle. The regulation of power by controlling fuel supply in lieu of a throttle is indicative of a compression ignition engine.

(14) "Control Area" means any electrical region in California that regulates its power generation in order to balance electrical loads and maintain planned interchange schedules with other control areas.

(15) "Cumulatively" means the aggregation of hours or days of engine use, and any portion of an hour or day of engine use, toward a specified time limit(s).

(16) "Date of Acquisition or Submittal" means

(A) For each District-approved permit or district registration for stationary sources, the date the application for the district permit or the application for engine registration was submitted to the District. Alternatively, upon District approval, the date of purchase as defined by the date shown on the front of the cashed check, the date of the financial transaction, or the date on the engine purchasing agreement, whichever is earliest.

(B) For an engine subject to neither a district permit program nor a district registration program for stationary sources, the date of purchase as defined by the date shown on the front of the cashed check, the date of the financial transaction, or the date on the engine purchasing agreement, whichever is earliest.

(17) "Date of Initial Installation" means one of the following, whichever is earlier:

(A) the date on which a new stationary diesel-fueled engine is placed at a location in order to be operated for the first time since delivery from the manufacturer or distributor, or,

(B) for the purposes of a Tier 1- or Tier 2-certified stationary diesel agricultural engine complying with section 93115.8(b)(3) emission standards, one year from January 1 of the model year of such engine.

(18) "Demand Response Program (DRP)" means a program for reducing electrical demand using an Interruptible Service Contract (ISC) or Rolling Blackout Reduction Program (RBRP).

(19) "Diesel Fuel" means any fuel that is commonly or commercially known, sold, or represented by the supplier as diesel fuel, including any mixture of primarily liquid hydrocarbons - organic compounds consisting exclusively of the elements carbon and hydrogen - that is sold or represented by the supplier as suitable for use in an internal combustion, compression-ignition engine.

(20) "Diesel-Fueled" means fueled by diesel fuel, CARB diesel fuel, or jet fuel, in whole or part.

(21) "Diesel Particulate Filter (DPF)" means an emission control technology that reduces PM emissions by trapping the particles in a flow filter substrate and periodically removes the collected particles by either physical action or by oxidizing (burning off) the particles in a process called regeneration.

(22) "Diesel Particulate Matter (PM)" means the particles found in the exhaust of diesel-fueled CI engines as determined in accordance with the test methods identified in section 93115.14.

(23) "Digester Gas" is any gas derived from anaerobic decomposition of organic matter.

(24) "Direct-Drive Emergency Standby Fire Pump Engines" means engines directly coupled to pumps exclusively used in water-based fire protection systems.

(25) "District" has the same meaning as defined in the California Health and Safety Code, Section 39025.

(26) "DRP Engine" means an engine that is enrolled in a DRP.

(27) "Dual-fuel Diesel Pilot Engine" means a dual-fueled engine that uses diesel fuel as a pilot ignition source at an annual average ratio of less than 5 parts diesel fuel to 100 parts total fuel on an energy equivalent basis.

(28) "Dual-fuel Engine" means any CI engine that is engineered and designed to operate on a combination of alternative fuels, such as compressed natural gas (CNG) or liquefied petroleum gas (LPG) and diesel fuel or an alternative diesel fuel. These engines have two separate fuel systems, which inject both fuels simultaneously into the engine combustion chamber.

(29) "Emergency Standby Engine" means a stationary engine that meets the criteria specified in (A) and (B) and any combination of (C) or (D) or (E) below:

(A) is installed for the primary purpose of providing electrical power or mechanical work during an emergency use and is not the source of primary power at the facility; and

(B) is operated to provide electrical power or mechanical work during an emergency use; and

(C) is operated under limited circumstances for maintenance and testing, emissions testing, or initial start-up testing, as specified in sections 93115.6(a), (b), and (c); or

(D) is operated under limited circumstances in response to an impending outage, as specified in sections 93115.6(a), (b), and (c); or

(E) is operated under limited circumstances under a DRP as specified in section 93115.6(c).

(30) "Emergency Use" means providing electrical power or mechanical work during any of the following events and subject to the following conditions:

(A) the failure or loss of all or part of normal electrical power service or normal natural gas supply to the facility:

1. which is caused by any reason other than the enforcement of a contractual obligation the owner or operator has with a third party or any other party; and

2. which is demonstrated by the owner or operator to the district APCO's satisfaction to have been beyond the reasonable control of the owner or operator;

(B) the failure of a facility's internal power distribution system:

1. which is caused by any reason other than the enforcement of a contractual obligation the owner or operator has with a third party or any other party; and

2. which is demonstrated by the owner or operator to the district APCO's satisfaction to have been beyond the reasonable control of the owner or operator;

(C) the pumping of water or sewage to prevent or mitigate a flood or sewage overflow;

(D) the pumping of water for fire suppression or protection;

(E) the powering of ALSF-1 and ALSF-2 airport runway lights under category II or III weather conditions;

(F) the pumping of water to maintain pressure in the water distribution system for the following reasons:

1. a pipe break that substantially reduces water pressure; or

2. high demand on the water supply system due to high use of water for fire suppression; or

3. the breakdown of electric-powered pumping equipment at sewage treatment facilities or water delivery facilities; or

(G) the day-of-launch system checks and launch tracking performed (in parallel with grid power) by the United States Department of Defense at Command Destruct sites (also known as "CT" sites) that occur within the 24-hour time period associated with the scheduled time of the launch.

(31) "Emission Control Strategy" means any device, system, or strategy employed with a diesel-fueled CI engine that is intended to reduce emissions including, but not limited to, particulate filters, diesel oxidation catalysts, selective catalytic reduction systems, fuel additives used in combination with particulate filters, alternative diesel fuels, and any combination of the above.

(32) "End User" means any person who purchases or leases a stationary diesel-fueled engine for operation in California. Persons purchasing engines for the sole purpose of resale are not considered "end users."

(33) "Enrolled" means either of the following, whichever applies:

(A) the ISC is in effect during the specified time period for an engine in an ISC; or

(B) the date the engine is entered into the RBRP.

(34) "Executive Officer" means the executive officer of the Air Resources Board, or his or her designated representative.

(35) "Facility" means one or more contiguous properties, in actual physical contact or separated solely by a public roadway or other public right-of-way, under common ownership on which engines operate.

(36) "Fuel Additive" means any substance designed to be added to fuel or fuel systems or other engine-related engine systems such that it is present in-cylinder during combustion and has any of the following effects: decreased emissions, improved fuel economy, increased performance of the engine; or assists diesel emission control strategies in decreasing emissions, or improving fuel economy or increasing performance of the engine.

(37) "Generator Set" means a CI engine coupled to a generator that is used as a source of electricity.

(38) "Hazard Index" means the sum of individual acute or chronic hazard quotients for each substance affecting a particular toxicological endpoint, as determined in accordance with the requirements of "The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments,"

Office of Environmental Health Hazard Assessment, August 2003, which is incorporated herein by reference.

(39) "HC" means the sum of all hydrocarbon air pollutants.

(40) "Health Facility" has the same meaning as defined in Section 1250 of the California Health and Safety Code.

(41) "In-Use" means a CI engine that is not a "new" CI engine.

(42) "Initial Start-up Testing" means operating the engine or supported equipment to ensure their proper performance either:

(A) for the first time after installation of a stationary diesel-fueled CI engine at a facility, or

(B) for the first time after installation of emission control equipment on an in-use stationary diesel-fueled CI engine.

(43) "Interruptible Service Contract (ISC)" means a contractual arrangement in which a utility distribution company provides lower energy costs to a nonresidential electrical customer in exchange for the ability to reduce or interrupt the customer's electrical service during a Stage 2 or Stage 3 alert, or during a transmission emergency.

(44) "Jet Fuel" means fuel meeting any of the following specifications:

(A) ASTM D 1655-02, "Standard Specification for Aviation Turbine Fuels," which is incorporated herein by reference. Jet fuels meeting this specification include Jet A, Jet A-1, and Jet B;

(B) Military Detail (MIL-DTL) 5624T, "Turbine Fuels, Aviation, Grades Jet Propellant (JP) JP-4, JP-5, and JP-5/JP8 ST," dated September 18, 1998, which is incorporated herein by reference; and

(C) Military Test (MIL-T) 83133E, "Turbine Fuels, Aviation, Kerosene Types, North Atlantic Treaty Organization (NATO) F-34 (JP-8), NATO F-35, and JP-8+100," dated April 1, 1999, which is incorporated herein by reference.

(45) "Landfill Gas" means any gas derived through any biological process from the decomposition of waste buried within a waste disposal site.

(46) "Location" means any single site at a facility.

(47) "Maintenance and Testing" means operating an emergency standby CI engine to:

(A) evaluate the ability of the engine or its supported equipment to perform during an emergency. "Supported Equipment" includes, but is not limited to, generators, pumps, transformers, switchgear, and breakers; or

(B) facilitate the training of personnel on emergency activities; or

(C) provide electric power for the facility when the utility distribution company takes its power distribution equipment offline to service that equipment for any reason that does not qualify as an emergency use; or

(D) provide additional hours of operation to perform testing on an engine that has experienced a breakdown or failure during maintenance. Upon air district approval, these additional hours of operation will not be counted in the maximum allowable annual hours of operation for the emergency standby CI engine that provided the electrical power.

(48) "Maximum Rated Power" means the maximum brake kilowatt output of an engine as determined from any of the following, whichever is the greatest:

(A) the manufacturer's sales and service literature,

(B) the nameplate of the unit, or

(C) if applicable, as shown in the application for certification of the engine.

(49) "Model Year" means the stationary CI engine manufacturer's annual production period, which includes January 1st of a calendar year, or if the manufacturer has no annual production period, the calendar year.

(50) "New" or "New CI Engine" means the following:

(A) a stationary CI engine installed at a facility after January 1, 2005, including an engine relocated from an off-site location after January 1, 2005, except the following shall be deemed in-use engines:

1. a replacement stationary CI engine that is installed to temporarily replace an in-use engine while the in-use engine is undergoing maintenance and testing, provided the replacement engine emits no more than the in-use engine, and the replacement engine is not used more than 180 days cumulatively in any 12-month rolling period;

2. an engine for which a district-approved application for a district permit or engine registration for stationary sources was submitted to the District prior to January 1, 2005, even though the engine was installed after January 1, 2005;

3. an engine that is one of four or more engines owned by an owner or operator and is relocated prior to January 1, 2008, to an offsite location that is owned by the same owner or operator;

4. an engine, or replacement for an engine, used in agricultural operations that is relocated within the same facility or to another facility under the same owner or operator for use in agricultural operations, unless the engine is sited where an engine is not currently located and has not been previously located.

5. an engine installed at a facility prior to January 1, 2005, and relocated within the same facility after January 1, 2005.

6. a model year 2004 or 2005 engine purchased prior to January 1, 2005, for use in California. The date of purchase is defined by the date shown on the front of the cashed check, the date of the financial transaction, or the date on the engine purchasing agreement, whichever is earliest.

7. a greater than 50 bhp Tier 1- or Tier 2-certified stationary diesel agricultural engine installed after January 1, 2005, shall be considered a new engine subject to the requirements of section 93115.8(a) until 12 years after the date of initial installation, at which time, it shall be considered an in-use engine subject to the requirements of section 93115.8(b)(3).

(B) a stationary CI engine that has been reconstructed after January 1, 2005, shall be deemed a new engine unless the sum of the costs of all individual reconstructions of that engine after January 1, 2005, is less than 50% of the lowest-available purchase price, determined at the time of the most recent reconstruction, of a complete, comparably-equipped new engine (within ±/- 10% of the reconstructed engine's brake horsepower rating).

For purposes of this definition, the cost of reconstruction and the cost of a comparable new engine shall not include the cost of equipment and devices required to meet the requirements of this ATCM.

(51) "Nitrogen Oxides (NOx)" means compounds of nitric oxide (NO), nitrogen dioxide ($NO_2$), and other oxides of nitrogen, which are typically created during combustion processes and are major contributors to smog formation and acid deposition.

(52) "Noncertified Engine" means a CI engine that is not certified to Off-Road CI Certification Standards as specified in title 13, California Code of Regulations, section 2423.

(53) "Non-Methane Hydrocarbons (NMHC)" means the sum of all hydrocarbon air pollutants except methane.

(54) "Outer Continental Shelf (OCS)" shall have the meaning provided by section 2 of the Outer Continental Shelf Lands Act (43 U.S.C. Section 1331 et seq.).

(55) "Owner or Operator" means any person subject to the requirements of this ATCM, including but not limited to:

(A) an individual, trust, firm, joint stock company, business concern, partnership, limited liability company, association, or corporation including but not limited to, a government corporation; and

(B) any city, county, district, commission, the state or any department, agency, or political subdivision thereof, any interstate body, and the federal government or any department or agency thereof to the extent permitted by law.

(56) "Particulate Matter (PM)" means the particles found in the exhaust of CI engines, which may agglomerate and adsorb other species to form structures of complex physical and chemical properties.

(57) "Portable CI Engine" means a compression ignition (CI) engine designed and capable of being carried or moved from one location to another, except as provided in section 93115.4(a)(72). Indicators of portability include, but are not limited to, wheels, skids, carrying handles, dolly, trailer, or platform. The provisions of this definition notwithstanding, an engine with indicators of portability that remains at the same facility location for more than 12 consecutive rolling months or 365 rolling days, whichever occurs first, not including time spent in a storage facility, shall be deemed a stationary engine.

(58) "Prime CI Engine" means a stationary CI engine that is not an emergency standby CI engine.

(59) "Prioritization Score" means the numeric value used to rank facilities in order of their potential to pose significant risk to human receptors. Prioritization scores are calculated per the process described in the "CAPCOA Air Toxics 'Hot Spots' Program Facility Prioritization Guidelines," California Air Pollution Control Officer's Association (CAPCOA), July 1990, which is incorporated herein by reference.

(60) "Rated Brake Horsepower (bhp)" means:

(A) for in-use engines, the maximum brake horsepower output of an engine as determined from any of the following, whichever reflects the engine's configuration as of January 1, 2005:

1. the manufacturer's sales and service literature;

2. the nameplate of the engine; or

3. if applicable, as shown in the application for certification of the engine;

(B) for new engines, the maximum brake horsepower output of an engine as determined from any of the following, whichever reflects the engine's configuration upon the engine's initial installation at the facility:

1. the manufacturer's sales and service literature;

2. the nameplate of the engine; or

3. if applicable, as shown in the application for certification of the engine.

(61) "Receptor location" means any location outside the boundaries of a facility where a person may experience exposure to diesel exhaust due to the operation of a stationary diesel-fueled CI engine. Receptor locations include, but are not limited to, residences, businesses, hospitals, daycare centers, and schools.

(62) "Reconstruction" means the rebuilding of the engine or the replacement of engine parts, including pollution control devices, but excluding operating fluids; lubricants; and other consumables such as air filters, fuel filters, and glow plugs that are subject to regular replacement.

(63) "Remotely-Located Agricultural Engine" means a stationary diesel-fueled CI engine used in agriculture that is:

(A) located in a federal ambient air quality area that is designated as unclassifiable or attainment for all PM and ozone national ambient air quality standards (title 40, Code of Federal Regulations, section 81.305); and

(B) located more than one-half mile from any residential area, school, or hospital.

(64) "Residential Area" means three or more permanent residences (i.e., homes) located anywhere outside the facility's property.

(65) "Rolling Blackout Reduction Program (RBRP)" means a contractual arrangement, implemented by the San Diego Gas and Electric Company (SDG&E) in San Diego County, in which SDG&E pays a nonresidential electrical customer, in accordance with the most current RBRP Schedule, in exchange for the customer using its diesel-fueled engines to reduce its electrical demand upon request by SDG&E during either a Stage 3 alert or a transmission emergency.

(66) "Rotating Outage" means a controlled, involuntary curtailment of electrical power service to consumers as ordered by the Utility Distribution Company.

(67) "School" or "School Grounds" means any public or private school used for purposes of the education of more than 12 children in kindergarten or any of grades 1 to 12, inclusive, but does not include any private school in which education is primarily conducted in a private home(s). "School" or "School Grounds" includes any building or structure, playground, athletic field, or other areas of school property but does not include unimproved school property.

(68) "Selective Catalytic Reduction (SCR) System" means an emission control system that reduces NOx emissions through the catalytic reduction of NOx in diesel exhaust by injecting nitrogen-containing compounds into the exhaust stream, such as ammonia or urea.

(69) "Seller" means any person who sells, leases, or offers for sale any stationary diesel-fueled engine directly to end users.

(70) "Stage 2 Alert" means an official forecast or declaration by the California Independent System Operator that the operating reserves of electrical power will fall or have fallen below 5 percent.

(71) "Stage 3 Alert" means an official forecast or declaration by the California Independent System Operator that the operating reserves of electrical power will fall or have fallen below 1.5 percent.

(72) "Stationary CI Engine" means a CI engine that is designed to stay in one location, or remains in one location. A CI engine is stationary if any of the following are true:

(A) the engine or its replacement is attached to a foundation, or if not so attached, resides at the same location for more than 12 consecutive months. Any engine such as backup or standby engines, that replaces an engine at a location and is intended to perform the same or similar function as the engine(s) being replaced, shall be included in calculating the consecutive time period. The cumulative time of all engine(s), including the time between the removal of the original engine(s) and installation of the replacement engine(s), will be counted toward the consecutive time period; or

(B) the engine remains or will reside at a location for less than 12 consecutive months if the engine is located at a seasonal source and operates during the full annual operating period of the seasonal source, where a seasonal source is a stationary source that remains in a single location on a permanent basis (at least two years) and that operates at that single location at least three months each year; or

(C) the engine is moved from one location to another in an attempt to circumvent the 12 month residence time requirement. The period during which the engine is maintained at a storage facility shall be excluded from the residency time determination.

(73) "Stationary Source" means any building, structure, facility, or installation that emits any pollutant directly or as fugitive emissions. Building, structure, facility, or installation include all pollutant emitting activities which:

(A) are under the same ownership or operation, or which are owned or operated by entities which are under common control; and

(B) belong to the same industrial grouping either by virtue of falling within the same two-digit standard industrial code or by virtue of being part of a common industrial process, manufacturing process, or connected process involving a common raw material; and

(C) are located on one or more contiguous or adjacent properties.

(74) "Stock Engine" means a certified CI engine that has never been placed in service and is part of a supply of engines offered for sale, rent, or lease by a person or firm who offers for sale, rent, or lease engines and related equipment for profit.

(75) "Transmission Constrained Area" means the specific location that is subject to localized operating reserve deficiencies due to the failure of the normal electrical power distribution system.

(76) "Transmission Emergency" means an official forecast or declaration by the California Independent System Operator that the available electrical power transmission capacity to a transmission constrained area is insufficient and may result in an uncontrolled local grid collapse in the transmission constrained area.

(77) "Utility Distribution Company" means one of several organizations that control energy transmission and distribution in California. Utility Distribution Companies include, but are not limited to, the Pacific Gas and Electric Company, the San Diego Gas and Electric Company, Southern California Edison, Los Angeles Department of Water and Power, the Imperial Irrigation District, and the Sacramento Municipal Utility District.

(78) "Verification Procedure, Warranty and In-Use Compliance Requirements for In-Use Strategies to Control Emissions from Diesel Engines (Verification Procedure)" means the ARB regulatory procedure codified in title 13, CCR, sections 2700-2710, which is incorporated herein by reference, that engine manufacturers, sellers, owners, or operators may use to verify the reductions of diesel PM or NOx from in-use diesel engines using a particular emission control strategy.

(79) "Verified Diesel Emission Control Strategy" means an emission control strategy, designed primarily for the reduction of diesel PM emissions, which has been verified pursuant to the "Verification Procedure."

**➡§ 93115.5. ATCM for Stationary CI Engines - Fuel and Fuel Additive Requirements for New and In-Use Stationary CI Engines That Have a Rated Brake Horsepower of Greater Than 50 (>50 bhp).**

(a) As of January 1, 2006, except as provided for in sections 93115.3 and 93115.5(c), no owner or

operator of a new stationary CI engine or an in-use prime stationary diesel-fueled CI engine shall fuel the engine with any fuel unless the fuel is one of the following:

(1) CARB Diesel Fuel; or

(2) an alternative diesel fuel that is:

(A) biodiesel;

(B) a biodiesel blend that does not meet the definition of CARB Diesel Fuel;

(C) a Fischer-Tropsch fuel; or

(D) an emulsion of water in diesel fuel; or

(3) any alternative diesel fuel that is not identified in section 93115.5(a)(2) above and meets the requirements of the Verification Procedure; or

(4) an alternative fuel; or

(5) CARB Diesel Fuel used with fuel additives that meets the requirements of the Verification Procedure; or

(6) any combination of 93115.5(a)(1) through (5) above.

(b) As of January 1, 2006, except as provided for in section 93115.3, no owner or operator of an in-use emergency standby stationary diesel-fueled CI engine shall add to the engine or any fuel tank directly attached to the engine any fuel unless the fuel is one of the following:

(1) CARB Diesel Fuel; or

(2) an alternative diesel fuel that is:

(A) biodiesel;

(B) a biodiesel blend that does not meet the definition of CARB Diesel Fuel;

(C) a Fischer-Tropsch fuel; or

(D) an emulsion of water in diesel fuel; or

(3) any alternative diesel fuel that is not identified in section 93115.5(b)(2) above and meets the requirements of the Verification Procedure; or

(4) an alternative fuel; or

(5) CARB Diesel Fuel used with fuel additives that meets the requirements of the Verification Procedure; or

(6) any combination of 93115.5(b)(1) through (5) above.

(c) Upon the effective date of the amendments to add in-use stationary diesel-fueled agricultural engine requirements to the ATCM, no owner or operator of an in-use stationary diesel-fueled CI engine used in agricultural operations shall fuel the engine with any fuel unless the fuel is one of the following:

(1) CARB Diesel Fuel; or

(2) an alternative diesel fuel that is:

(A) biodiesel;

(B) a biodiesel blend that does not meet the definition of CARB Diesel Fuel;

(C) a Fischer-Tropsch fuel; or

(D) an emulsion of water in diesel fuel; or

(3) any alternative diesel fuel that is not identified in section 93115.5(c)(2) above and meets the requirements of the Verification Procedure; or

(4) an alternative fuel; or

(5) CARB Diesel Fuel used with fuel additives that meets the requirements of the Verification Procedure; or

(6) any combination of 93115.5(c)(1) through (5) above.

**➡§ 93115.6. ATCM for Stationary CI Engines - Emergency Standby Diesel-Fueled CI Engine (>50 bhp) Operating Requirements and Emission Standards.**

(a) New Emergency Standby Diesel-Fueled CI Engine (>50 bhp) Operating Requirements and Emission Standards.

(1) At-School and Near-School Provisions. No owner or operator shall operate a new stationary emergency standby diesel-fueled CI engine for non-emergency use, including maintenance and testing, during the following periods:

(A) whenever there is a school sponsored activity, if the engine is located on school grounds, and

(B) between 7:30 a.m. and 3:30 p.m. on days when school is in session, if the engine is located within 500 feet of school grounds. Section 93115.6(a)(1) does not apply if the engine emits no more than 0.01 g/bhp-hr of diesel PM.

(2) No owner or operator shall operate any new stationary emergency standby diesel-fueled CI engine (>50 bhp) in response to the notification of an impending rotating outage, unless all the following criteria are met:

(A) the engine's permit to operate allows operation of the engine in anticipation of a rotating outage, or the District has established a policy or program that authorizes operation of the engine in anticipation of a rotating outage; and

(B) the Utility Distribution Company has ordered rotating outages in the control area where the engine is located, or has indicated it expects to issue such an order at a specified time; and

(C) the engine is located in a specific location that is subject to the rotating outage; and

(D) the engine is operated no more than 30 minutes prior to the time when the Utility Distribution Company officially forecasts a rotating outage in the control area; and

(F) the engine operation is terminated immediately after the Utility Distribution Company advises that a rotating outage is no longer imminent or in effect.

(3) New Engines: As of January 1, 2005, except as provided in section 93115.3, no person shall sell, offer for sale, purchase, or lease for use in California any new stationary emergency standby diesel-

fueled CI engine that has a rated brake horsepower greater than 50 unless it meets the following applicable emission standards, and no person shall operate any new stationary emergency standby diesel-fueled CI engine that has a rated brake horsepower greater than 50, unless it meets all of the following applicable operating requirements and emission standards specified in 93115.6(a)(3) (which are summarized in Table 1):

(A) Diesel PM Standard and Hours of Operating Requirements.

1. General Requirements: New stationary emergency standby diesel-fueled engines (>50 bhp) shall:

a. emit diesel PM at a rate less than or equal to 0.15 g/bhp-hr; or

b. meet the diesel PM standard, as specified in the Off-Road Compression Ignition Engine Standards for off-road engines with the same maximum rated power (title 13 CCR, section 2423), in effect on the date of acquisition or submittal, as defined in section 93115.4 whichever is more stringent; and

c. not operate more than 50 hours per year for maintenance and testing purposes, except as provided in 93115.6(a)(3)(A)2. This section does not limit engine operation for emergency use and for emission testing to show compliance with 93115.6(a)(3).

2. The District may allow a new emergency standby diesel-fueled CI engine (> 50 hp) to operate up to 100 hours per year for maintenance and testing purposes on a site-specific basis, provided the diesel PM emission rate is less than or equal to 0.01 g/bhp-hr.

Table 1. Summary of the Emission Standards and Operating Requirements for New Stationary Emergency Standby Diesel-Fueled CI Engines > 50 BHP

(See section 93115.6(a)(3))

| *Diesel PM* | | | | *Other Pollutants* |
|---|---|---|---|---|
| | *Maximum Allowable Annual Hours of Operation for Engines Meeting Diesel PM Standards* | | | |
| *Diesel PM Standards (g/bhp-hr)* | *Emergency Use* | *Non-Emergency Use* | | *HC, NOx, NMHC+NOx, and CO Standards (g/bhp-hr)* |
| | | *Emission Testing to show compliance*[2] | *Maintenance & Testing (hours/year)* | |
| ≤0.15[1] | Not Limited by ATCM[3] | Not Limited by ATCM[3] | 50 | Off-Road CI Engine Certification Standards for an off-road engine of the model year and horsepower rating of the engine installed to meet the applicable PM standard, or Tier 1 standards.[4] |
| ≤0.01[1] | Not Limited by ATCM[3] | Not Limited by ATCM[3] | 51 to 100 (Upon approval by the District) | |

1. Or off-road certification standard (title 13 CCR section 2423) for an off-road engine with the same maximum rated power, whichever is more stringent.
2. Emission testing limited to testing to show compliance with section 93115.6(a)(3).
3. May be subject to emission or operational restrictions as defined in current applicable district rules, regulations, or policies.
4. The option to comply with the Tier 1 standards is available only if no off-road engine certification standards have been established for an off-road engine of the same model year and maximum rated power as the new stationary emergency standby diesel-fueled CI engine.

(B) HC, NOx, NMHC + NOx, and CO standards: New stationary emergency standby diesel-fueled CI engines (> 50 bhp) must meet the standards for off-road engines of the same model year and maximum rated power as specified in the Off-Road Compression-Ignition Engine Standards (title 13, CCR, section 2423). If no standards have been established for an off-road engine of the same model year and maximum rated power as the new stationary emergency standby diesel-fueled CI engine, then the new stationary emergency standby diesel-fueled CI engine shall meet the Tier 1 standards in title 13, CCR, section 2423 for an off-road engine of the same maximum rated power, irrespective of the new stationary emergency standby diesel-fueled CI engine's model year.

(C) The District:

1. may establish more stringent diesel PM, NMHC+NOx, HC, NOx, and CO emission rate standards; and

2. may establish more stringent limits on hours of maintenance and testing on a site-specific basis; and

3. shall determine an appropriate limit on the number of hours of operation for demonstrating compliance with other District rules and initial start-up testing.

(4) New Direct-Drive Emergency Stand by Fire Pump Engines: Except as provided in section 93115.3, no person shall sell, offer for sale, purchase, or lease for use in California any new direct-drive emergency standby diesel-fueled fire-pump engine that has a rated brake horsepower greater than 50 unless it meets either the emission standards of section 93115.6(a)(3) or the emission standards defined in section 93115.6(a)(4), and no person shall operate any new stationary emergency standby diesel-fueled CI engine that has a rated brake horsepower greater than 50, unless it meets all of the applicable operating requirements and emission standards specified in either 93115.6(a)(3) or 93115.6(a)(4).

(A) Standards and Hours of Operating Requirements.

1. General Requirements: New direct-drive emergency standby diesel-fueled fire-pump engines (>50 bhp) shall, upon District approval of installation:

a. meet the Tier 2 emission standards specified in the Off-Road Compression Ignition Engine Standards for off-road engines with the same maximum rated power (title 13 CCR, section 2423) until 3 years after the date the Tier 3 standards are applicable for off-road engines with the same maximum rated power. At that time, new direct-drive emergency standby diesel-fueled fire-pump engines (>50 bhp) are required to meet the Tier 3 emission standards, until 3 years after the date the Tier 4 standards are applicable for off-road engines with the same maximum rated power. At that time, new direct-drive emergency standby diesel-fueled fire-pump engines (>50 bhp) are required to meet the Tier 4 emission standards; and

b. not operate more than the number of hours necessary to comply with the testing requirements of the National Fire Protection Association (NFPA) 25 - "Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems," 2002 edition, which is incorporated herein by reference. This section does not limit engine operation for emergency use and for emission testing to show compliance with 93115.6(a)(4).

(B) The District:

1. may establish more stringent diesel PM, NMHC+NOx, HC, NOx, and CO emission rate standards; and

2. may establish more stringent limits on hours of maintenance and testing on a site-specific basis; and

3. shall determine an appropriate limit on the number of hours of operation for demonstrating compliance with other District rules and initial start-up testing.

(b) In-Use Emergency Standby Diesel-Fueled CI Engine (> 50 bhp) Operating Requirements and Emission Standards.

(1) No owner or operator shall operate any in-use stationary emergency standby diesel-fueled CI engine in response to the notification of an impending rotating outage unless all the following criteria are met:

(A) the engine's permit to operate allows operation of the engine in anticipation of a rotating outage, or the District has established a policy or program that authorizes operation of the engine in anticipation of a rotating outage; and

(B) the Utility Distribution Company has ordered rotating outages in the control area where the engine is located, or has indicated it expects to issue such an order at a certain time; and

(C) the engine is located in a specific location that is subject to the rotating outage; and

(D) the engine is operated no more than 30 minutes prior to the time when the Utility Distribution Company officially forecasts a rotating outage in the control area; and

(E) the engine operation is terminated immediately after the Utility Distribution Company advises that a rotating outage is no longer imminent or in effect.

(2) At-School and Near-School Provisions. No owner or operator shall operate an in-use stationary emergency standby diesel-fueled CI engine for non-emergency use, including maintenance and testing, during the following periods:

(A) whenever there is a school sponsored activity, if the engine is located on school grounds, and

(B) between 7:30 a.m. and 3:30 p.m. on days when school is in session, if the engine is located within 500 feet of school grounds. Section 93115.6(b)(2) does not apply if the engine emits no more than 0.01 g/bhp-hr of diesel PM.

(3) Except as provided in section 93115.3, no owner or operator shall operate an in-use stationary emergency standby diesel-fueled CI engine (> 50 hp) in California unless it meets, in accordance with the applicable compliance schedules specified in sections 93115.11 and 93115.12, the following requirements (which are summarized in Table 2):

Table 2. Summary of the Emission Standards and Operating Requirements for In-Use Stationary Emergency Standby Diesel-Fueled CI Engines > 50 BHP

(See section 93115.6(a)(3))

| *Diesel PM* | | | | *Other Pollutants* |
|---|---|---|---|---|
| | *Maximum Allowable Annual Hours of Operation for Engines Meeting Diesel PM Standards* | | | |
| *Diesel PM Standards (g/bhp–hr)* | *Emergency Use* | *Non–Emergency Use* | | *HC, NOx, NMHC+NOx, and CO Standards (g/bhp–hr)* |
| | | *Emission Testing to show compliance*[1] | *Maintenance & Testing (hours/year)* | |
| >0.40[2] | Not Limited by ATCM[2] | Not Limited by ATCM[2] | 20 | Not limited by ATCM[2] |
| >0.15 and ≤0.40 | Not Limited by ATCM[2] | Not Limited by ATCM[2] | 21 to 30 | For engines with emission control strategies not verified through the verification procedure: Off–Road CI Engine Certification Standards for an off–road engine of the model year and maximum rated power of the engine installed to meet the applicable PM standard, or Tier 1 standards.[3] |
| >0.01 and ≤0.15 | Not Limited by ATCM[2] | Not Limited by ATCM[2] | 31 to 50 (Upon approval by the District) | |
| | | | | OR |
| ≤0.01 | Not Limited by ATCM[2] | Not Limited by ATCM[2] | 51 to 100 (Upon approval by the District) | Both (i) and (ii) must be met: (i) No increase in HC or NOx above 10% from baseline levels OR No increase in NMHC+NOx emissions above baseline levels (ii) No increase in CO above 10% from baseline levels |

1. Emission testing limited to testing to show compliance with section 93115.6(b)(3).
2. May be subject to emission or operational restrictions as defined in current applicable district rules, regulations, or policies.
3. The option to comply with the Tier 1 standards is available only if no off–road engine certification standards have been established for an off–road engine of the same model year and maximum rated power as the new stationary emergency standby diesel–fueled CI engine.

(A) Diesel PM Standard and Hours of Operation Limitations.

1. General Requirements:

a. No owner or operator shall operate an in-use stationary emergency standby diesel-fueled CI engine (>50 bhp) that emits diesel PM at a rate greater than 0.40 g/bhp-hr more than 20 hours per year for maintenance and testing purposes. The District may approve up to 20 additional hours per year for the maintenance and testing of such in-use emergency standby diesel fueled CI engines operated at

health facilities. This subsection does not limit engine operation for emergency use and for emission testing to show compliance with 93115.6(b)(3).

b. No owner or operator shall operate an in-use stationary emergency standby diesel-fueled CI engine (>50 bhp) that emits diesel PM at a rate less than or equal to 0.40 g/bhp-hr more than 30 hours per year for maintenance and testing purposes, except as provided in 93115.6(b)(3)(A)2. This section does not limit engine operation for emergency use and for emission testing to show compliance with 93115.6(b)(3).

2. The District may allow in-use stationary emergency standby diesel-fueled CI engines (> 50 bhp) to operate more than 30 hours per year for maintenance and testing purposes on a site-specific basis, provided the following limits are met:

a. Up to 40 annual hours of operation are allowed for maintenance and testing purposes at a health facility if the diesel PM emission rate is greater than 0.15 g/bhp-hr but less than or equal to 0.40 g/bhp-hr.

b. Up to 50 annual hours of operation are allowed for maintenance and testing purposes if the diesel PM emission rate is greater than 0.01 g/bhp-hr but less than or equal to 0.15 g/bhp-hr.

c. Up to 100 annual hours of operation are allowed for maintenance and testing purposes if the diesel PM emission rate is less than or equal to 0.01 g/bhp-hr.

(B) Additional Standards:

Owners or operators that choose to meet the diesel PM standards defined in section 93115.6(b)(3)(A) with emission control strategies that are not verified through the Verification Procedure shall either:

1. Meet the applicable HC, NOx, NMHC+NOx, and CO standards for off-road engines of the same model year and maximum rated power as specified in the Off-Road Compression-Ignition Engine Standards (title 13, CCR, section 2423). If no standards have been established for an off-road engine of the same model year and maximum rated power as the in-use stationary emergency standby diesel-fueled CI engine, then the in-use stationary emergency standby diesel-fueled CI engine shall meet the Tier 1 standards in title 13, CCR, section 2423 for an off-road engine of the same maximum rated power, irrespective of the in-use stationary emergency standby diesel-fueled CI engine's model year; Or

2. Not increase CO emission rates by more than 10% above baseline; and

Not increase HC or NOx emission rates by more than 10% above baseline; or

Not increase the sum of NMHC and NOx emission rates above baseline.

(C) The District:

1. may establish more stringent diesel PM, NMHC+NOx, HC, NOx, and CO emission rate standards; and

2. may establish more stringent limits on hours of maintenance and testing on a site-specific basis; and

3. shall determine an appropriate limit on the number of hours of operation for demonstrating compliance with other District rules and initial start-up testing.

(c) Operating Requirements and Emission Standards for New and In-Use Emergency Standby Stationary Diesel-Fueled CI Engines that Have a Rated Brake Horsepower of Greater than 50 (>50 bhp) Used in Demand Response Programs (DRP Engines).

(1)New Emergency Standby Diesel-Fueled CI DRP Engines (>50 bhp) Operating Requirements and

Emission Standards.

(A)At-School and Near-School Provisions. No owner or operator shall operate a new stationary emergency standby diesel-fueled CI DRP engine for non-emergency use, including maintenance and testing, during the following periods:

1. whenever there is a school sponsored activity, if the engine is located on school grounds; and

2. between 7:30 a.m. and 3:30 p.m. on days when school is in session, if the engine is located within 500 feet of school grounds. Section 93115.6(c)(1)(A) does not apply if the engine emits no more than 0.01 g/bhp-hr of diesel PM.

(B) No owner or operator shall operate any in-use new stationary emergency standby diesel-fueled CI DRP engine (>50 bhp) in response to the notification of an impending rotating outage, unless the engine is operating pursuant to a DRP, or all of the following criteria are met:

1. the engine's permit to operate allows operation of the engine in anticipation of a rotating outage, or the District has established a policy or program that authorizes operation of the engine in anticipation of a rotating outage; and

2. the Utility Distribution Company has ordered rotating outages in the control area where the engine is located, or has indicated it expects to issue such an order at a specified time; and

3. the engine is in a specific location that is subject to the rotating outage in the control area; and

4. the engine is operated no more than 30 minutes prior to the time when the Utility Distribution Company officially forecasts a rotating outage in the control area; and

5. the engine operation is terminated immediately after the Utility Distribution Company advises that a rotating outage is no longer imminent or in effect.

(C) Except as provided in section 93115.3, no owner or operator shall operate any new stationary emergency standby diesel-fueled CI DRP engine (>50 bhp), unless it meets all of the following applicable operating requirements and emission standards:

1. Diesel PM Standard and Hours of Operating Requirements.

a. New DRP Engines enrolled in the RBRP on or after January 1, 2005, and prior to January 1, 2008, shall:

(i.) meet the requirements specified in 93115.6(a)(3) and

(ii.) not operate more than 75 hours per year for RBRP operation.

b. New DRP Engines enrolled in the RBRP on or after January 1, 2008, shall:

(i.) meet the more stringent diesel PM standard of either 0.01 g/bhp-hr of diesel PM; or

(ii.) the current model year diesel PM standard as specified in the Off-Road Compression Ignition Engine Standards for off-road engines with the same maximum rated power (title 13, CCR, section 2423) in effect on the date of RBRP enrollment; and

(iii.) comply with the limitations on the hours of operation for maintenance and testing as specified in 93115.6(a)(3)(A)2.; and

(iv.) not operate more than 75 hours per year for RBRP operation.

c. New DRP Engines enrolled in an ISC on or after January 1, 2005, shall:

(i.) meet the more stringent diesel PM standard of either 0.01 g/bhp-hr diesel PM; or

(ii.) the current model year diesel PM standard as specified in the Off-Road Compression Ignition Engine Standards for off-road engines with the same maximum rated power (title 13, CCR, section 2423) in effect on the date of ISC enrollment; and

(iii.) comply with the limitations on the hours of operation for maintenance and testing as specified in 93115.6(a)(3)(A)2.; and

(iv.) not operate more than 150 hours per year for ISC operation.

2. HC, NOx, NMHC + NOx, and CO standards: No owner or operator shall operate any new stationary emergency standby diesel-fueled CI DRP engine (>50 bhp), unless it meets the standards for off-road engines of the same model year and maximum rated power as specified in the Off-Road Compression Ignition Engine Standards (title 13, CCR, section 2423). If no standards have been established for an off-road engine of the same model year and maximum rated power as the new stationary emergency standby diesel-fueled CI DRP engine, then the new stationary emergency standby diesel-fueled CI DRP engine shall meet the Tier 1 standards in title 13, CCR, section 2423 for an off-road engine of the same maximum rated power, irrespective of the new stationary emergency standby diesel-fueled CI DRP engine's model year.

3. A District:

a. may establish more stringent diesel PM, NMHC+NOx, HC, NOx, and CO emission rate standards; and

b. may establish more stringent maintenance and testing hour of operation standards on a site-specific basis; and

c. shall determine an appropriate limit on the number of hours of operation for demonstrating compliance with other District rules and initial start-up testing.

(2) In-Use Emergency Standby Diesel-Fueled CI DRP Engine (> 50 bhp) Operating Requirements and Emission Standards.

(A) At-School and Near-School Provisions. No owner or operator shall operate an in-use stationary emergency standby diesel-fueled CI engine for non-emergency use, including maintenance and testing during the following periods:

1. whenever there is a school sponsored activity, if the engine is located on school grounds; and

2. between 7:30 a.m. and 3:30 p.m. on days when school is in session, if the engine is located within 500 feet of school grounds. Section 93115.6(c)(2)(A) does not apply if the engine emits no more than 0.01 g/bhp-hr of diesel PM.

(B) No owner or operator shall operate any in-use stationary emergency standby diesel-fueled CI DRP engine (>50 bhp) in response to the notification of an impending rotating outage, unless the engine is operating pursuant to a DRP, or all of the following criteria are met:

a. the engine's permit to operate allows operation of the engine in anticipation of a rotating outage, or the District has established a policy or program that authorizes operation of the engine in anticipation of a rotating outage; and

b. the Utility Distribution Company has ordered rotating outages in the control area where the engine is located, or has indicated it expects to issue such an order at a certain time; and

c. the engine is in a specific location that is subject to the rotating outage in the control area; and

d. the engine is operated no more than 30 minutes prior to the time when the Utility Distribution Company officially forecasts a rotating outage in the control area; and

e. the engine operation is terminated immediately after the Utility Distribution Company advises that a rotating outage is no longer imminent or in effect.

(C) Except as provided in section 93115.3, no owner or operator shall operate any in-use stationary emergency standby diesel-fueled CI DRP engine (> 50 hp) unless it meets all of the following applicable operating requirements and emission standards:

1. Diesel PM Standard and Hours of Operation Requirements.

a. In-Use DRP Engines enrolled in the RBRP prior to January 1, 2005, shall:

(i.) meet the diesel PM standards and hour of operation limitations specified in 93115.6(b)(3)(A) and (B); and

(ii.) not operate more than 75 hours per year for RBRP operation.

b. In-Use DRP Engines enrolled in the RBRP on or after January 1, 2005, and prior to January 1, 2008, shall:

(i.) meet a diesel PM standard of 0.15 g/bhp-hr diesel PM; and

(ii.) meet the requirements specified in 93115.6(b)(3)(A) for maintenance and testing hours of operation; and

(iii.) not operate more than 75 hours per year for RBRP operation.

c. In-Use DRP Engines enrolled in the RBRP on or after January 1, 2008, shall:

(i.) meet a diesel PM standard of 0.01 g/bhp-hr diesel PM; and

(ii.) meet the requirements specified in 93115.6(b)(3)(A) for maintenance and testing hours of operation; and

(iii.) not operate more than 75 hours per year for RBRP operation.

d. In-Use DRP Engines enrolled in an ISC prior to January 1, 2005, shall as of January 1, 2006:

(i.) meet a diesel PM standard of 0.15 g/bhp-hr diesel PM; and

(ii.) meet the requirements specified in 93115.6(b)(3)(A) for maintenance and testing hours of operation; and

(iii.) not operate more than 150 hours per year for ISC operation.

e. In-Use DRP Engines enrolled in an ISC on or after January 1, 2005, and prior to January 1, 2008, shall:

(i.) meet a diesel PM standard of 0.15 g/bhp-hr diesel PM; and

(ii.) meet the requirements specified in 93115.6(b)(3)(A) for maintenance and testing hours of operation; and

(iii.) not operate more than 150 hours per year for ISC operation.

f. In-Use DRP Engines enrolled in an ISC on or after January 1, 2008, shall:

(i.) meet a diesel PM standard of 0.01 g/bhp-hr diesel PM; and

(ii.) meet the requirements specified in 93115.6(b)(3)(A) for maintenance and testing hours of operation; and

(iii.) not operate more than 150 hours per year for ISC operation.

2. Additional Standards.

Owners or operators that choose to meet the diesel PM standards and hour of operation limits defined in section 93115.6(c)(2)(C) with emission control strategies that are not verified through the Verification Procedure shall either:

a. Meet the applicable HC, NOx, NMHC+NOx, and CO standards for off-road engines of the same model year and maximum rated power as specified in the Off-Road Compression Ignition Engine Standards (title 13, CCR, section 2423). If no standards have been established for an off-road engine of the same model year and maximum rated power as the in-use stationary emergency standby diesel-fueled CI DRP engine, then the in-use stationary emergency standby diesel-fueled CI DRP engine shall meet the Tier 1 standards in title 13, CCR, section 2423 for an off-road engine of the same maximum rated power, irrespective of the in-use stationary emergency standby diesel-fueled CI DRP engine's model year; or

b. Not increase CO emission rates by more than 10% above baseline; and not increase HC or NOx emission rates by more than 10% above baseline, or not increase the sum of NMHC and NOx emission rates above baseline.

3. A District:

a. may establish more stringent diesel PM, NMHC+NOx, HC, NOx, and CO emission rate standards; and

b. may establish more stringent limits on hours of maintenance and testing on a site-specific basis; and

c. shall determine an appropriate limit on the number of hours of operation for demonstrating compliance with other District rules and initial start-up testing.

(3) Other Requirements Specific to RBRP Engines and the San Diego. Gas and Electric Company (SDG&E).

(A) The sum total electrical generation (also known as the "total load reduction capacity") from all diesel-fueled engines dispatched in the RBRP shall not exceed 80.0 megawatts (MW) at any time.

(B) RBRP Engines shall be dispatched by SDG&E into service in accordance with a district-approved dispatch protocol as specified in section 93115.10(h)(2).

(4)Requirements Applicable to DRP Engines after a DRP is Terminated

After a DRP is terminated by either the Utility Distribution Company or the engine owner or operator, the DRP engine shall remain subject to the requirements of section 93115.6(c) as if the DRP were still in effect.

**➡§ 93115.7. ATCM for Stationary CI Engines - Stationary Prime Diesel-Fueled CI Engine (>50 bhp) Emission Standards.**

(a) New Stationary Prime Diesel-Fueled CI Engine (>50 bhp) Emission Standards.

As of January 1, 2005, except as provided in section 93115.3, no person shall sell, purchase, or lease for use in California a new stationary prime diesel-fueled CI engine that has a rated brake horsepower greater than 50 unless it meets the following applicable emission standards, and no owner or operator shall operate any new stationary prime diesel-fueled CI engine that has a rated brake horsepower greater than 50 unless it meets all of the following emission standards and operational requirements (which are summarized in Table 3):

Table 3. Summary of the Emission Standards for New Stationary Prime Diesel-Fueled CI Engines > 50 BHP (See section 93115.7(a)(1))

**Table 3. Summary of the Emission Standards for New Stationary Prime Diesel–Fueled CI Engines > 50 BHP (See section 93115.7(a)(1))**

| *Diesel PM Standards (g/bhp–hr)* | *HC, NOx, NMHC+NOx, and CO Standards (g/bhp–hr)* |
|---|---|
| Meet the more stringent of: | |
| ≤0.01[1] OR Off–Road CI Engine Certification Standard for an off–road engine of the same maximum rated power | Off–Road CI Engine Certification Standard for an off–road engine of the model year and maximum rated power of the engine installed to meet the applicable PM standard, or Tier 1 standards.[1,2] |

1. May be subject to additional emission limitations as specified in current district rules, regulations, or policies governing distributed generation.
2. The option to comply with the Tier 1 standards is available only if no off–road engine certification standards have been established for an off–road engine of the same model year and maximum rated power as the new stationary prime diesel–fueled CI engine.

(1) Diesel PM Standard: All new stationary prime diesel-fueled CI engines (> 50 bhp) shall emit diesel PM at a rate that is less than or equal to 0.01 grams diesel PM per brake-horsepower-hour (g/bhp-hr) or shall meet the diesel PM standard, as specified in the Off-Road Compression Ignition Engine Standards for off-road engines with the same maximum rated power (title 13, CCR, section 2423), in effect on the date of acquisition or submittal, as defined in section 93115.4, whichever is more stringent.

(2) HC, NOx, NMHC+NOx, and CO Standards: All new stationary prime diesel-fueled CI engines (> 50 bhp) shall meet the standards for off-road engines of the same model year and maximum rated power as specified in the Off-Road Compression-Ignition Engine Standards (title 13, CCR, section 2423). If no limits have been established for an off-road engine of the same model year and maximum rated power as the new stationary prime diesel-fueled CI engine, then the new stationary prime diesel-fueled CI engine shall meet the Tier 1 standards in title 13, CCR, section 2423, for an off-road engine of the same maximum rated power, irrespective of the new stationary prime diesel-fueled CI engine's model year;

(3) New stationary prime diesel-fueled CI engines that are used to provide electricity near the place of use (also known as "distributed generation") may be subject to additional emission limitations as specified in current district rules, policies, or regulations governing distributed generation;

(4) The District may establish more stringent diesel PM, NMHC+NOx, HC, NOx, and CO emission rate limits on a site-specific basis.

(b) In-Use Stationary Prime Diesel-Fueled CI Engine (>50 bhp) Emission Standards. Except as provided in section 93115.3, no owner or operator shall operate an in-use stationary prime diesel-fueled CI engines (> 50 bhp) in California unless it meets the following requirements (which are summarized in Table 4):

Table 4. Summary of the Emission Standards for In-Use Stationary Prime Diesel-

Fueled CI Engines > 50 BHP (See section 93115.7(b)(1))

Table 4. Summary of the Emission Standards for In-Use Stationary Prime Diesel-Fueled CI Engines > 50 BHP (See section 93115.7(b)(1))

| | *Diesel PM* | | *Other Pollutants* |
|---|---|---|---|
| *Applicability* | *Diesel PM Standards (g/bhp-hr)* | *Standard* | *HC, NOx, NMHC+NOx, and CO Standards (g/bhp-hr)* |
| All off-road certified in-use prime engines | | 85% reduction from baseline levels (Option 1)<br>OR<br>0.01 g/bhp/hr (Option 2) | For engines with emission control strategies not verified through the verification procedure: Off-Road CI Engine Certification Standards for an off-road engine of the model year and maximum rated power of the engine installed to meet the applicable PM standard, or Tier 1 standards. [1] |
| Only in-use prime engines NOT certified in accordance with the Off-Road Compression Ignition Standards | | 85% reduction from baseline levels (Option 1)<br>OR<br>0.01 g/bhp/hr (Option 2)<br>OR<br>[30% reduction from baseline levels<br>AND<br>0.01 g/bhp-hr by no later than July 1, 2011] (Option 3) | OR<br>Both (i) and (ii) must be met:<br>(i) No increase in HC or NOx emissions above 10% from baseline levels<br>OR<br>No increase in NMHC+NOx emissions above baseline levels<br>(ii) No increase in CO above 10% from baseline levels |

1. The option to comply with the Tier 1 standards is available only if no off-road engine certification standards have been established for an off-road engine of the same model year and maximum rated power as the new stationary emergency standby diesel-fueled CI engine.

(1) Diesel PM Standards: All in-use stationary prime diesel-fueled CI engines (> 50 bhp) certified in accordance with the Off-Road Compression- Ignition Engine Standards (title 13, CCR, section 2423) shall comply with either option 1 or option 2 below. All engines not certified in accordance with the Off-Road Compression- Ignition Engine Standards (title 13, CCR, section 2423) shall comply with option 1, option 2, or option 3 below:

(A) Option 1: Reduce the diesel PM emission rate by at least 85 percent, by weight, from the baseline level, in accordance with the appropriate compliance schedule specified in sections 93115.11 and 93115.12;

(B) Option 2: Emit diesel PM at a rate less than or equal to 0.01 g/bhp-hr in accordance with the appropriate compliance schedule as specified in sections 93115.11 and 93115.12;

(C) Option 3: Reduce the diesel PM emission rate by at least 30% from the baseline level, by no later than January 1, 2006, and emit diesel PM at a rate of 0.01 g/bhp-hr or less by no later than July 1, 2011.

(2) Additional Standards:

Owners or operators that choose to meet the diesel PM limits defined in section 93115.7(b) with emission control strategies that are not verified through the Verification Procedure shall either:

(A) Meet the applicable HC, NOx, NMHC+NOx, and CO standards for off-road engines of the same model year and maximum rated power as specified in the Off-Road Compression-Ignition Engine Standards (title 13, CCR, section 2423). If no standards have been established for an off-road engine of the same model year and maximum rated power as the in-use stationary prime diesel-fueled CI

engine, then the in-use stationary prime diesel-fueled CI engine shall meet the Tier 1 standards in title 13, CCR, section 2423 for an off-road engine of the same maximum rated power, irrespective of the new stationary emergency standby diesel-fueled CI engine's model year; or

(B) Not increase CO emission rates by more than 10% above baseline; and

Not increase HC or NOx emission rates by more than 10% above baseline, or

Not increase the sum of NMHC and NOx emission rates above baseline.

(3) The District may establish more stringent diesel PM, NMHC+NOx, HC, NOx, and CO emission rate standards.

**➡§ 93115.8. ATCM for Stationary CI Engines - Emission Standards for Stationary Diesel-Fueled CI Engines (>50 bhp) Used in Agricultural Operations.**

(a) Emission Standards for New Stationary Diesel-Fueled CI Engines (>50 bhp) Used in Agricultural Operations.

(1) As of January 1, 2005, except as provided in sections 93115.3, 93115.8(a)(1)(A)5., and 93115.8(a)(2), no person shall sell, purchase, or lease for use in California any new stationary diesel-fueled engine to be used in agricultural operations that has a rated brake horsepower greater than 50, or operate any new stationary diesel-fueled engine to be used in agricultural operations that has a rated brake horsepower greater than 50, unless the engine meets all of the following emission performance standards (which are summarized in Table 5.):

Table 5. Summary of the Emission Standards for New Stationary Diesel-Fueled CI Engines > 50 BHP Used In Agricultural Operations (See section 93115.8(a))

Table 5. Summary of the Emission Standards for New Stationary Diesel–Fueled CI Engines > 50 BHP Used In Agricultural Operations (See section 93115.8(a))

| | *Diesel PM* | *Other Pollutants* |
|---|---|---|
| *Horsepower Range (hp)* | *Diesel PM Standards (g/bhp–hr)* | *HC, NOx, NMHC+NOx, and CO Standards (g/bhp–hr)* |
| All Applications Greater Than 50 But Less Than 100, Other Than Generator Sets | Less Than or Equal to 0.30[1] OR Off–Road CI Engine Certification Standard for an off-road engine of the same maximum rated power, whichever is more stringent | |
| All Applications Greater Than or Equal to 100 But Less Than 175, Other Than Generator Sets | Less Than or Equal to 0.22[1] OR Off–Road CI Engine Certification Standard for an off-road engine of the same maximum rated power, whichever is more stringent | Off–Road CI Engine Certification Standard for an off-road engine of the model year and maximum rated power of the engine installed to meet the applicable PM standard, or Tier 1 standards.[1] |
| All Applications Greater Than or Equal to 175, Other Than Generator Sets | Less than or Equal to 0.15[1] OR Off–Road Engine Certification Standard for an off-road engine of the same maximum rated power, whichever is more stringent | |
| Generator Set Engines Greater Than 50 | Less Than or Equal to 0.15[1] OR Off–Road CI Engine Certification Standard for an off-road engine of the same maximum rated power, whichever is more stringent. | |

[1] Prior to January 1, 2008, these limits shall not apply to engines sold from one agricultural operation to another and funded under State or federal incentive funding programs, as specified in 93115.8(a)(2).

(A) Diesel PM Standard:

1. New agricultural stationary diesel-fueled CI engines, used in all agricultural operations except generator set applications with a maximum rated horsepower greater than 50 but less than 100 shall emit no more than 0.30 g/bhp-hr diesel particulate matter (PM) limit or shall meet the standards, as specified in the Off-Road Compression- Ignition Engine Standards for off-road engines of the same maximum rated power (title 13, CCR, section 2423), in effect on the date of acquisition or submittal, as defined in section 93115.4, whichever is more stringent; and

2. New agricultural stationary diesel-fueled CI engines, used in all agricultural operations except generator set applications with a maximum rated horsepower greater than or equal to 100 but less than 175 shall emit no more than 0.22 g/bhp-hr diesel particulate matter (PM) limit or shall meet the standards, as specified in the Off-Road Compression-Ignition Engine Standards for off-road engines of the same maximum rated power (title 13, CCR, section 2423), in effect on the date of acquisition or submittal, as defined in section 93115.4 whichever is more stringent; and

3. New agricultural stationary diesel-fueled CI engines, used in all agricultural operations except generator set applications with a maximum rated horsepower greater than or equal to 175 shall emit no more than 0.15 g/bhp-hr diesel PM or shall meet the standards, as specified in the Off-Road Compression Ignition Engine Standards for off-road engines of the same maximum rated power (title 13, CCR, section 2423), in effect on the date of acquisition or submittal, as defined in section 93115.4, whichever is more stringent; and

4. New agricultural stationary diesel-fueled CI engines, used in generator set applications with a maximum rated horsepower greater than 50, shall emit no more than 0.15 g/bhp-hr diesel PM, or shall meet the standards, as specified in the Off-Road Compression-Ignition Engine Standards for off-road engines of the same maximum rated power (title 13, CCR, section 2423), in effect on the date of acquisition or submittal, as defined in section 93115.4, whichever is more stringent;

5. On a site-specific basis, a District may extend compliance with sections 93115.8(a)(1)(A)1. through 4. up to four years provided:

a. The District determines that an engine meeting sections 93115.8(A)1. through 4. would exceed the District's threshold for significant risk pursuant to H&SC section 44391 (AB 2588 "Hot Spots" Program), and

b. No later than four years after the applicable initial compliance date for sections 93115.8(a)(1)(A)1. through 4., one of the following is installed:

(i.) an electric motor;

(ii.) an engine greater than 50 bhp but less than 75 bhp that does not exceed 0.02 g/bhp-hr PM; or

(iii.) an engine greater than 75 bhp that does not exceed 0.01 g/bhp-hr diesel PM.

(B) NMHC, NOx, and CO Standards: New agricultural stationary diesel-fueled CI engines shall meet the HC, NOx, (or NMHC+NOx, if applicable) and CO standards for off-road engines of the same model year and maximum rated power, as specified in the Off-Road Compression-Ignition Engine Standards (title 13, CCR, section 2423). If no limits have been established for an off-road engine of the same model year and maximum rated power as the new agricultural stationary diesel-fueled CI engine, then the new agricultural stationary diesel-fueled CI engine shall meet the Tier 1 standards in title 13, CCR, section 2423, for an off-road engine of the same maximum rated power, irrespective of the new agricultural diesel-fueled CI engine's model year.

(2) Prior to January 1, 2008, the requirements of section 93115.8(a)(1) shall not apply to any stationary diesel-fueled CI engine that:

(A) is used in agricultural operations; and

(B) was funded under a State or federal incentive funding program;

and

(C) was sold for use in another agricultural operation, provided the stationary diesel-fueled CI engine complies with Tier II Off-Road Compression Ignition Standards for off-road engines of the same maximum rated power (title 13, CCR, section 2423).

For purposes of this section, State or federal incentive funding programs include, but are not limited to, California's Carl Moyer Program, as set forth in title 17, Part 5, Chapter 9 of the California Health and Safety Code, and the U.S. Department of Agriculture's Environmental Quality Incentives Program (EQIP), as set forth in title 7, Chapter XIV, Part 1466 of the Code of Federal Regulations.

(b)Emission Standards for In-Use Stationary Diesel-Fueled CI Engines (>50 bhp) Used in Agricultural Operations.

(1) Except as provided in sections 93115.3 and 93115.8(b)(5) through (7), no owner or operator shall operate an in-use stationary diesel-fueled CI engine greater than 50 bhp in an agricultural operation in California unless it meets the requirements in sections 93115.8(b)(2) through (4) (which are summarized in Tables 6 and 7):

Table 6: Emission Standards

Noncertified Greater than 50 BHP In-Use Stationary Diesel-Fueled Engines Used in Agricultural Operations See sections 93115.8(b)(2) and (4)

Table 6: Emission Standards
Noncertified Greater than 50 BHP In-Use Stationary
Diesel-Fueled Engines Used in Agricultural Operations
See sections 93115.8(b)(2) and (4)

| *Horsepower Range (hp)* | *Application* | *Compliance* | *Diesel PM* | *HC, NOx, NMHC+NOx, and CO* |
|---|---|---|---|---|
| | | *On or After December 31* | *Not to Exceed (g/bhp-hr)* | *Not to Exceed (g/bhp-hr)* |
| Greater Than 50 But Less Than 75 | Generator Sets | 2015 | 0.02 | Off-Road CI Engine Certification Standards for an off-road engine of the model year and maximum rated power of the engine installed to meet the applicable PM standard.[1] |
| | All Other Applications | 2011 | 0.30 | |
| Greater Than or Equal to 75 But Less Than 100 | Generator Sets | 2015 | 0.01 | |
| | All Other Applications | 2011 | 0.30 | |
| Greater Than or Equal to 100 But Less Than 175 | Generator Sets | 2015 | 0.01 | |
| | All Other Applications | 2010 | 0.22 | |
| Greater Than or Equal to 175 But Less Than or Equal to 750 | All Applications | 2010 | 0.15 | |
| Greater Than 750 | All Applications | 2014 | 0.075 | |

1. If no limits have been established for an off-road engine of the same model year and maximum rated power, then the in-use stationary diesel-fueled engine used in an agricultural operation shall not exceed Tier 1 standards in title 13, CCR, section 2423 for an off-road engine of the same maximum rated power irrespective of model year.


| Horsepower Range (hp) | Application | Compliance | Diesel PM | HC, NOx, NMHC+NOx, and CO |
|---|---|---|---|---|
| | | On or After December 31 | Not to Exceed (g/bhp-hr) | Not to Exceed (g/bhp-hr) |
| Greater Than 50 But Less Than 75 | Generator Sets | 2015 | 0.02 | Off-Road CI Engine Certification Standards for an off-road engine of the model year and maximum rated power of the engine installed to meet the applicable PM standard.[1] |
| | All Other Applications | 2011 | 0.30 | |
| Greater Than or Equal to 75 But Less Than 100 | Generator Sets | 2015 | 0.01 | |
| | All Other Applications | 2011 | 0.30 | |
| Greater Than or Equal to 100 But Less Than 175 | Generator Sets | 2015 | 0.01 | |
| | All Other Applications | 2010 | 0.22 | |
| Greater Than or Equal to 175 But Less Than or Equal to 750 | All Applications | 2010 | 0.15 | |
| Greater Than 750 | All Applications | 2014 | 0.075 | |

1. If no limits have been established for an off-road engine of the same model year and maximum rated power, then the in-use stationary diesel-fueled engine used in an agricultural operation shall not exceed Tier 1 standards in title 13, CCR, section 2423 for an off-road engine of the same maximum rated power irrespective of model year.


Table 7: Emission Standards

Tier 1- and Tier 2-Certified Greater than 50 BHP In-Use Stationary Diesel-Fueled Engines Used in Agricultural Operations See sections 93115.8(b)(3) and (4)

**Table 7: Emission Standards**
**Tier 1– and Tier 2–Certified Greater than 50 BHP In–Use Stationary Diesel–Fueled Engines Used in Agricultural Operations**
**See sections 93115.8(b)(3) and (4)**

| *Horsepower Range (hp)* | *Compliance* | *Diesel PM* | *HC, NOx, NMHC+NOx, and CO* |
|---|---|---|---|
| | *On or After December 31* | *Not to Exceed (g/bhp–hr)* | *(g/bhp–hr)* |
| Greater Than 50 But Less Than 75 | 2015 or 12 years after the date of initial installation, whichever is later | 0.02 | Off–Road CI Engine Certification Standards for an off–road engine of the model year and maximum rated power of the engine installed to meet the applicable PM standard.[1] |
| Greater Than or Equal to 75 But Less Than 175 | 2015 or 12 years after the date of initial installation, whichever is later | 0.01 | |
| Greater Than or Equal to 175 But Less Than or Equal to 750 | 2014 or 12 years after the date of initial installation, whichever is later | 0.01 | |
| Greater Than 750 | 2014 or 12 years after the date of initial installation, whichever is later | 0.075 | |

[1.] If no limits have been established for an off–road engine of the same model year and maximum rated power, then the in–use stationary diesel–fueled engine used in an agricultural operation shall not exceed Tier 1 standards in title 13, CCR, section 2423 for an off–road engine of the same maximum rated power irrespective of model year.


| Horsepower Range (hp) | Compliance On or After December 31 | Diesel PM Not to Exceed (g/bhp--hr) | HC, NOx, NMHC+NOx, and CO (g/bhp-hr) |
|---|---|---|---|
| Greater Than 50 But Less Than 75 | 2015 or 12 years after the date of initial installation, whichever is later | 0.02 | Off-Road CI Engine Certification Standards for an off-road engine of the model year and maximum rated power of the engine installed to meet the applicable PM standard.[1] |
| Greater Than or Equal to 75 But Less Than 175 | 2015 or 12 years after the date of initial installation, whichever is later | 0.01 | |
| Greater Than or Equal to 175 But Less Than or Equal to 750 | 2014 or 12 years after the date of initial installation, whichever is later | 0.01 | |
| Greater Than 750 | 2014 or 12 years after the date of initial installation, whichever is later | 0.075 | |


[1.] If no limits have been established for an off-road engine of the same model year and maximum rated power, then the in-use stationary diesel-fueled engine used in an agricultural operation shall not

exceed Tier 1 standards in title 13, CCR, section 2423 for an off-road engine of the same maximum rated power irrespective of model year.

(2) Diesel PM Standards for Noncertified In-use Stationary Diesel-fueled CI Engines Used in Agricultural Operations (except as provided in section 93115.3):

(A) On or after December 31, 2015, no owner or operator shall operate any greater than 50 but less than 75 bhp noncertified stationary diesel-fueled generator set engine used in an agricultural operation unless such generator set engine's diesel PM emissions do not exceed 0.02 g/bhp-hr.

(B) On or after December 31, 2015, no owner or operator shall operate any greater than or equal to 75 but less than 175 bhp noncertified stationary diesel-fueled generator set engine used in an agricultural operation unless such generator set engine's diesel PM emissions do not exceed 0.01 g/bhp-hr.

(C) On or after December 31, 2011, no owner or operator shall operate any greater than 50 but less than 75 bhp noncertified stationary diesel-fueled engine (other than a generator set engine) used in an agricultural operation unless such engine's diesel PM emissions do not exceed 0.30 g/bhp-hr.

(D) On or after December 31, 2011, no owner or operator shall operate any greater than or equal to 75 but less than 100 bhp noncertified stationary diesel-fueled engine (other than a generator set engine) used in an agricultural operation unless such engine's diesel PM emissions do not exceed 0.30 g/bhp-hr.

(E) On or after December 31, 2010, no owner or operator shall operate any greater than or equal to 100 but less than 175 bhp noncertified stationary diesel-fueled engine (other than a generator set engine) used in an agricultural operation unless such engine's diesel PM emissions do not exceed 0.22 g/bhp-hr.

(F) On or after December 31, 2010, no owner or operator shall operate any greater than or equal to 175 through 750 bhp noncertified stationary diesel-fueled engine used in an agricultural operation unless such engine's diesel PM emissions do not exceed 0.15 g/bhp-hr.

(G) On or after December 31, 2014, no owner or operator shall operate any greater than 750 bhp noncertified stationary diesel-fueled engine used in an agricultural operation unless such engine's diesel PM emissions do not exceed 0.075 g/bhp-hr.

(3) Diesel PM Standards for Tier 1- and Tier 2-Certified In-use Stationary Diesel-fueled Engines Used in Agricultural Operations (except as provided in section 93115.3):

(A) On or after December 31, 2015, or 12 years after the date of initial installation, whichever is later, no owner or operator shall operate any greater than 50 but less than 75 bhp Tier 1- or Tier 2-certified stationary diesel-fueled engine used in an agricultural operation unless such engine's diesel PM emissions do not exceed 0.02 g/bhp-hr.

(B) On or after December 31, 2015, or 12 years after the date of initial installation, whichever is later, no owner or operator shall operate any greater than or equal to 75 but less than 175 bhp Tier 1- or Tier 2-certified stationary diesel-fueled engine used in an agricultural operation unless such engine's diesel PM emissions do not exceed 0.01 g/bhp-hr.

(C) On or after December 31, 2014, or 12 years after the date of initial installation, whichever is later, no owner or operator shall operate any greater than or equal to 175 through 750 bhp Tier 1- or Tier 2-certified stationary diesel-fueled engine used in an agricultural operation unless such engine's diesel PM emissions do not exceed 0.01 g/bhp-hr.

(D) On or after December 31, 2014 or 12 years after the date of initial installation, whichever is later, no owner or operator shall operate any greater than 750 bhp Tier 1- or Tier 2-certified stationary diesel-fueled engine used in an agricultural operation unless such engine's diesel PM emissions do not exceed 0.075 g/bhp-hr.

(4) HC, NOx, NMHC+NOx, and CO Standards: An agricultural engine shall not exceed the HC, NOx (or NMHC+NOx, if applicable) and CO standards for off-road engines of the same model year and maximum rated power, as specified in the Off-Road CI Engine Standards (title 13, CCR, section 2423). If no limits have been established for an off-road engine of the same model year and maximum rated power, then the in-use stationary diesel-fueled engine used in an agricultural operation shall not exceed Tier 1 standards in title 13, CCR, section 2423 for an off-road engine of the same maximum rated power irrespective of model year.

(5) The Executive Officer may extend the compliance dates in sections 93115.8(b)(1) through (4) up to one year, provided that verifiable information shows new engine packages for stationary diesel engine applications are not available in sufficient numbers or in a sufficient range of makes, models, and sizes to replace in-use stationary diesel agricultural engines.

(6) On a site-specific basis, a District may extend compliance dates in sections 93115.8(b)(1), (2), and (4) up to four years provided:

(A) A District determines that an engine meeting section 93115.8(b)(2) would exceed a District's threshold for significant risk pursuant to H&SC section 44391 (AB 2588 "Hot Spots" Program), and

(B) No later than four years after the applicable initial compliance date for section 93115.8(b)(2), one of the following is installed:

1. an electric motor;

2. an engine greater than 50 bhp but less than 75 bhp that does not exceed 0.02 g/bhp-hr PM; or

3. an engine greater than 75 bhp that does not exceed 0.01 g/bhp-hr diesel PM.

(7) A District may:

(A) Allow an owner or operator up to two additional years to comply with sections 93115.8(b)(1) through (4), provided at least 60 days prior to the applicable compliance date or dates, the owner or operator submits to the District Air Pollution Control Officer documentation demonstrating that an affected engine or engines shall be replaced with an electric motor or electric motors within two years. Documentation for each engine replaced shall include identification of the engine, the purchasing agreement for the electric motor, and a copy of an agreement with a utility distribution company to provide electricity if electricity is not already available for electric motor operation.

(B) Establish more stringent diesel PM, NMHC+NOx, HC, NOx, and CO emission limits, emission limit compliance dates, or other requirements.

(c) Registration Requirements for Greater than 50 bhp Stationary Diesel-Fueled CI Agricultural Engines.

(1) Registration Submittal. Except as provided in section 93115.2(a), the owner or operator of a greater than 50 bhp stationary diesel-fueled CI agricultural engine or engines shall submit the registration information specified in section (c)(2) below to the District according to the following schedule:

(A) For each in-use stationary diesel-fueled CI agricultural engine, no later than March 1, 2008;

(B) For each new stationary diesel-fueled CI agricultural engine installed on or after March 1, 2008, no later than 90 days after the date of initial installation; and

(C) For each new stationary diesel-fueled CI agricultural engine installed on or after January 1, 2005, but before March 1, 2008, within 90 days after initial installation or the effective date of amendments adding section 93115.8(c) to the ATCM, whichever is later.

(2) Registration Information.

(A) At minimum, the owner or operator shall submit the following information for each greater than 50 bhp stationary diesel-fueled CI agricultural engine:

1. Date of registration application submittal;

2. Name, title (as applicable), and signature of person submitting the registration application;

3. Name, address, mailing address (if differs from address), and telephone number of the engine owner and of the operator, if the owner is not also the operator;

4. Date of installation or anticipated installation;

5. Year of manufacture or approximate age, if unable to determine year of manufacture;

6. Make;

7. Model;

8. Serial number;

9. Maximum rated brake horsepower;

10. Certification status with respect to Off-Road CI Engine Certification Standards (title 13, CCR, section 2413) (if available)

11. Estimated annual average operating hours;

12. Fuels Used;

13. Estimated annual average gallons of each fuel used, if alternative diesel fuels are used;

14. Location including, but not limited to, one of the following: latitude and longitude, universal trans meridian (UTM) coordinates, global positioning satellite data (GPS), address, town and nearest cross streets, parcel or plot number/designation, or other description that clearly identifies the location of the engine; and

15. For an engine located within one-quarter mile of (1,320 feet) of a residential area, school, or hospital:

a. Distance (in meters or feet) from engine to residential area, school, or hospital;

b. Direction from engine to residential area, school, or hospital;

c. Location of engine and residential area, school, or hospital including one or more of the following for each: latitude and longitude, universal trans meridian (UTM) coordinates, global positioning satellite data (GPS), address, town and nearest cross streets.

(B) Any additional information required to evaluate the section 93115.3(a) exemption of an agricultural emergency standby generator set engine or a remotely-located agricultural engine from the requirements of section 93115.8(b).

(3) The owner or operator of a stationary diesel-fueled CI agricultural engine registered under section 93115.8(c)(1) shall notify the District in writing no later than 14 days after any change of owner or operator, change in location, installation or commencement of an emissions control strategy, or replacement with an electric motor or noncompression ignition engine.

(4) A District may provide stationary diesel-fueled CI agricultural engine owners and operators with alternatives to section 93115.8(c)(1) through (3) requirements, provided the Executive Officer finds such alternatives to be equivalent to sections 93115.8(c)(1) through (3).

(5) Upon written request by the Executive Officer, an APCO shall provide to the Executive Officer a written report of information gathered under sections 93115.8(c)(1) through (4).

(d) Fee Requirements for Greater than 50 bhp Stationary Diesel-Fueled CI Agricultural Engine Owners or Operators.

The owner or operator of a greater than 50 bhp stationary diesel-fueled CI agricultural engine or engines shall pay any fees assessed by the District for the purpose of recovering the District's cost of implementing and enforcing section 93115.8 requirements, including section 93115.8(c) requirements.

**➡§ 93115.9. ATCM for Stationary CI Engines - Emission Standards for New Stationary Diesel-Fueled Engines, Less Than or Equal to 50 Brake Horsepower (<50 bhp).**

As of January 1, 2005, except as provided in section 93115.3, no person shall sell, offer for sale, or lease for use in California any stationary diesel-fueled CI engine that has a rated brake horsepower less than or equal to 50, unless the engine meets the current Off-Road Compression- Ignition Engine Standards (title 13, CCR, section 2423) for PM, NMHC+NOx, and CO for diesel off-road engines of the same maximum rated power. (These requirements are summarized in Table 8.)

Table 8. Summary of the Emission Standards for Stationary Diesel-Fueled CI Engines < 50 BHP (See section 93115.9)

Table 8. Summary of the Emission Standards for Stationary Diesel–Fueled CI Engines ≤ 50 BHP
(See section 93115.9)

Diesel PM Standards, NMHC+NOx, and CO Standards
(g/bhp–hr)

Current Off–Road CI Engine Certification Standard for an off–road engine of the same maximum rated power.

**➡§ 93115.10. ATCM for Stationary CI Engines - Recordkeeping, Reporting, and Monitoring Requirements.**

(a) Reporting Requirements for Owners or Operators of New and In-Use Stationary CI Engines, Including Non-Diesel-Fueled CI Engines, Having a Rated Horsepower Greater than 50 (> 50 bhp).

(1) Except as provided in section 93115.3 and section 93115.10(a)(5) below, prior to the installation of any new stationary CI engine (> 50 bhp) at a facility, each owner or operator shall provide the information identified in section 93115.10(a)(3) to the District APCO.

(2) Except as provided in section 93115.3 and section 93115.10(a)(5) below, no later than July 1, 2005, each owner or operator of an in-use stationary CI engine (>50 bhp) shall provide the information specified in section 93115.10(a)(3) to the District APCO.

(3) Each owner or operator shall submit to the District APCO the following information for each new and in-use stationary CI engine (>50 bhp) in accordance with the requirements of sections 93115.10(a)(1) and (2) above:

(A) Owner/Operator Contact Information

1. Company name

2. Contact name, phone number, address, e-mail address

3. Address of engine(s)

(B) Engine Information

1. Make,

2. Model,

3. Engine Family,

4. Serial number,

5. Year of manufacture (if unable to determine, approximate age),

6. Rated Brake Horsepower Rating,

7. Exhaust stack height from ground,

8. Engine Emission Factors and supporting data for PM, NOx and NMHC separately or NMHC+NOx, and CO, (if available) from manufacturers data, source tests, or other sources (specify),

9. Diameter of stack outlet,

10. Direction of outlet (horizontal or vertical),

11. End of stack (open or capped),

12. Control equipment (if applicable)

a. Turbocharger,

b. Aftercooler,

c. Injection Timing Retard,

d. Catalyst,

e. Diesel Particulate Filter,

f. Other;

(C) Fuel(s) Used

1. CARB Diesel,

2. Jet fuel,

3. Diesel,

4. Alternative diesel fuel (specify),

5. Alternative fuel (specify),

6. Combination (Dual fuel) (specify),

7. Other (specify);

(D) Operation Information, including:

1. Describe general use of engine,

2. Typical load (percent of maximum bhp rating),

3. Typical annual hours of operation,

4. If seasonal, months of year operated and typical hours per month operated,

5. Fuel usage rate (if available);

(E) Receptor Information, including:

1. Nearest receptor description (receptor type),

2. Distance to nearest receptor (feet or meters),

3. Distance to nearest school grounds;

(F) A statement whether the engine is included in an existing AB 2588 emission inventory.

(4) Except as provided in section 93115.3, no later than 180 days prior to the earliest applicable compliance date specified in sections 93115.11 or 93115.12, each owner or operator of an in-use stationary diesel-fueled CI engine greater than 50 brake horsepower (> 50 bhp) shall provide the following additional information to the District APCO: an identification of the control strategy for each stationary diesel-fueled CI engine that when implemented will result in compliance with sections 93115.6 and 93115.7. If applicable, the information should include the Executive Order number issued by the Executive Officer for a Diesel Emission Control Strategy that has been approved by the Executive Officer through the Verification Procedure.

(5) An APCO may exempt the owner or operator from providing all or part of the information identified in sections 93115.10(a)(3) or (4) if there is a current record of the information in the owner or operator's permit to operate, permit application, District registration program, or other District records.

(6) Upon written request by the Executive Officer, an APCO shall provide to the Executive Officer a written report of all information identified in sections 93115.10(a)(3) and (4).

(b) Reporting Requirements for Sellers of Stationary Diesel-Fueled CI Engines Having a Rated Brake Horsepower Less Than or Equal to 50 (< 50 bhp).

(1) Except as provided in section 93115.3, no later than January 31, 2006 and by January 31st of each year thereafter, all sellers of stationary diesel fueled CI engines sold for use in California that have a rated brake horsepower less than or equal to 50 shall provide the following information for the previous calendar year to the Executive Officer of the Air Resources Board:

(A) Contact Information

1. Sellers Company Name (if applicable);

2. Contact name, phone number, e-mail address;

(B) Engine Sales Information (for each engine sold for use in California in the previous calendar year)

1. Make,

2. Model,

3. Model year (if known),

4. Rated brake horsepower,

5. Number of engines sold,

6. Certification executive order number (if applicable),

7. Engine family number (if known),

8. Emission control strategy (if applicable).

(c) Demonstration of Compliance with Emission Limits.

(1) Prior to the installation of a new stationary diesel-fueled CI engine at a facility, the owner or operator of the new stationary diesel-fueled CI engine(s) subject to the requirements of section 93115.6(a)(3), 93115.6(a)(4), 93115.6(c)(1)(C), and 93115.7(a)(1) shall provide emission data to the District APCO in accordance with the requirements of section 93115.13 for purposes of demonstrating compliance.

(2) By no later than the earliest applicable compliance date specified in sections 93115.11 or 93115.12, the owner or operator of an in-use stationary diesel-fueled CI engine(s) subject to the requirements of section 93115.6(b)(3), 93115.6(c)(2)(C), or 93115.7(b)(1) shall provide emissions and/or operational data to the District APCO in accordance with the requirements of section 93115.13 for purposes of demonstrating compliance.

(d) Notification of Loss of Exemption.

(1) Owners or operators of in-use stationary diesel-fueled CI engines, who are operating under an exemption specified in sections 93115.3 or 93115.8(a)(2) from all or part of the requirements of sections 93115.6, 93115.7, or 93115.8 shall notify the District APCO within five days after they become aware that the exemption no longer applies and shall demonstrate compliance with the applicable requirements of:

(A) section 93115.6 or 93115.7, no later than 180 days after the date the exemption no longer applies; or

(B) section 93115.8, no later than 18 months after the date the exemption no longer applies or no later than 18 months after the emission standard compliance date set forth in section 93115.8, whichever is later.

(2) A District APCO shall notify owners or operators of in-use stationary diesel-fueled CI engines, operating under an exemption specified in section 93115.3(g) from the requirements of section 93115.5 and sections 93115.6, 93115.7, or 93115.8, when the exemption no longer applies and the owner or operator shall demonstrate compliance with the applicable requirements of

(A) section 93115.5, 93115.6, or 93115.7, no later than 180 days after notification by the District APCO; or

(B) section 93115.8, no later than 18 months after notification by the District APCO or no later than 18 months after the emission standard compliance date set forth in section 93115.8, whichever is later.

(3) An owner or operator of an in-use stationary diesel-fueled CI engine(s) subject to the requirements of sections 93115.6, 93115.7, or 93115.8 shall provide emissions data to the District APCO in accordance with the requirements of section 93115.13 for purposes of demonstrating compliance pursuant to section 93115.10(d)(1) or (2).

(e) Monitoring Equipment.

(1) A non-resettable hour meter with a minimum display capability of 9,999 hours shall be installed upon engine installation, or by no later than January 1, 2005, on all engines subject to all or part of the requirements of sections 93115.6, 93115.7, or 93115.8(a) unless the District determines on a case-by-case basis that a non-resettable hour meter with a different minimum display capability is appropriate in consideration of the historical use of the engine and the owner or operator's compliance history.

(2) All DPFs installed pursuant to the requirements in sections 93115.6, 93115.7, or 93115.8(a) must, upon engine installation or by no later than January 1, 2005, be installed with a backpressure monitor that notifies the owner or operator when the high backpressure limit of the engine is approached.

(3) The District APCO may require the owner or operator to install and maintain additional monitoring equipment for the particular emission control strategy(ies) used to meet the requirements of sections 93115.6, 93115.7, or 93115.8(a).

(f) Reporting Provisions for Exempted Agricultural Emergency, Prime, and Nonagricultural Emergency Engines.

An owner or operator of an agricultural emergency standby generator set engine subject to section 93115.3(a) or an engine subject to sections 93115.3(d) or 93115.3(j) shall keep records of the number of hours the engines are operated on a monthly basis. Such records shall be retained for a minimum of 36 months from the date of entry. Record entries made within 24 months of the most recent entry shall be retained on-site, either at a central location or at the engine's location, and made immediately available to the District staff upon request. Record entries made from 25 to 36 months from the most recent entry shall be made available to District staff within 5 working days from the district's request.

(g) Reporting Requirements for Emergency Standby Engines.

(1) Starting January 1, 2005, each owner or operator of an emergency standby diesel-fueled CI engine shall keep records and prepare a monthly summary that shall list and document the nature of use for each of the following:

(A) emergency use hours of operation;

(B) maintenance and testing hours of operation;

(C) hours of operation for emission testing to show compliance with sections 93115.6(a)(3) and 93115.6(b)(3);

(D) initial start-up testing hours;

(E) if applicable, hours of operation to comply with the requirements of NFPA 25;

(F) hours of operation for all uses other than those specified in sections 93115.10(g)(1)(A) through (D) above; and

(G) the fuel used.

1. For engines operated exclusively on CARB Diesel Fuel, the owner or operator shall document the use of CARB Diesel Fuel through the retention of fuel purchase records indicating that the only fuel purchased for supply to an emergency standby engine was CARB Diesel Fuel; or

2. For engines operated on any fuel other than CARB Diesel Fuel, fuel records demonstrating that the only fuel purchased and added to an emergency standby engine or engines, or to any fuel tank directly attached to an emergency standby engine or engines, meets the requirements of section 93115.5(b).

(2) Records shall be retained for a minimum of 36 months. Records for the prior 24 months shall be retained on-site, either at a central location or at the engine's location, or at an offsite central location within California, and shall be made immediately available to the District staff upon request. Records for the prior 25 to 36 months shall be made available to District staff within 5 working days from request.

(h) Reporting Requirements for the San Diego Gas and Electric Company Regarding the RBRP.

(1) The San Diego Gas and Electric Company shall provide to the San Diego County Air Pollution Control District the following information, by January 31, 2005, to the extent the District does not already have the information:

(A) For each diesel-fueled engine enrolled in the RBRP:

1. Owner's Company Name (if applicable);

2. Contact name, phone number, e-mail address;

3. Load reduction capacity of engine, which is the rated brake horsepower expressed in megawatts (megawatts); and

4. Diesel PM emission rate of the engine (g/bhp-hr);

(B) The San Diego Gas and Electric Company shall update the information as necessary to reflect the current inventory of RBRP engines and provide the updated information to the SDAPCD upon request.

(2) The San Diego Gas and Electric Company shall provide the San Diego County Air Pollution Control District with an environmental dispatch protocol for the RBRP that meets all of the following requirements:

(A) The protocol shall require the San Diego Gas and Electric Company to dispatch engines in an order that protects public health, with consideration given to factors including, but not limited to, diesel PM emission rate, location, and other factors to be determined by the District; and

(B) The protocol shall require the San Diego Gas and Electric Company to identify and report to the District the specific engines called for dispatch within 1 day of the dispatch; and

(C) The protocol shall require the San Diego Gas and Electric Company to report the following information to the District, within 30 days of the dispatch:

1. Identification of engine dispatched;

2. Load capacity of engine dispatched;

3. Cumulative total of load capacity of engines dispatched (megawatts); and

4. Cumulative total of diesel PM emission rate of engines dispatched (g/hr).

(D) Within 30 calendar days of receiving the environmental dispatch protocol, or a time period mutually agreed by the parties, the District APCO shall approve or disapprove the protocol.

(i) Additional Reporting Requirements for the Stationary Emergency Standby Diesel-Fueled CI Engines Used To Fulfill the Requirements of an Interruptible Service Contract (ISC).

(1) The owner or operator of an ISC engine shall provide to the District the following information, as necessary to the extent the District does not already have the information:

(A) For each diesel-fueled engine enrolled in the ISC:

1. Owner's Company Name (if applicable);

2. Contact name, phone number, e-mail address; and

3. Diesel PM emission rate of the engine (g/bhp-hr).

(B) For engines enrolled in an ISC prior to January 1, 2005, the information identified in 93115.10(i)(1)(A) shall be provided to the District by January 31, 2005; and

(C) For engines enrolled in an ISC after January 1, 2005, the information identified in 93115.10(i)(1)(A) shall be provided to the District no later than 30 days after the engine is enrolled in an ISC.

The owner or operator shall update the information as necessary to reflect the current inventory of ISC engines and shall provide the updated information to the District upon request.

**➡§ 93115.11. ATCM for Stationary CI Engines - Compliance Schedule for Owners or Operators of Three or Fewer Engines (>50 bhp) Located Within a District.**

(a) All owners and operators of three or fewer engines located within a District, who will meet the requirements of sections 93115.6(b) solely by maintaining or reducing the current annual hours of operation for maintenance and testing, shall be in compliance with the annual hours of operation limits beginning January 1, 2006.

(b) All owners and operators of three or fewer engines located within a District, which are not in compliance with section 93115.11(a) but are required to meet the requirements of sections 93115.6(b) or 93115.7(b), shall comply with section 93115.6(b) or 93115.7(b), whichever applies, according to the following schedule:

(1) All pre-1989 through 1989 model year engines, inclusive, shall be in compliance by no later than January 1, 2006;

(2) All 1990 through 1995 model year engines, inclusive, shall be in

compliance by no later than January 1, 2007; and

(3) All 1996 and later model year engines shall be in compliance by no later than January 1, 2008.

**➡§ 93115.12. ATCM for Stationary CI Engines - Compliance Schedule for Owners or Operators of Four or More Engines (>50 bhp) Located Within a District.**

(a) All owners and operators of four or more engines located within a District, who will meet the

requirements of sections 93115.6(b) solely by maintaining or reducing the current annual hours of operation for maintenance and testing, shall be in compliance with the annual hours of operation limits beginning January 1, 2006.

(b) All owners and operators of four or more engines located within a District, who are not in compliance with section 93115.12(a) but are required to meet the requirements of sections 93115.6(b) or 93115.7(b), shall comply with sections 93115.6(b) or 93115.7(b), whichever applies, according to the following schedule:

| Pre-1989 Through 1989 Model Year Engines, Inclusive | |
|---|---|
| Percent of Engines | Compliance date |
| 50% | January 1, 2007 |
| 75% | January 1, 2008 |
| 100% | January 1, 2009 |
| 1990 through 1995 Model Year Engines, Inclusive | |
| Percent of Engines | Compliance date |
| 30% | January 1, 2007 |
| 60% | January 1, 2008 |
| 100% | January 1, 2009 |
| 1996 and Later Model Year Engines | |
| Percent of Engines | Compliance date |
| 50% | January 1, 2008 |
| 100% | January 1, 2009 |

**➡§ 93115.13. ATCM for Stationary CI Engines - Compliance Demonstration.**

(a) Upon approval by the District APCO, the following sources of data may be used in whole or part to demonstrate compliance with the emissions standards or requirements of sections 93115.6 through 93115.9:

(1) off-road engine certification test data for the stationary diesel-fueled CI engine,

(2) engine manufacturer test data,

(3) emissions test data from a similar engine,

(4) emissions test data used in meeting the requirements of the Verification Procedure for the emission control strategy implemented, or

(5) An alternative compliance demonstration as described in section 93115.13(f).

(b) Emissions testing of a stationary diesel-fueled CI engine, for purposes of showing compliance with the requirements of sections 93115.6 through 93115.9, shall be done in accordance with the methods specified in section 93115.14.

(c) For purposes of emissions testing, the particulate matter (PM) emissions from a dual-fueled stationary CI engine, which uses as its fuel a mixture of diesel fuel and other fuel(s), shall be deemed to be 100% diesel PM.

(d) Emissions testing for the purposes of determining the percent change from baseline shall include baseline and emission control strategy testing subject to the following conditions:

(1) Baseline testing may be conducted with the emission control strategy in place, provided the test sample is taken upstream of the emission control strategy and the presence of the emission control strategy is shown to the District APCO's satisfaction as having no influence on the emission test results;

(2) Control strategy testing shall be performed on the stationary diesel-fueled CI engine with full implementation of the emission control strategy;

(3) The percent change from baseline shall be calculated as the baseline emissions minus control strategy emissions, with the difference being divided by the baseline emissions and the result expressed as a percentage; and

(4) The same test method shall be used for determining both baseline emissions and control strategy emissions.

(e) Emission testing for the purposes of demonstrating compliance with an emission level shall be performed on the stationary diesel-fueled CI engine with the emission control strategy fully implemented.

(f) Alternative Compliance Demonstration: The owner or operator of a new or in-use stationary diesel-fueled CI engine greater than 50 bhp may demonstrate compliance with the 0.01 g/bhp-hr PM emission standard of sections 93115.6 through 93115.9 by using one of the following:

(1) A Level 3 Verified Diesel Emission Control Strategy in combination with a certified CI engine that meets the 0.15 g/bhp-hr PM emission standard, or

(2) An 85 percent PM emission reduction control strategy in combination with a certified CI engine that meets 0.15 g/bhp-hr PM emission standard, or

(3) A certified CI engine that meets the 0.15 g/bhp-hr PM emission standard in combination with one of the emission control strategies identified in section 93115.13(f)(1) or (f)(2) and meets the requirements of section 93115.3(s) or section 93115.3(v), or

(4) Off-road CI equipment manufactured in compliance with the Transitional Implementation Flexibility Provisions for Equipment Manufacturers specified in title 13, CCR, section 2423(d); title 40 CFR, section 89.102(d); or title 40, CFR, section 1039.625 in combination with one of the emission control strategies identified in sections 93115.13(f)(1) or (f)(2) provided the CI engine meets the 0.15 g/bhp-hr PM emission standard, or

(5) A certified CI engine in an engine family identified by the manufacturer to participate in the averaging, banking, or trading program for that model year in compliance with the applicable subparts of title 40, CFR, section 89; title 40, CFR, section 1039; or title 13, CCR, section 2423(b)(2), provided the CI engine meets the 0.15 g/bhp-hr PM emission standard and is used in combination with one of the emission control strategies identified in sections 93115.13(f)(1) or (f)(2), or

(6) A Tier 4 certified CI engine or a new piece of equipment identified in section (f)(4) that emits no more than 0.015 g/bhp-hr PM.

**➡§ 93115.14. ATCM for Stationary CI Engines - Test Methods.**

(a) The following test methods shall be used to determine diesel PM, HC, NOx, CO and NMHC emission rates:

(1) Diesel PM emission testing shall be done in accordance with one of the following methods:

(A) California Air Resources Board Method 5 (ARB Method 5), "Determination of Particulate Matter Emissions from Stationary Sources," as amended July 28, 1997, which is incorporated herein by reference.

1. For purposes of this section, diesel PM shall be measured only by the probe catch and filter catch and shall not include PM captured in the impinger catch or solvent extract.

2. The tests are to be carried out under steady state operation. Test cycles and loads shall be in accordance with ISO-8178 Part 4 or alternative test cycle approved by the District APCO.

3. The District APCO may require additional engine or operational duty cycle data if an alternative test cycle is requested; or

(B) International Organization for Standardization (ISO) 8178 Test procedures: ISO 8178-1:1996(E) ( "ISO 8178 Part 1") ISO 8178-2: 1996(E) ( "ISO 8178 Part 2"); and ISO 8178-4:1996(E) ( "ISO 8178 Part 4"), which are incorporated herein by reference; or

(C) Title 13, California Code of Regulations, section 2423, "Exhaust Emission Standards and Test Procedures - Off-Road Compression Ignition Engines," which is incorporated herein by reference.

(2) NOx, CO and HC emission testing shall be done in accordance with one of the following methods:

(A) California Air Resources Board Method 100 (ARB Method 100), "Procedures for Continuous Gaseous Emission Stack Sampling," as amended July 28, 1997, which is incorporated herein by reference.

1. Tests using ARB Method 100 shall be carried out under steady state operation. Test cycles and loads shall be in accordance with ISO-8178 Part 4 or alternative test cycle approved by the District APCO.

2. The District APCO may require additional engine or operational duty cycle data if an alternative test cycle is requested; or

(B) International Organization for Standardization (ISO) 8178 Test procedures: ISO 8178-1:1996(E) ( "ISO 8178 Part 1") ISO 8178-2: 1996(E) ( "ISO 8178 Part 2"); and ISO 8178-4:1996(E) ( "ISO 8178 Part 4"), which are incorporated herein by reference; or

(C) Title 13, California Code of Regulations, section 2423, "Exhaust Emission Standards and Test Procedures - Off-Road Compression Ignition Engines," which is incorporated herein by reference.

(3) NMHC emission testing shall be done in accordance with one of the following methods:

(A) International Organization for Standardization (ISO) 8178 Test procedures: ISO 8178-1:1996(E) ( "ISO 8178 Part 1") ISO 8178-2:1996(E) ( "ISO 8178 Part 2"); and ISO 8178-4:1996(E) ( "ISO 8178 Part 4"), which are incorporated herein by reference; or

(B) Title 13, California Code of Regulations, section 2423, "Exhaust Emission Standards and Test Procedures - Off-Road Compression Ignition Engines," which is incorporated herein by reference.

(b) The District APCO may approve the use of alternatives to the test methods listed in section 93115.14(a), provided the alternatives are demonstrated to the APCO's satisfaction as accurate in determining the emission rate of diesel PM, HC, NOx, NMHC, or CO.

### ➡§ 93115.15. ATCM for Stationary CI Engines - Severability.

Each part of this ATCM shall be deemed severable, and in the event that any part of this ATCM is held to be invalid, the remainder of this ATCM shall continue in full force and effect.

## ➡§ 93116. Purpose.

Airborne Toxic Control Measure for Diesel Particulate Matter from Portable Engines Rated at 50 Horsepower and Greater

The purpose of this airborne toxic control measure (ATCM) is to reduce diesel particulate matter (PM) emissions from portable diesel-fueled engines having a rated brake horsepower of 50 and greater (> or =50 bhp).

## ➡§ 93116.1. Applicability.

(a) Except as provided below, all portable engines having a maximum rated horsepower of 50 bhp and greater and fueled with diesel are subject to this regulation.

(b) The following portable engines are not subject to this regulation:

(1) Any engine used to propel mobile equipment or a motor vehicle of any kind;

(2) Any portable engine using an alternative fuel;

(3) Dual-fuel diesel pilot engines that use an alternative fuel or an alternative diesel fuel;

(4) Tactical support equipment;

(5) Portable diesel-fueled engines operated on either San Clemente or San Nicolas Island;

(6) Engines preempted from State regulation under 42 USC §7543(e)(1);

(7) Portable diesel-fueled engines operated at airports that satisfy the following requirements:

(A) the equipment is subject to the South Coast Ground Service Equipment Memorandum of Understanding (MOU); and

(B) the participating airlines have demonstrated to the satisfaction of the Executive Officer that the diesel PM reductions achieved by satisfying the requirements of the MOU are equivalent to the reductions achieved by this control measure.

(8) Engines used exclusively on cranes shall meet all applicable requirements in Title 13 of the California Code of Regulations commencing with section 2449;

(9) Engines used exclusively on street sweepers that are not subject to Title 13 Cal. Code Regs., section 2022 shall meet all applicable requirements in Title 13 of the California Code of Regulations commencing with section 2025; and

(10) Engines used exclusively on two-engine water well drilling rigs as defined in Title 13, Cal. Code Regs., section 2449(c) shall meet all applicable requirements in Title 13 of the California Code of Regulations commencing with section 2449.

## ➡§ 93116.2. Definitions.

(a) For the purposes of these regulations, the following definitions apply:

(1) "Air Pollution Control Officer or APCO" means the air pollution control officer of a district, or his/her designee.

(2) "Alternative Fuel" means gasoline, natural gas, propane, liquid petroleum gas (LPG), hydrogen, ethanol, or methanol.

(3) "Alternative Diesel Fuel" means any fuel used in a compression ignition (CI) engine that is not, commonly or commercially known, sold or represented by the supplier as diesel fuel No. 1-D or No. 2-D, pursuant to the specifications in ASTM Standard Specification for Diesel Fuel Oils D975-81, or an alternative fuel, and does not require engine or fuel system modifications for the engine to operate, although minor modifications (e.g., recalibration of the engine fuel control) may enhance performance. An emission control strategy using a fuel additive will be treated as an alternative diesel fuel based strategy unless:

(A) the additive is supplied to the engine fuel by an on-board dosing mechanism, or

(B) the additive is directly mixed into the base fuel inside the fuel tank of the engine, or

(C) the additive and base fuel are not mixed until engine fueling commences, and no more additive plus base fuel combination is mixed than required for a single fueling of a single engine.

(4) "CARB Diesel Fuel" means any diesel fuel that is commonly or commercially known, sold, or represented by the supplier as diesel fuel No. 1-D or No. 2-D, pursuant to the specification for Diesel Fuel Oils D975-81, and that meets the specifications defined in Title 13 CCR, sections 2281, 2282, and 2284.

(5) "Certified Nonroad Engine" refers to an engine meeting an applicable nonroad engine emission standard as set forth in Title 13 of the California Code of Regulations or CFR 40 Part 89.

(6) "Crane" means the same as "Two-Engine Crane" defined in Title 13, CCR, section 2449(c)(56).

(7) "Diesel Fuel" means any fuel that is commonly or commercially known, sold, or represented by the supplier as diesel fuel, including any mixture of primarily liquid hydrocarbons -organic compounds consisting exclusively of the elements carbon and hydrogen -that is sold or represented as suitable for use in an engine.

(8) "Diesel-Fueled" means fueled by diesel fuel, or CARB diesel fuel, in whole or part.

(9) "Diesel Particulate Matter (PM)" means the particles found in the exhaust of diesel-fueled engines which may agglomerate and adsorb other species to form structures of complex physical and chemical properties.

(10) "District" means a District as defined in Health and Safety Code section 39025.

(11) "Dual-fuel Diesel Pilot Engine" means a dual-fueled engine that uses diesel fuel as a pilot ignition source at an annual average ratio of less than 5 parts diesel fuel to 100 parts total fuel on an energy equivalent basis.

(12) "Emergency" means providing electrical power or mechanical work during any of the following events and subject to the following conditions:

(A) the failure or loss of all or part of normal electrical power service or normal natural gas supply to the facility:

1. which is caused by any reason other than the enforcement of a contractual obligation the owner or operator has with a third party or any other party; and

2. which is demonstrated by the owner or operator to the district APCO's satisfaction to have been beyond the reasonable control of the owner or operator;

(B) the failure of a facility's internal power distribution system:

1. which is caused by any reason other than the enforcement of a contractual obligation the owner or operator has with a third party or any other party; and

2. which is demonstrated by the owner or operator to the district APCO's satisfaction to have been beyond the reasonable control of the owner or operator;

(C) the pumping of water or sewage to prevent or mitigate a flood or sewage overflow;

(D) the pumping of water for fire suppression or protection;

(E) the pumping of water to maintain pressure in the water distribution system for the following reasons:

1. pipe break; or

2. high demand on water supply system due to high use of water for fire suppression;

(F) the breakdown of electric-powered pumping equipment at sewage treatment facilities or water delivery facilities;

(G) the training of personnel in the use of portable equipment for emergency purposes.

(13) "Emergency Event" refers to a situation arising from a sudden and reasonably unforeseen natural disaster such as an earthquake, flood, fire, or other acts of God, or other unforeseen event that requires the use of portable engines to help alleviate the threat to public health and safety.

(14) "Engine" means any piston-driven internal combustion engine.

(15) "Engines Used Exclusively in Emergency Applications" refer to engines that are used only during an emergency or emergency event, and includes appropriate maintenance and testing.

(16) "Executive Officer" means the Executive Officer of the California Air Resources Board (CARB) or his/her designee.

(17) "Fleet" refers to a portable engine or group of portable engines that are owned and managed by an individual operational entity, such as a business, business unit within a corporation, or individual city or state department under the control of a Responsible Official. Engines that are owned by different business entities that are under the common control of only one Responsible Official shall be treated as a single fleet.

(18) "Fuel Additive" means any substance designed to be added to fuel or fuel systems or other engine-related systems such that it is present in-cylinder during combustion and has any of the following effects: decreased emissions, improved fuel economy, increased performance of the engine; or assists diesel emission control strategies in decreasing emissions, or improving fuel economy or increasing performance of the engine. Fuel additives used in conjunction with diesel fuel may be treated as an alternative diesel fuel.

(19) "In-Use Engines" refers to portable diesel-fueled engines operating under valid permits or registrations as of December 31, 2009.

(20) "Level-3 Verified Technology" means a technology that has satisfied the requirements of the "Verification Procedure for In-Use Strategies to Control Emissions from Diesel Engines" in Title 13, California Code of Regulations, commencing with section 2700, and has demonstrated an reduction in diesel particulate matter of 85% or greater.

(21) "Location" means any single site at a building, structure, facility, or installation.

(22) "Low-Use Engines"refers to portable diesel-fueled engines that operate 80 hours or less in a calendar year.

(23) "Maximum Rated Horsepower (brake horsepower (bhp))" is the maximum brake horsepower rating specified by the portable engine manufacturer and listed on the nameplate of the portable engine.

(24) "Nonroad Engine" means:

(A) Except as discussed in paragraph (2) of this definition, a nonroad engine is any engine:

1. in or on a piece of equipment that is self-propelled or serves a dual purpose by both propelling itself and performing another function (such as garden tractors, off-highway mobile cranes and bulldozers); or

2. in or on a piece of equipment that is intended to be propelled while performing its function (such as lawnmowers and string trimmers); or

3. that, by itself or in or on a piece of equipment, is portable or transportable, meaning designed to be and capable of being carried or moved from one location to another. Indicia of transportability include, but are not limited to, wheels, skids, carrying handles, dolly, trailer, or platform.

(B) An engine is not a nonroad engine if:

1. the engine is used to propel a motor vehicle or a vehicle used solely for competition, or is subject to standards promulgated under section 202 of the federal Clean Air Act; or

2. the engine is regulated by a federal New Source Performance Standard promulgated under section 111 of the federal Clean Air Act; or

3. the engine otherwise included in paragraph (1)(C) of this definition remains or will remain at a location for more than 12 consecutive months or a shorter period of time for an engine located at a seasonal source. Any engine(s) that replace(s) an engine at a location and that is intended to perform the same or similar function as the engine replaced will be included in calculating the consecutive time period. An engine located at a seasonal source is an engine that remains at a seasonal source during the full annual operating period of the seasonal source. A seasonal source is a stationary source that remains in a single location on a permanent basis (at least two years) and that operates at that single location approximately three (or more) months each year.

(25) "Off-Road Engine" means the same as nonroad engine.

(26) "Outer Continental Shelf (OCS)" shall have the meaning provided by section 2 of the Outer Continental Shelf Lands Act (43 USC Section 1331 et seq.).

(27) "Participating Airlines" means the collective group of Individual Participating Airlines under the MOU, which currently is as follows: ABX Air, Inc. (formerly Airborne Express), Alaska Airlines, America West Airlines, American Airlines, ATA Airlines (formerly American Trans Air), Continental Airlines, Delta Air Lines, Astar Air Cargo (formerly DHL Airways), Federal Express, Hawaiian Airlines, Jet Blue Airways Corp., Midwest Airlines (formerly Midwest Express Airlines), Northwest Airlines, Southwest Airlines, United Airlines, United Parcel Service, and US Airways. Participating Airlines does not mean the Air Transportation Association of America, Inc.

(28) "Permit" refers to a certificate issued by the Air Pollution Control Officer acknowledging expected compliance with the applicable requirements of the district's rules and regulations.

(29) "Portable" means designed and capable of being carried or moved from one location to another. Indicia of portability include, but are not limited to, wheels, skids, carrying handles, dolly, trailer, or

platform. For the purposes of this regulation, dredge engines on a boat or barge are considered portable. The engine is not portable if:

(A) the engine or its replacement is attached to a foundation, or if not so attached, will reside at the same location for more than 12 consecutive months. The period during which the engine is maintained at a storage facility shall be excluded from the residency time determination. Any engine, such as a back-up or stand-by engine, that replace engine(s) at a location, and is intended to perform the same or similar function as the engine(s) being replaced, will be included in calculating the consecutive time period. In that case, the cumulative time of all engine(s), including the time between the removal of the original engine(s) and installation of the replacement engine(s), will be counted toward the consecutive time period; or

(B) the engine remains or will reside at a location for less than 12 consecutive months if the engine is located at a seasonal source and operates during the full annual operating period of the seasonal source, where a seasonal source is a stationary source that remains in a single location on a permanent basis (at least two years) and that operates at that single location at least three months each year; or

(C) the engine is moved from one location to another in an attempt to circumvent the portable residence time requirements.

(30) "Project" means the use of one or more registered or permitted portable engines or equipment units operated under the same or common ownership or control to perform a single activity.

(31) "Registration" refers to either:

(A) a certificate issued by the Executive Officer acknowledging expected compliance with the applicable requirements of the Statewide Portable Equipment Registration Program; or

(B) a certificate issued by the Air Pollution Control Officer acknowledging expected compliance with the applicable requirements of the district's Portable Equipment Registration Program.

(32) "Responsible Official" refers to an individual employed by the company or public agency with the authority to certify that the portable engines under his/her jurisdiction comply with applicable requirements of this regulation. A company or public agency may have more than one Responsible Official.

(33) "Selective Catalytic Reduction (SCR) System" refers to an air pollution emissions control system that reduces oxides of nitrogen (NOx) emissions through the catalytic reduction of NOx by injecting nitrogen-containing compounds into the exhaust stream, such as ammonia or urea.

(34) "Stationary Source" means any building, structure, facility or installation that emits any air contaminant directly or as a fugitive emission. Building, structure, facility, or installation includes all pollutant emitting activities which:

(A) are under the same ownership or operation, or which are owned or operated by entities which are under common control; and

(B) belong to the same industrial grouping either by virtue of falling within the same two-digit standard industrial classification code or by virtue of being part of a common industrial process, manufacturing process, or connected process involving a common raw material; and

(C) are located on one or more contiguous or adjacent properties.

[Note: For the purposes of this regulation a stationary source and nonroad engine are mutually exclusive.]

(35) "Stock Engine" means a certified diesel-fueled engine that has never been placed in service and is part of a supply of engines offered for sale, rent, or lease by a person or company who offers for sale, rent, or lease engines and related equipment for profit.

(36) "Storage" means a warehouse, enclosed yard, or other area established for the primary purpose of maintaining portable engines when not in operation.

(37) "Street Sweeper" means the same as "Dual-engine Street Sweeper" defined in Title 13, CCR, section 2022(b)(2).

(38) "Tactical Support Equipment (TSE)" means equipment using a portable engine, including turbines, that meets military specifications, owned by the U.S. Department of Defense and/or the U.S. military services or its allies, and used in combat, combat support, combat service support, tactical or relief operations, or training for such operations. Examples include, but are not limited to, engines associated with portable generators, aircraft start carts, heaters and lighting carts.

(39) "Tier 4 Emission Standards" refers to the final emission standards adopted by the U.S. EPA for newly manufactured nonroad engines.

(40) "Transportable" means the same as portable.

(41) "Verified Emission Control Strategy" refers to an emission control strategy, designed primarily for the reduction of diesel PM emissions which has been verified pursuant to the "Verification Procedure for In-Use Strategies to Control Emissions from Diesel Engines" in Title 13, California Code of Regulations, commencing with section 2700, and incorporated by reference.

(42) "U.S. EPA" refers to the United States Environmental Protection Agency.

**➡§ 93116.3. Requirements.**

(a) Diesel-fueled portable engines shall only use one of the following fuels:

(1) CARB diesel fuel; or

(2) alternative diesel fuel that has been verified through the Verification Procedure for In-Use Strategies to Control Emissions from Diesel Engines; or

(3) CARB diesel fuel utilizing fuel additives that have been verified through the Verification Procedure for In-Use Strategies to Control Emissions from Diesel Engines.

[Note that credit for diesel PM reductions for diesel fuel or CARB diesel fuel blends that use an alternative diesel fuel such as biodiesel, Fischer-Tropsch fuels, or emulsions of water in diesel fuel is available only for fuel blends that been verified through the Verification Procedure for In-Use Strategies to Control Emissions from Diesel Engines. The credit granted is based upon the verified level approved by the Executive Officer within the Executive Order for the fuel blend.]

(b) Diesel PM Standards

(1) Requirements for in-use portable diesel-fueled engines

(A) Except as provided in sections 93116.3(b)(1)(B) and 93116.3(b)(1)(C), starting January 1, 2010, all portable diesel-fueled engines shall be certified to meet a federal or California standard for newly manufactured engines pursuant to 40 CFR Part 89, Part 86, or the equivalent categories in Title 13 of the California Code of Regulations.

(B) In lieu of complying with (b)(1)(A), owners of portable diesel-fueled engines used exclusively in emergency applications or portable diesel-fueled engines that qualify as low-use engines may commit to replacing these engines with Tier 4 engines, subject to the requirements below:

1. the Responsible Official shall submit written notification identifying the specific portable diesel-fueled engines to be replaced with portable diesel-fueled engines certified to the Tier 4 emission standards; and

2. for each class and category of nonroad engine, replace each portable diesel-fueled engine so identified within two years of the first engine being offered for sale that satisfies the Tier 4 emission standards.

(C) Notwithstanding the requirements of section 93116.3(b)(1)(A), any company, public agency, or military base may select specific engines to continue to operate until December 31, 2010. The selections shall be submitted to the appropriate regulatory agency no later than 30 days after the effective date of these amendments, and are subject to the requirements below:

1. The engine(s) selected shall have current, valid permits or registrations as of December 31, 2009; and

2. one engine with no restriction for maximum rated horsepower; or

3. no more than five engines not to exceed 500 cumulative brake horsepower for the selected engines.

4. If an owner has selected one spark ignition engine per title 13 Cal. Code Regs. subsection 2456(f)(11)(A), then section 93116.3(b)(1)(C)(2) shall not be used.

5. If an owner has selected less than five spark ignition engines per title 13 Cal. Code Regs. subsection 2456(f)(11)(B) then the combined total of selected spark-ignition engines and compression-ignition engines shall not exceed five engines with a cumulative size of 500 brake horsepower.

(2) Portable diesel-fueled engines that have not been permitted or registered prior to January 1, 2006, are subject to the following requirements:

(A) except as specified in 93116.3(b)(4), 93116.3(b)(5), and 93116.3(b)(6), and except as allowed under flexibility provisions for equipment and vehicle manufacturers and post-manufacture marinizers pursuant to 40 CFR Part 89 or Title 13 of the California Code of Regulations, the portable diesel-fueled engine shall meet the most stringent of the federal or California emission standard for nonroad engines; or

(B) upon approval by the air pollution control officer, a diesel-fueled portable engine not certified to an emission standard pursuant to 40 CFR Part 89 or Title 13 California Code of Regulations used exclusively in emergency applications or qualifying as a low-use engine designation may only be permitted or registered by a district. Any engine used exclusively in emergency applications or qualifying as a low-use engine designation is subject to the requirements of section 93116.3(b)(3).

(3) Except as provided in section 93116.3(b)(1)(B), portable diesel-fueled engines used exclusively in emergency applications or qualifying as low-use engines shall satisfy one of the following requirements by January 1, 2020:

(A) the portable diesel-fueled engine is certified to Tier 4 emission standards for newly manufactured nonroad engines; or

(B) the portable diesel-fueled engine is equipped with a properly functioning level-3 verified technology; or

(C) the portable diesel-fueled engine is equipped with a combination of verified emission control strategies that have been verified together to achieve at least 85% reduction in diesel PM emissions.

(4) Engines operated in California between March 1, 2004 and October 1, 2006 may be permitted or registered by a district or registered in the Statewide Portable Equipment Registration Program until 12/31/09 if they meet an emission standard pursuant to 40 CFR Part 89 or Title 13 of the California Code of Regulations.

(5) Upon approval by the air pollution control officer, a district may permit or register engines operated in California between March 1, 2004 and October 1, 2006 that are not certified to an emission standard pursuant to 40 CFR Part 89 or Title 13 of the California Code of Regulations.

(6) An engine owner, operator, dealer, or distributor may permit or register an engine not meeting the most stringent emission standard providing the following are met:

(A) the engine met the most stringent emission standard in effect prior to the change for that horsepower range, and;

(B) The application for permit or registration of the engine is submitted within six months of the effective date of the change in emission standards.

(c) Fleet Requirements

(1) Each fleet is subject to and shall comply with the following weighted PM emission fleet averages expressed as grams per brake horsepower-hour (g/bhp-hr) by the listed compliance dates:

| Fleet Standard Compliance Date | Engines <175 hp (g/bhp-hr) | Engines>=175 to 749 hp (g/bhp-hr) | Engines>=750 hp (g/bhp-hr) |
|---|---|---|---|
| 1/1/13 | 0.3 | 0.15 | 0.25 |
| 1/1/17 | 0.18 | 0.08 | 0.08 |
| 1/1/20 | 0.04 | 0.02 | 0.02 |

(2) For the purposes of this regulation, the portable diesel-fueled engines affected by the fleet provisions of this regulation include all portable diesel-fueled engines operated in California, including portable diesel-fueled engines registered with the Statewide Portable Equipment Registration Program or permitted by or registered with a local district.

(3) The following portable diesel-fueled engines shall be excluded from the fleet requirements:

(A) portable diesel-fueled engines operated exclusively outside of California or operated only within the OCS.

(B) portable diesel-fueled engines used exclusively in emergency applications.

(C) portable diesel-fueled engines that qualify as low-use engines.

(4) Portable diesel-fueled engines that qualify as low-use engines and subsequently exceed the allowed hours of operation in a calendar year, or portable diesel-fueled engines that are identified to be used exclusively in emergency applications but subsequently are used in non-emergency applications, become immediately subject to the requirements of section 93116.3(c) in the year such exceedence or use occurs. For low-use engines, the hours of operation used for an emergency event shall not be counted toward the allowed hours of operation.

(5) Portable alternative-fueled engines may be included in a fleet if the engine satisfies the requirements in section 93116.3(d)(2)(B).

(6) Portable diesel-fueled portable engines equipped with SCR systems.

(A) The diesel PM fleet emission standards in section 93116.3(c)(1) do not apply to:

1. portable diesel-fueled engines equipped with properly operating SCR systems as of January 1, 2004; and

2. with the approval of the Executive Officer, portable diesel-fueled engines equipped with properly operating SCR systems after January 1, 2004.

(B) At the request of the Responsible Official, portable diesel-fueled engine(s) equipped with a SCR system(s) may be included in the company's fleet for the purpose of complying with an applicable fleet emission standard. Once the engine(s) is included in a fleet, compliance with applicable fleet emission standards shall always include these diesel-fueled portable engine(s).

(C) For all diesel-fueled portable engines equipped with SCR systems, the following information shall be submitted to the Executive Officer to demonstrate that the SCR system is operating properly:

1. Tests results for NOx, PM, and ammonia slip

a. the following tests methods shall be used to demonstrate compliance:

i. NOX shall be measured with CARB test method 100 dated July 1997, or equivalent district-approved test method; and

ii. diesel PM shall be measured with CARB test method 5 dated July 1997 or equivalent district-approved test method. For the purposes of this requirement, only the probe catch and filter catch ("front half") is used to determine the emission rate, g/bhp-hr, and shall not include PM captured in the impinger catch or solvent extract; and

iii. ammonia slip shall be measured with Bay Area Air Quality Management District Source Test Procedure ST-1B, Ammonia Integrated Sampling, dated January 1982, or other equivalent district approved test method.

b. the duration of the emission test shall be sufficient to document the typical operation of the portable diesel-fueled engine(s); and

c. testing shall be performed at the frequency required by the permit or registration. In no event shall the time between emission tests exceed three years.

(7) Beginning on January 1, 2013, the weighted average PM emission rate for the fleet cannot exceed the fleet standard that is in effect. Changes in the fleet, including portable engine additions and deletions, shall not result in noncompliance with this standard.

(d) Fleet Average Calculations

(1) General Provisions

(A) The average PM emission factor for the fleet is determined by the following formula:

<<Sigma>> Summation for each portable engine in the fleet (bhp x emission factor) / <<Sigma>> Summation for each portable engine in the fleet (bhp)

where:

bhp = maximum rated horsepower.

emission factor = diesel PM emission rate, as determined below:

(B) The following diesel PM emission rates shall be used with the above formula to determine the weighted average fleet emission rate:

1. for portable diesel-fueled engines certified to a nonroad engine standard, the results of emission measurements submitted to either the U. S. EPA or CARB for the purposes of satisfying the appropriate emission standard; or

2. results from emission measurements from a verified emission control strategy may be used in conjunction with engine emission information; or

3. for portable diesel-fueled engine(s) equipped with SCR system(s), results from valid emission tests.

(2) The following incentives may be used to revise the fleet average, as outlined below:

(A) Where equipment uses grid power for more than 200 hours in lieu of operating a portable diesel-fueled engine for a given project, the time period grid power is used may be used to reduce each affected engine's emission factor. The emission factor for each affected portable engine will be reduced proportionally by the percentage of time the equipment uses grid power. To receive credit for grid power in the fleet calculation, the recordkeeping and reporting requirements in section 93116.4(c)(3) shall be satisfied.

(B) Alternative-fueled portable engines

1. Alternative-fueled portable engines operating 100 or more hours may be included toward determining compliance with the applicable fleet emission standards. A diesel PM emission rate of zero shall be used in the fleet calculations for these engines.

2. Alternative-fueled portable engines operating 100 or more hours per calendar year and added to a fleet prior to January 1, 2009, may be counted twice in the company's fleet average determination toward compliance with the 2013 and 2017 fleet emission standards. The alternative-fueled engine shall be certified to meet a federal or California standard for newly manufactured nonroad engines pursuant to 40 CFR Part 89 or Title 13 of the California Code of Regulations.

(C) Portable diesel-fueled engines certified to Tier 4 nonroad engine standards that are added to a fleet prior to January 1, 2015, may be counted twice in the company's fleet average determination toward compliance with the 2013 and 2017 fleet emission standards.

### ➡§ 93116.3.1. Compliance Flexibility for Diesel PM Standards.

If the Executive Officer finds, based on verifiable information from the engine manufacturer, distributor, or dealer, that current model year engines meeting the current emission standards are not available or not available in sufficient numbers or in a sufficient range of makes, models, and horsepower ratings, then the Executive Officer may allow the sale, purchase, or installation of a new stock engine meeting the emission standards from the previous model year to meet the emission standards in sections 93116.3(b).

### ➡§ 93116.4. Fleet Recordkeeping and Reporting Requirements.

(a) The owner or operator of a fleet is not subject to the requirements of this section if each portable diesel-fueled engine in the fleet satisfies any one of the following requirements:

(1) the portable diesel-fueled engine is certified to Tier 4 emission standards for newly manufactured nonroad engines; or

(2) the portable diesel-fueled engine is equipped with a properly functioning level-3 verified technology; or

(3) the portable diesel-fueled engine is equipped with a combination of verified emission control strategies that have been verified together to achieve at least 85% reduction in diesel PM emissions.

(b) Portable diesel-fueled engine(s) equipped with properly operating SCR system(s) shall be excluded from the requirements of section 93116.4(a) if the engine(s) is not subject to section 93116.3(c)(1).

(c) Effective January 1, 2012, the Responsible Official of a fleet shall:

(1) Keep and maintain records for:

(A) alternative-fueled portable engines used as part of a company's fleet average, except as provided in section 93116.4(d); and

(B) portable diesel-fueled engines affected by the use of electrification; and

(C) portable diesel-fueled engines qualifying as low-use engines; and

(D) portable diesel-fueled engines used exclusively in emergency applications.

(2) The Responsible Official, for all portable engines subject to section 93116.4(c)(1), shall:

(A) install or cause to be installed and properly maintained on each portable engine subject to recordkeeping a non-resettable hour-meter; and

(B) maintain on a calendar year basis a record of the total hours of operation for each portable engine. If the portable engine is used out-of-state, then the records may account for operation within California only, excluding operation within the OCS; and

(C) maintain all required records at a central place of business for five years. The records shall clearly identify each portable engine subject to the recordkeeping requirement as well as the annual hours of operation. These records are to be made available, upon request for inspection, to local air pollution control district or CARB personnel. The requested records shall be provided to the appropriate personnel within ten business days of the request.

(3) The Responsible Official of a fleet electing to use electrification in determining the fleet average shall:

(A) notify the Executive Officer identifying the dates, location, duration of the project, and a description of the project that will rely on electrification instead of using portable diesel-fueled engines. The notification shall be provided prior to the start of the project; and

(B) identify each affected portable diesel-fueled engine, including: make, model, serial number, year of manufacture for each engine, emission factor (g/bhp-hr) and district permit or State/district registration number; and

(C) shall clearly identify the electrification activity, including indicating the amount of electricity used and the time period for the project; and

(D) shall retain copies of contracts or other documentation, with the project proponent and/or applicable utility, supporting the use of grid power.

(4) Test results for SCR compliance shall be maintained at a central place of business for five years. At the request of CARB or district personnel, the Responsible Official shall have three business days to provide a copy of the most recent test results.

(d) Effective January 1, 2008, for alternative-fueled engines added to a fleet prior to January 1, 2009, the Responsible Official shall:

(1) install or cause to be installed and properly maintained on each portable engine subject to recordkeeping a non-resettable hour-meter; and

(2) maintain on a calendar year basis a record of the total hours of operation for each portable engine. If the portable engine is used out-of-state, then the records may account for operation within California only, excluding operation within the OCS; and

(3) maintain all required records at a central place of business for five years. The records shall clearly identify each portable engine subject to the recordkeeping requirement as well as the annual hours of operation. These records are to be made available, upon request for inspection, to local air pollution control district or CARB personnel. The requested records shall be provided to the appropriate personnel within ten business days of the request.

(e) The Responsible Official of the fleet shall provide the following reports to the Executive Officer:

(1) A status report, due to the Executive Officer by March 1, 2011, that includes the following items:

(A) the fleet's weighted average PM emission rate for the 2010 calendar year, including a summary for each portable engine that is part of the fleet and each engine's emission rate (g/bhp-hr); and

(B) inventory of portable engines in the fleet identifying whether the engine is state-registered or permitted/registered with the district. Alternative-fueled engines should be identified by fuel type. The inventory shall identify the make, model, serial number, year of manufacture, primary fuel type, emission factor (g/bhp-hr), and district permit or State/district registration number for each engine to be used in the fleet average determination; and

(C) identify, if applicable, each portable diesel-fueled engine that the owner commits to replacing with a Tier 4 engine, including: make, model, serial number, year of manufacture for each engine, and district permit or State/district registration number; and

(D) listing of portable diesel-fueled engines, if applicable, used exclusively in emergency applications. The listing shall identify each engine claiming use only in emergency applications, including: make, model, serial number, year of manufacture for each engine, emission factor (g/bhp-hr), and district permit or State/district registration number; and

(E) listing of portable diesel-fueled engines, if applicable, satisfying the low-use engine requirements. The listing shall identify each engine, including: make, model, serial number, year of manufacture for each engine, emission factor (g/bhp-hr), and district permit or State/district registration number; and

(F) listing of portable alternative-fueled engines, if applicable, added to the fleet prior to January 1, 2009, pursuant to section 93116.3(d)(2)(B)2. The listing shall identify each engine, including: make, model, serial number, year of manufacture for each engine, U.S. EPA engine family name, emission factor (g/bhp-hr), and district permit or State/district registration number; and

(G) for portable diesel-fueled engine(s) equipped with SCR system(s), documentation demonstrating that the SCR system is operating properly.

(2) A statement of compliance signed by the Responsible Official that the fleet standards are being achieved and a summary that identifies each portable engine in the fleet and the associated emission rate (g/bhp-hr). Portable engines included in the fleet are those that are part of the fleet at the time the fleet standard became effective. The engine identification shall include, at a minimum, the make, model, serial number, and year of manufacture for each engine. Alternative-fueled engines should be identified by fuel type. The statements of compliance are due to the Executive Officer by the following dates:

(A) March 1, 2013, for the fleet standards that become effective January 1, 2013; and

(B) March 1, 2017, for the fleet standards that become effective January 1, 2017; and

(C) March 1, 2020 for the fleet standards that become effective January 1, 2020.

(3) The Responsible Official shall identify to the Executive Officer, as part of each compliance report, the specific portable diesel-fueled engines, if any, used exclusively in emergency applications and the specific portable diesel-fueled engines, if any, claimed to be low-use engine. The list shall include for each portable diesel-fueled engine: the make, model, serial number, year of manufacture for each engine, emission factor (g/bhp-hr), and district permit or State/district registration number.

(4) The Responsible Official shall identify to the Executive Officer, as part of each compliance report, the specific portable diesel-fueled engines, if any, excluded from the fleet because the portable diesel-fueled engine operated exclusively outside of California or operated only within the OCS. The list shall include for each portable diesel-fueled engine: the make, model, serial number, year of manufacture, and, district permit or State/district registration number for each engine.

(5) If compliance with the fleet average includes the use of electrification, the Responsible Official shall provide documentation supporting the credit claimed for electrification.

(6) As part of each compliance report, the Responsible Official shall, if applicable, certify the following:

(A) all portable alternative-fueled engines included in the fleet average operated at least 100 hours during the previous 12 months prior to the fleet emission standard becoming effective.

(B) for all portable diesel-fueled engines used exclusively in emergency applications, the engines were used only for emergency applications.

(C) for all portable diesel-fueled engines using the low-use designation, the engines operated no more than 80 hours for the reporting period.

(D) for all portable diesel-fueled engines equipped with SCR, the engine complies with applicable district or Statewide Portable Equipment Registration Program requirements.

(7) After March 1, 2013, the APCO or the Executive Officer may require the submittal of information demonstrating compliance with the applicable fleet standard. Upon receiving the request, the Responsible Official shall provide the requested information within 30 days.

(f) For fleets that are exempted from the requirements of section 93116.4 pursuant to section 93116.4(a), the Responsible Official shall certify that all portable diesel-fueled engines in the fleet satisfy the requirements of section 93116.4(a). The Responsible Official shall provide the certification statement and a list of the portable diesel-fueled engines in the fleet to the Executive Officer when the fleet initially satisfies the requirements of section 93116.4(a). The list of engines shall identify the make, model, serial number, and district permit or State/district registration number for each engine.

**➡§ 93116.5. Enforcement of Fleet Requirements.**

(a) Both the Executive Officer and the APCO have the authority to review or seek enforcement action for violation of the fleet emission standard.

(b) The CARB will make available to the districts the information the Responsible Official has provided to CARB to demonstrate compliance with the fleet standard.

**➡§ 93117. Airborne Toxic Control Measure to Reduce Particulate Emissions from Diesel-Fueled Engines - Standards for Nonvehicular Diesel Fuel Used in Intrastate Diesel-Electric Locomotives and Harborcraft.**

(a)Requirements.
(1)Standards for Nonvehicular Diesel Fuel Used in Harborcraft in the South Coast Air Quality Management District (SCAQMD) Beginning January 1, 2006. Beginning January 1, 2006, California nonvehicular diesel fuel sold, offered for sale, or supplied within the SCAQMD for use in harborcraft is subject to all of the requirements of Title 13 CCR sections 2281 (sulfur content), 2282 (aromatic hydrocarbons content) and 2284 (lubricity) applicable to vehicular diesel fuel, and shall be treated under those sections as if it were vehicular diesel fuel.
(2)Standards for Nonvehicular Diesel Fuel Used in Intrastate Diesel-Electric Locomotives and Harborcraft Beginning January 1, 2007. Beginning January 1, 2007, California nonvehicular diesel fuel sold, offered for sale, or supplied for use in diesel-electric intrastate locomotives or harborcraft is subject to all of the requirements of title 13 CCR sections 2281 (sulfur content), 2282 (aromatic hydrocarbons content) and 2284 (lubricity) applicable to vehicular diesel fuel, and shall be treated under those sections as if it were vehicular diesel fuel.
(3)Exemption for military specification fuel used in military vessels. The requirements of this section do not apply to military specification fuel that is sold, offered for sale, or supplied for use in marine vessels owned or operated by the armed forces of the United States.
(b) Definitions.

(1) "California nonvehicular diesel fuel" means any diesel fuel that is not vehicular diesel fuel as defined respectively in title 13 CCR sections 2281(b), 2282(b), or 2284(b) and that is sold or made available for use in engines in California.

(2) "Diesel-electric locomotive" means a locomotive using electric power provided by a diesel engine that drives a generator or alternator; the electrical power produced then drives the wheels using electric motors.

(3) "Diesel fuel" means any fuel that is commonly or commercially known, sold or represented as diesel fuel, including any mixture of primarily liquid hydrocarbons that is sold or represented as suitable for use in an internal combustion, compression-ignition engine.

(4) "Harborcraft" means any marine vessel that meets all of the following criteria:

(A) The vessel does not carry a "registry" (foreign trade) endorsement on its United States Coast Guard certificate of documentation, and is not registered under the flag of a country other than the United States;

(B) The vessel is less than 400 feet in length overall (LOA) as defined in 50 CFR § 679.2 as adopted June 19, 1996;

(C) The vessel is less than 10,000 gross tons (GT ITC) per the convention measurement (international system) as defined in 46 CFR § 69.51-.61, as adopted September 12, 1989; and

(D) The vessel is propelled by a marine diesel engine with a per-cylinder displacement of less than 30 liters.

(5) "Intrastate diesel-electric locomotive" means:

(A) A diesel-electric locomotive that operates within California for which at least 90 percent of its annual fuel consumption, annual hours of operation, or annual rail miles traveled occur within California. This definition would typically include, but not be limited to, diesel-electric locomotives used in the following operations: passenger intercity and commuter, short haul, short line, switch, industrial, port, and terminal operations;

(B) An intrastate diesel-electric locomotive does not include those diesel-electric locomotives that:

1. Meet the U.S. Environmental Protection Agency Tier II locomotive emission standards, and

2. Primarily move freight into and out of the South Coast Air Quality Management District, and

3. Have been included as a diesel-electric locomotive operating in the South Coast Nonattainment Area under paragraph IV.B. of the Memorandum of Mutual Understandings and Agreements for the South Coast Locomotive Fleet Average Emissions Program, dated July 2, 1998.

(C) (This subsection reserved for consideration of diesel-electric locomotives that meet the U.S. Environmental Protection Agency Tier II locomotive emission standards and primarily move freight within California outside of the South Coast Air Quality Management District.)

(6) "Locomotive" means a piece of on-track equipment designed for moving or propelling cars that are designed to carry freight, passengers or other equipment, but which itself is not designed or intended to carry freight, passengers (other than those operating the locomotive) or other equipment.

(7) "Marine vessel" means any ship, boat, watercraft, or other artificial contrivance used as a means of transportation on water.

(c)Alternative Emission Reduction Plan for Intrastate Diesel-Electric Locomotives. For an owner or operator of an intrastate diesel-electric locomotive who has submitted an alternative emission reduction plan (plan) that contains a substitute fuel(s) and/or emission control strategy(s) and has been approved by the Executive Officer, compliance with the alternative emission reduction plan (plan) shall constitute compliance with the requirements of subsection (a)(2). In order to be approved, the plan must do all of the following:

(1) Identify or define the total fuel consumption and total emissions that would be associated with the activities of the diesel-electric locomotives were the owner or operator to comply with subsection (a)(2).

(2) Define a substitute fuel(s) and/or emission control strategy(s) for the plan.

(3) Identify the emission reductions that are attributable to the substitute fuel(s) and/or emission control strategy(s) relative to the emission reductions achieved through compliance with subsection (a)(2).

(4) Demonstrate that the substitute fuel(s) and/or emission control strategy(s) in the plan provide equivalent or better emission benefits than would be achieved through compliance with subsection (a)(2). The emission benefits achieved under the plan shall be targeted towards residents in those parts of the state most impacted by diesel-electric locomotive emissions.

(5) The plan shall contain adequate enforcement provisions.

**➡§ 93118. Airborne Toxic Control Measure for Auxiliary Diesel Engines and Diesel-Electric Engines Operated on Ocean-Going Vessels Within California Waters and 24 Nautical Miles of the California Baseline.**

[NOTE: This section is not presently being enforced by the Air Resources Board because of a court injunction against enforcement of this section. See Pacific Merchant Shipping Ass'n v. Goldstene (9th Cir. 2008) 517 F.3d 1108. Consistent with the court's ruling, this section will only be enforced if the Air Resources Board obtains authorization to do so from the United States Environmental Protection Agency.]

(a) Purpose.

The purpose of this section is to reduce emissions of diesel particulate matter (PM), nitrogen oxides, and sulfur oxides from the use of auxiliary diesel engines and diesel-electric engines on ocean-going vessels within any of the waters subject to this regulation ( "Regulated California Waters").

(b) Applicability.

(1) Except as provided in subsection (c), this section applies to any person who owns, operates, charters, rents, or leases any ocean-going vessel that operates in any of the Regulated California Waters, which include all of the following:

(A) all California internal waters;

(B) all California estuarine waters;

(C) all California ports, roadsteads, and terminal facilities (collectively "ports");

(D) all waters within 3 nautical miles of the California baseline, starting at the California-Oregon border and ending at the California-Mexico border at the Pacific Ocean, inclusive;

(E) all waters within 12 nautical miles of the California baseline, starting at the California-Oregon border and ending at the California-Mexico border at the Pacific Ocean, inclusive;

(F) all waters within 24 nautical miles of the California baseline, starting at the California-Oregon border to 34.43 degrees North, 121.12 degrees West, inclusive; and

(G) all waters within the area, not including islands, between the California baseline and a line starting at 34.43 degrees North, 121.12 degrees West; thence to 33.50 degrees North, 118.58 degrees West; thence to 32.65 degrees North, 117.81 degrees West; and ending at the California-Mexico border at the Pacific Ocean, inclusive.

(2) Except as provided in subsection (c), this section applies to tanker and nontanker ocean-going vessels that are flagged in, registered in, entitled to fly the flag of, or otherwise operating under the authority of the United States ( "U.S.-flagged") or any other country ( "foreign-flagged").

(3) Nothing in this section shall be construed to amend, repeal, modify, or change in any way any applicable U.S. Coast Guard requirements. Any person subject to this section shall be responsible for ensuring compliance with both U.S. Coast Guard regulations and the requirements of this section, including but not limited to, obtaining any necessary approvals, exemptions, or orders from the U.S. Coast Guard.

(c) Exemptions.

(1) The requirements of this section do not apply to ocean-going vessel voyages that are comprised of continuous and expeditious navigation through any of the Regulated California Waters for the purpose of traversing such bodies of water without entering California internal or estuarine waters or calling at a port, roadstead, or terminal facility. "Continuous and expeditious navigation" includes stopping and anchoring only to the extent such stopping and anchoring are required by the U.S. Coast Guard; rendered necessary by force majeure or distress; or made for the purpose of rendering assistance to persons, ships, or aircraft in danger or distress. This exemption does not apply to the passage of an ocean-going vessel that engages in any of the prejudicial activities specified in United Nations Convention on the Law of the Seas (UNCLOS) 1982, Article 19, subpart 2. Further, notwithstanding any Coast Guard mandated stops or stops due to force majeure or the rendering of assistance, this exemption does not apply to a vessel that was otherwise scheduled or intended to enter California internal or estuarine waters or call at a port, roadstead or terminal facility.

(2) The requirements of this section do not apply to slow-speed two-stroke diesel engines as defined in subsection (d).

(3) The requirements of this section do not apply to auxiliary engines on-board ocean-going vessels owned or operated by any branch of local, state, federal government, or by a foreign government, when such vessels are operated within the Regulated California Waters on government non-commercial service. However, such vessels are encouraged to act in a manner consistent, so far as is reasonable and practicable, with this section.

(4) The requirements of this section do not apply to auxiliary engines while operating on liquefied natural gas or compressed natural gas.

(5) The requirements of this section, including the payment of Noncompliance Fees as provided in subsection (h), do not apply to the master of the vessel ( "master") if the master reasonably and actually determines that compliance with this section would endanger the safety of the vessel, its crew, its cargo or its passengers because of severe weather conditions, equipment failure, fuel contamination, or other extraordinary reasons beyond the master's reasonable control. This exemption applies only as long as and to the extent necessary to secure the safety of the vessel, its crew, its cargo, or its passengers and provided that;

(A) the master takes all reasonable precautions after the conditions necessitating the exemption have ended to avoid or minimize repeated claims of exemption under this subsection;

(B) the master notifies the Executive Officer of a safety exemption claim within 24 hours after the end of each such episode (i.e., the period of time during which the emergency conditions exist that necessitate the safety exemption claim, as provided in paragraph (5) above); and

(C) the master submits to the Executive Officer, within 4 working days after the notification in paragraph (B) above, all documentation necessary to establish the conditions necessitating the safety exemption and the date(s), local time, and position of the vessel (longitude and latitude) in Regulated California Waters at the beginning and end of the time period during which a safety exemption is claimed under this subsection. All documentation required under this paragraph shall be provided in English.

(d) Definitions.

For purposes of this section, the following definitions apply:

(1) "ASTM" means ASTM International.

(2) "Auxiliary engine" means an engine on an ocean-going vessel designed primarily to provide power for uses other than propulsion, except that all diesel-electric engines shall be considered "auxiliary diesel engines" for purposes of this regulation.

(3) "Baseline" means the mean lower low water line along the California coast, as shown on the following National Oceanic and Atmospheric Administration (NOAA) Nautical Charts as authored by the NOAA Office of Coast Survey, which are incorporated herein by reference:

(A) Chart 18600, Trinidad Head to Cape Blanco (January 2002);

(B) Chart 18620, Point Arena to Trinidad Head (June 2002);

(C) Chart 18640, San Francisco to Point Arena (August 2005);

(D) Chart 18680, Point Sur to San Francisco (June 2005);

(E) Chart 18700, Point Conception to Point Sur (July 2003);

(F) Chart 18720, Point Dume to Purisima Point (January 2005); and

(G) Chart 18740, San Diego to Santa Rosa Island (April 2005).

(4) "Compliance Period" means the calendar year or other continuous period during which an approved Alternative Control of Emissions (ACE) plan is or will be in effect as specified in subsection (g).

(5) "Diesel Engine" means an internal combustion, compression-ignition (CI) engine with operating characteristics significantly similar to the theoretical diesel combustion cycle. The regulation of power by controlling fuel supply in lieu of a throttle is indicative of a compression ignition engine.

(6) "Diesel Particulate Matter" means the particles found in the exhaust of diesel engines, which may agglomerate and adsorb other species to form structures of complex physical and chemical properties.

(7) "Diesel-electric engine" means a diesel engine connected to a generator that is used as a source of electricity for propulsion or other uses.

(8) "Emission Control Strategy" means any device, system, or strategy employed to reduce emissions from a diesel engine, including, but not limited to, utilization of shore-side electrical power, diesel oxidation catalysts, selective catalytic reduction systems, diesel particulate filters, alternative diesel fuels, water emulsified fuels, lower sulfur fuels, and any combination of the above.

(9) "Estuarine Waters" means an arm of the sea or ocean that extends inland to meet the mouth of a river.

(10) "Executive Officer" means the executive officer of the Air Resources Board (ARB), or his or her designee.

(11) "Hydrocarbon (HC)" means the sum of all hydrocarbon air pollutants.

(12) "Internal Waters" means any navigable river or waterway within the State of California.

(13) "IMO" means the International Maritime Organization.

(14) "ISO" means the International Organization for Standardization.

(15) "Marine Diesel Oil" means any fuel that meets all the specifications for DMB grades as defined in Table I of International Standard ISO 8217, as revised in 2005, which is incorporated herein by reference.

(16) "Marine Gas Oil" means any fuel that meets all the specifications for DMX or DMA grades as defined in Table I of International Standard ISO 8217, as revised in 2005, which is incorporated herein by reference.

(17) "Master" means the person who operates a vessel or is otherwise in charge of the vessel's operations.

(18) "Military Vessel" means any ship, boat, watercraft, or other contrivance used for any purpose on water, and owned or operated by the armed services.

(19) "Nitrogen Oxides (NOx)" means compounds of nitric oxide (NO), nitrogen dioxide (NO2), and other oxides of nitrogen, which are typically created during combustion processes and are major contributors to smog formation and acid deposition.

(20) "Non-Methane Hydrocarbons (NMHC)" means the sum of all hydrocarbon air pollutants except methane.

(21) "Ocean-going Vessel" means a commercial, government, or military vessel meeting any one of the following criteria:

(A) a vessel with a "registry" (foreign trade) endorsement on its United States Coast Guard certificate of documentation, or a vessel that is registered under the flag of a country other than the United States;

(B) a vessel greater than or equal to 400 feet in length overall (LOA) as defined in 50 CFR § 679.2, as adopted June 19, 1996;

(C) a vessel greater than or equal to 10,000 gross tons (GT ITC) pursuant to the convention measurement (international system) as defined in 46 CFR 69.51-.61, as adopted September 12, 1989; or

(D) a vessel propelled by a marine compression ignition engine with a per-cylinder displacement of greater than or equal to 30 liters.

(22) "Operate" means steering or otherwise running the vessel or its functions while the vessel is underway, moored, anchored, or at dock.

(23) "Own" means having all the incidents of ownership, including the legal title, of a vessel whether or not that person lends, rents, or pledges the vessel; having or being entitled to the possession of a vessel as the purchaser under a conditional sale contract; or being the mortgagor of a vessel.

(24) "Particulate Matter" means any airborne finely divided material, except uncombined water, which exists as a liquid or solid at standard conditions (e.g., dust, smoke, mist, fumes or smog).

(25) "Person" includes all of the following:

(A) any person, firm, association, organization, partnership, business trust, corporation, limited liability company, or company;

(B) any state or local governmental agency or public district, or any officer or employee thereof;

(C) the United States or its agencies, to the extent authorized by federal law.

(26) "Regulated California Waters" means all of the following:

(A) all California internal waters;

(B) all California estuarine waters;

(C) all California ports, roadsteads, and terminal facilities (collectively "ports");

(D) all waters within 3 nautical miles of the California baseline, starting at the California-Oregon border and ending at the California-Mexico border at the Pacific Ocean, inclusive;

(E) all waters within 12 nautical miles of the California baseline, starting at the California-Oregon border and ending at the California-Mexico border at the Pacific Ocean, inclusive;

(F) all waters within 24 nautical miles of the California baseline, starting at the California-Oregon border to 34.43 degrees North, 121.12 degrees West, inclusive; and

(G) all waters within the area, not including any islands, between the California baseline and a line starting at 34.43 degrees North, 121.12 degrees West; thence to 33.50 degrees North, 118.58 degrees West; thence to 32.65 degrees North, 117.81 degrees West; and ending at the California-Mexico border at the Pacific Ocean, inclusive.

(27) "Roadstead" means any facility that is used for the loading, unloading, and anchoring of ships.

(28) "Slow Speed Engine" means an engine with a rated speed of 150 revolutions per minute or less.

(29) "Sulfur Oxides" means compounds of sulfur dioxide ($SO_2$), and other oxides of sulfur, which are typically created during combustion of sulfur containing fuels.

(30) "Tanker" means a self-propelled vessel constructed or adapted primarily to carry, or that carries, oil or hazardous material in bulk as cargo or cargo residue.

(31) "Two-stroke Engine" means an internal combustion engine which operates on a two stroke cycle where the cycle of operation completes in one revolution of the crankshaft.

(32) "Vessel" means any tugboat, tanker, freighter, passenger ship, barge, or other boat, ship, or watercraft, except those used primarily for recreation and any of the following:

(A) a seaplane on the water;

(B) a watercraft specifically designed to operate on a permanently fixed course, the movement of which is restricted to a fixed track or arm to which the watercraft is attached or by which the watercraft is controlled.

(e) Requirements.

(1) Emission Limits.

Except as provided in subsections (c), (g) and (h), no person subject to this section shall operate any auxiliary diesel engine, while the vessel is operating in any of the Regulated California Waters, which emits levels of diesel PM, NOx, or SOx in exceedance of the emission rates of those pollutants that would result had the engine used the following fuels:

(A) Beginning January 1, 2007:

1. marine gas oil, as defined in subsection (d); or

2. marine diesel oil, as defined in subsection (d), with a sulfur content of no more than 0.5 percent by weight;

(B) Beginning January 1, 2010: marine gas oil with a sulfur content of no more than 0.1 percent by weight.

(C) Compliance with subsection (e)(1) is presumed if the person operates the regulated engine(s) with the fuels as specified in subsection (e)(1)(A) and (e)(1)(B).

(2) Recordkeeping, Reporting, and Monitoring Requirements.

(A) Recordkeeping.

Beginning January 1, 2007, any person subject to this section shall retain and maintain records in English that contain the following information for at least three years following the date when the records were made:

1. The date, local time, and position (longitude and latitude) of the vessel for each entry into and departure from any of the Regulated California Waters, excluding any voyages exempted from the requirements of this section under subsection (c)(1);

2. The date, local time, and position (longitude and latitude) of the vessel at the initiation and completion of any fuel switching procedures used to comply with subsection (e)(1) prior to entry into any of the Regulated California Waters;

3. The date, local time, and position (longitude and latitude) of the vessel at the initiation and completion of any fuel switching procedures within any of the Regulated California Waters; completion

of fuel switching procedures occurs the moment all engines subject to this section have completely transitioned from operation on one fuel to another fuel;

4. The type of each fuel used (e.g. marine gas oil) in each auxiliary engine operated in any of the Regulated California Waters; and

5. The types, amounts, and the actual percent by weight sulfur content of all fuels purchased for use on the vessel, as reported by the fuel supplier or a fuel testing firm.

(B) Reporting and Monitoring.

1. Any person subject to this section shall provide in writing the information specified in subsection (e)(2)(A) to the Executive Officer upon request, either within 24 hours or by a later date approved by the Executive Officer on a case-by-case basis. To the extent the person already collects the information specified in subsection (e)(2)(A) in English to comply with other regulatory requirements or standard practices, the person may provide the requested information in a format consistent with those other regulatory requirements or standard practices.

2. Any person subject to this section shall provide to the Executive Officer upon request additional information the Executive Officer determines to be necessary to determine compliance with this section, including, but not limited to:

a. the make, model, rated power, and serial numbers of all auxiliary engines subject to subsection (e)(1);

b. the capacity and locations of all fuel tanks on the vessel; and

c. piping diagrams and specifications for mixing tanks or other fuel handling equipment applicable to auxiliary engines.

3. Any person subject to this section shall provide to the Executive Officer access to the vessel for the purpose of determining compliance with this section, including but not limited to, access to and review of records and information required under subsection (e)(2)(A) or (e)(2)(B)2., and for the purpose of collecting fuel samples for testing and analysis.

(f) Violations.

(1) Any person who is subject to this section and commits a violation of any provision, standard, criteria or requirement in this section is subject to the penalties, injunctive relief, and other remedies specified in Health and Safety Code, section 42400 et seq.; other applicable sections in the Health and Safety Code; and other applicable provisions as provided under California law for each violation. Nothing in this section shall be construed to limit or otherwise affect any applicable penalties or other remedies available under federal law.

(2) Any failure to meet any provision, standard, criteria or requirement in this section, including but not limited to the applicable emission limits; recordkeeping requirements; Noncompliance Fee provision; and Alternative Control of Emissions (ACE) provision, including the requirements of any approved ACE plans, shall constitute a single, separate violation of this section for each hour that a person operates an ocean-going vessel within the Regulated California Waters until such provision, standard, criteria or requirement has been met.

(3) Any person who is subject to this section is liable for meeting the requirements of this section, notwithstanding any contractual arrangement that person may have with any third-parties.

(g) Alternative Control of Emissions (ACE) Plan In Lieu of Meeting Subsection (e)(1).

For purposes of this subsection, the terms "ACE" and "ACE plan" shall have the same meaning, unless otherwise noted.

(1) Requirements.

(A) The purpose of this subsection is to allow any person ( "person" or "applicant") the option of complying with the requirements of this subsection (g) in lieu of the requirements of subsection (e)(1). Under this subsection (g), alternative emission control strategies can be implemented in lieu of meeting the requirements of subsection (e)(1), provided the alternative strategies result in emissions of diesel PM, NOx, and SOx from the auxiliary diesel engines that are no greater than the emissions that would have occurred under subsection (e)(1), over the applicable compliance period.

(B) An applicant wishing to participate in an ACE may include one or more vessels in the ACE, but the applicant shall only include vessels that the person owns or operates under their direct control. For purposes of this subsection, "direct control" shall include, but not be limited to, vessels for which the applicant has a contract, lease, or other arrangement with a third-party for the third-party to operate the vessel.

(C) No vessel shall be included in more than one ACE plan.

(D) No ACE plan shall have a compliance period greater than 1 calendar year or a continuous 12-month period. Except as provided in paragraph (E) below, upon completion of a compliance period, an approved ACE plan shall continue to be in effect for another compliance period of equal length, provided the following are met:

1. the applicant provides updated information for all elements of the approved ACE plan to the Executive Officer at least 30 days prior to the end of the first compliance period; and

2. the updated information demonstrates that compliance with this subsection will continue for the next compliance period.

(E) No ACE plan shall be extended for another compliance period if:

1. the Executive Officer has determined that violations of the ACE provisions have occurred and the Executive Officer revokes the ACE plan as specified in subsection (g)(3);

2. the applicant elects to cancel an approved ACE plan. Applicants who cancel operation under an approved ACE are subject to the emission requirements of subsection (e)(1) and all other requirements of this section upon the effective date of the cancellation. An ACE plan that is cancelled prior to the end of its approved compliance period shall have its compliance period adjusted to end at the effective date of cancellation; or

3. the applicant proposes to substantially change the alternative emission control strategies in their approved ACE plan, as determined by the Executive Officer. Applicants proposing to substantially change the alternative emission control strategies in their ACE plan shall be subject to the application process for new applications, as specified in subsection (g)(2).

(F) In addition to other requirements specified in this subsection (g), no proposed ACE plan shall be approved unless the applicant demonstrates to the satisfaction of the Executive Officer all of the following:

1. the alternative emission control strategies under the proposed ACE plan will result in emissions of diesel PM, NOx, and SOx from the auxiliary diesel engines that are no greater than the emissions that would have occurred under subsection (e)(1) over the applicable compliance period; and

2. surplus emission reductions achieved at one port will not result in increased emissions at a second port, relative to the emissions that would have occurred at the second port prior to implementation of this section.

(G) Emission control strategy is as defined in subsection (d)(8).

(H) The ACE plan application demonstrating compliance with this subsection shall contain, at a minimum, the following information:

1. the company name, address, and contact information;

2. the vessel(s) name, country flag, and IMO identification number;

3. the make, model, serial numbers and other information that uniquely identify each engine on the affected vessel(s) subject to the ACE;

4. documentation, calculations, emissions test data, or other information that demonstrates that the emission reductions from the auxiliary engines subject to the ACE will be equivalent to or greater than the emission reductions that would have been achieved upon compliance with subsection (e)(1). The emission reductions shall be calculated for diesel PM, NOx, and SOx, and shall be expressed in pounds of each pollutant;

5. information on the California ports expected to be visited by the affected vessel(s) during the compliance period that the ACE will be in effect, the anticipated dates of those visits, and the potential planned oversea routes to and from these ports; and

6. the proposed recordkeeping, reporting, monitoring, and testing procedures that the applicant plans to use to demonstrate continued compliance with the ACE.

(I) Emission reduction calculations used to demonstrate equivalence with the requirements of subsection (e)(1) shall include only diesel PM, NOx, and SOx emissions from auxiliary engines operating within any of the Regulated California Waters.

(J) Use of Shore-Side Power.

1. Except as otherwise provided in this subsection (g)(1)(J), vessels in an ACE that utilize shore-side power in lieu of their auxiliary diesel engines while at dockside shall be considered to meet the emission reduction requirements of the ACE during:

a. all travel within Regulated California Waters from a previous port to the California port terminal where shore-side power is used;

b. time spent secured ( "docked") at the California port terminal where shore-side power is used; and

c. all travel within Regulated California Waters from the California port where shore-side power is utilized to the next port visited.

2. For the purposes of paragraph 1 above, "utilizing shore-side power" means:

a. connecting to electricity supplied by a utility company, or another source with emissions per unit of delivered energy equivalent to or lower than the January 1, 2007 levels specified in title 17, CCR, sections 94200-94214, "Distributed Generation Certification Program;" and

b. shutting down all auxiliary engines subject to this control measure no later than one hour after the vessel is secured at the port terminal, and continuously thereafter until no more than one hour prior to when the vessel leaves the terminal.

3. Except as otherwise provided in paragraph 5 below, if a vessel operating under an approved ACE visits two California ports in succession, and the vessel utilizes shore-side power at the first port but not at the second port visited, the vessel shall not be considered to meet the emission reduction requirements of the ACE during the time it is docked at the second port and any subsequent travel within Regulated California Waters from this port.

4. Except as otherwise provided in paragraph 5 below, if a vessel operating under an approved ACE visits two California ports in succession, and the vessel utilizes shore-side power at the second port

but not at the first port visited, the vessel shall not be considered to meet the emission reduction requirements of the ACE during travel within Regulated California Waters to this first port or during the time the vessel is docked at the first port. Travel from the first port to the second port where shore-side power is utilized shall be deemed to meet the emission reduction requirements of the ACE.

5. The provisions in paragraphs 3 and 4 above notwithstanding, if a passenger cruise vessel operating under an approved ACE visits a California port, utilizes shore-side power at that port, then leaves that port and moors (i.e., drops anchor) at another offshore location away from a port, roadstead or terminal facility (e.g., Catalina Island or off Monterey), the mooring stop shall not be deemed as a second port visit. However, a person subject to this provision shall meet the emission limits in subsection (e)(1) for all auxiliary diesel engines on the passenger cruise vessel (i.e., all diesel-electric engines) during the entire time the vessel is moored.

(K) Any person subject to an approved ACE shall maintain operating records in a manner and form as specified by the Executive Officer in the approved ACE. Required records may include, but are not limited to, information on fuel usage, routes, port calls, maintenance procedures, and emissions test results. Such records and reports shall be retained for a period of not less than three (3) years and shall be submitted to the Executive Officer in the manner specified in the approved ACE and upon request by the Executive Officer, either within 24 hours or by a later date approved by the Executive Officer.

(L) Emission reductions included in an ACE shall not include reductions that are otherwise required by any State, federal or international rule, regulation, or statute.

(M) No person may comply with this section by operating under an ACE unless the applicant has first been notified in writing by the Executive Officer that the ACE application has been approved. Prior to such approval, applicants shall comply with the provisions of this section, including the emission limits in subsection (e)(1).

(N) No person may comply with this section by operating under an ACE that has been revoked as provided in subsections (g)(2)(G) and (g)(3).

(2) Application Process.

(A) Applications for an ACE shall be submitted in writing to the Executive Officer for evaluation.

(B) The Executive Officer shall establish an internet site ( "ACE internet site") in which all documents pertaining to an ACE application will be made available for public review. The Executive Officer shall also provide a copy of all such documents to each person who has requested copies of the documents; these persons shall be treated as interested parties. The Executive Officer shall provide two separate public comment periods during the ACE Application process, as specified in this subsection (g)(2).

(C) Completeness Determination.

Within 15 days after receiving an ACE application, the Executive Officer shall notify the applicant whether the application is deemed sufficiently complete to proceed with further evaluation. If the application is deemed incomplete, the notification shall identify the application's deficiencies. The Executive Officer shall have an additional 15-day period for reviewing each set of documents or information submitted in response to an incomplete determination. Nothing in this subsection prohibits the Executive Officer from requesting additional information from the applicant, during any part of the ACE application process, which the Executive Officer determines is necessary to evaluate the application.

(D) Notice of Completeness and 30-Day First Public Comment Period.

After an ACE application has been deemed complete, the Executive Officer shall provide a 30-day public comment period to receive comments on any element of the ACE application and whether the Executive Officer should approve or disapprove the ACE application based on the contents and merits of the application. The Executive Officer shall notify all interested parties of the following:

1. the applicant(s);

2. the start and end dates for the 30-day first comment period; and

3. the address of the ACE internet site where the application is posted.

The Executive Officer shall also make this notification available for public review on the ACE internet site.

(E) Proposed Action and 15-Day Second Public Comment Period.

Within 30 days after the first public comment period ends, the Executive Officer shall notify the applicant and all interested parties of ARB's proposed approval or disapproval. This notification shall propose to approve the application as submitted, disapprove the application, or approve the ACE application with modifications as deemed necessary by the Executive Officer. The notification shall identify the start and end dates for the 15-day second public comment period. During the second public comment period, any person may comment on the Executive Officer's proposed approval or disapproval of the ACE application and any element of the application. The Executive Officer shall also make this notification available for public review on the ACE internet site.

(F) Final Action.

Within 15 days after the second public comment period ends, the Executive Officer shall take final action to either approve or deny an ACE application and shall notify the applicant accordingly. If the application is denied or modified, the Executive Officer shall state the reasons for the denial or modification in the notification. The notification to the applicant and approved ACE plan, if applicable, shall be made available to the public on the ACE internet site. In addition, the Executive Officer shall consider and address all comments received during the first and second public comment periods, and provide responses to each comment on the ACE internet site.

(G) Notification to the Executive Officer of Changes to an Approved ACE.

The applicant shall notify the Executive Officer in writing within 30 days upon learning of any information that would alter the emissions estimates submitted during any part of the ACE application process. If the Executive Officer has reason to believe that an approved ACE has been granted to a person that no longer meets the criteria for an ACE, the Executive Officer may, pursuant to subsection (g)(3) below, modify or revoke the ACE as necessary to assure that the applicant and subject vessel(s) will meet the emission reduction requirements in this section.

(3) Revocation or Modification of Approved ACEs.

With 30-days notice to the ACE holder, the Executive Officer may revoke or modify, as needed, an approved ACE if there have been multiple violations of the ACE provisions or the requirements of the approved ACE plan; or if the Executive Officer has reason to believe that an approved ACE has been granted that no longer meets the criteria or requirements for an ACE or the applicant can no longer comply with the requirements of the approved ACE in its current form. Public notification of a revocation or modification of an approved ACE shall be made available on the ACE internet site.

(h) Noncompliance Fee In Lieu of Meeting Subsection (e)(1).

The Executive Officer may permit a person to pay noncompliance fees in lieu of meeting the requirements of subsection (e)(1). Payment of the fees notwithstanding, all other provisions of this section shall continue to apply. No person shall be permitted to pay the fees unless the person meets the notification requirements in subsection (h)(1) and the requirements in either subsections (h)(2), (h)(3), or (h)(4), as specified below:

(1) Notification Requirements.

Before the person's vessel enters Regulated California Waters, the Executive Officer must receive notice that the person will not meet the requirements of subsection (e)(1) while operating within Regulated California Waters, but the person will instead meet the requirements of this subsection (h). If the Executive Officer has not received such notice and the person enters Regulated California Waters, the person will be in violation of this section and will not be permitted to pay the fees in lieu of meeting the requirements of subsection (e)(1).

(2) Noncompliance for Reasons Beyond a Person's Reasonable Control.

Any person wishing to pay the fees under this subsection (h)(2) shall meet the following criteria:

(A) Demonstration of Need.

The person shall, through adequate documentation, demonstrate to the Executive Officer's satisfaction that the person's noncompliance with the requirements of subsection (e)(1) is beyond the person's reasonable control. For the purposes of this paragraph, "beyond the person's reasonable control" applies only when one or more of the following sets of circumstances (1, 2, or 3) applies:

1. Unplanned Redirection.

This provision applies only when all of the following criteria are met:

a. after leaving the last port of call, the person's vessel was redirected from his/her original, officially logged, non-California destination to a California port, roadstead, or terminal facility ( "port"); and

b. the vessel does not contain a quantity of fuel sufficient for the auxiliary engines to meet the requirements of subsection (e)(1) and cannot comply using the alternative emission control strategies under an approved ACE.

2. Inadequate Fuel Supply.

This provision applies only when all of the following criteria are met:

a. the person made good faith efforts to acquire a quantity of fuel sufficient for the vessel's auxiliary engines to meet the requirements of subsection (e)(1); and

b. the person was unable to acquire fuel sufficient for the engines to meet the requirements of subsection (e)(1) and cannot comply using the alternative emission control strategies under an approved ACE.

3. Inadvertent Purchase of Defective Fuel.

This provision applies only when all of the following criteria are met:

a. based on the fuel supplier's certification of the fuel specifications, the person reasonably believed, and relied on such belief, that the fuel the person purchased on the route from the vessel's home port to California would enable the auxiliary engines to meet the requirements of subsection (e)(1);

b. the person determined that the vessel's auxiliary engines in fact will not meet the requirements of subsection (e)(1) using any of the fuel purchased under paragraph 3.a. above and the person cannot comply using the alternative emission control strategies under an approved ACE; and

c. the vessel is already on its way to California, and there are no other ports of call on the vessel's route where fuel can be purchased sufficient to meet the requirements of subsection (e)(1).

(B) Payment of Fees.

Upon meeting the requirements of paragraph (A) in this subsection (h)(2), the person shall pay the fees for every port visit, as specified in subsection (h)(5) below.

(C) Executive Officer Review.

For the purposes of verifying the demonstration of need as specified in paragraph (A) above, the Executive Officer may consider and rely on any facts or circumstances the Executive Officer believes are appropriate, including but not limited to: the fuel supplier's ability or failure to provide adequate fuel ordered by the person; any material misrepresentation by the fuel supplier concerning the fuel specifications; the reasonableness of the person's reliance on fuel suppliers with a history of supplying fuel inadequate for meeting the requirements of subsection (e)(1); and force majeure.

(3) Noncompliance for Vessels to Be Taken Out of Service for Modifications.

If a person cannot meet the requirements of subsection (e)(1) without vessel modifications, and such modifications cannot be completed prior to the effective date of subsection (e)(1), the Executive Officer may permit the person to pay the fees as specified in this subsection. This provision also applies to vessels that will undergo modifications pursuant to an Executive Officer approved Alternative Control of Emissions (ACE) Plan. The vessel must be scheduled to complete the necessary modifications (e.g. during a dry dock operation) as soon as possible, but no later than 5 years after the effective date of this section. For this provision to apply, the person shall meet all of the following criteria:

(A) Demonstration of Need.

The person shall provide the Executive Officer a Compliance Retrofit Report, signed by the Chief Engineer of the person's vessel, which:

1. identifies the specific vessel modifications ( "modifications") (e.g. installation of additional fuel tanks) the person plans to use for meeting the requirements of subsection (e)(1) or an ACE Plan;

2. identifies the specific date by which the modifications will be completed (e.g. while the vessel is in dry dock); and

3. demonstrates to the satisfaction of the Executive Officer that the modifications will be made at the earliest possible date (e.g. the vessel has been scheduled for the earliest available dry dock appointment).

(B) Payment of Fees.

Upon meeting the requirements of paragraph (A) in this subsection (h)(3), the person shall pay the fees for every port visit, as specified in subsection (h)(5) below.

(C) Proof of Modifications Actually Performed.

Within ten (10) business days after the scheduled or actual completion of the modifications, whichever occurs first, the person shall provide written certification to the Executive Officer that the modifications specified under this subsection (h)(3) have been completed. If the modifications have not been completed, the person shall certify which modifications have been completed, which have not, and the anticipated completion date for the remaining modifications. The notification requirement specified in this paragraph, the notification requirements in subsection (h)(1) above, and the fee provisions in subsection (h)(5) below shall apply until all the modifications have been completed.

(4) Noncompliance Based on Infrequent Visits and Need for Vessel Modifications.

If a person cannot meet the requirements of subsection (e)(1) without modifications for the vessel at issue, and that vessel will make no more than two California port visits per calendar year, and no more than 4 California port visits after January 1, 2007 during the life of the vessel, the Executive Officer may permit the person to pay the fees as specified in this subsection.

(A) Demonstration of Need.

The person shall demonstrate to the satisfaction of the Executive Officer that modifications to the vessel are necessary to meet the requirements of subsection (e)(1), and that the vessel shall meet the visitation limits specified in this subsection (h)(4).

(B) Payment of Fees.

Upon meeting the requirements of paragraph (A) above, the person shall pay the fees for every port visit up to a maximum of 4 visits, as specified in subsection (h)(5) below.

(5) Calculation and Payment of Fees.

For each port visit, the person who elects to pay the fees pursuant to this subsection (h) shall pay the applicable fees shown in Table 1. For purposes of this provision, "port visit" shall include all stops at a port, roadstead, or terminal facility in Regulated California Waters, as well as all moorings (i.e., the ship drops anchor) at an offshore location in Regulated California Waters away from a port, roadstead or terminal facility (e.g., Catalina Island or off Monterey). For each port visit, the person shall deposit the fees in the port's Noncompliance Fee Settlement and Air Quality Mitigation Fund prior to leaving the California port or by a later date approved by the Executive Officer on a case-by-case basis:

(A) After January 1, 2007, each instance of a vessel stopping or anchoring at a port or offshore in Regulated California Waters shall count as one port visit, and the port visits shall be cumulative.

Table 1: Noncompliance Fee Schedule, Per Vessel

| Visit | Fee | |
|---|---|---|
| | Diesel-Electric Vessels | Other Vessels |
| 1st Port Visited | $32,500 | $13,000 |
| 2nd Port Visited | $65,000 | $26,000 |
| 3rd Port Visited | $97,500 | $39,000 |
| 4th Port Visited | $130,000 | $52,000 |
| 5th or more Port Visited | $162,500 | $65,000 |

(B) The fees shown in Table 1 shall be assessed by the Executive Officer at the time of the port visit. However, if for any reason the person is not notified by the Executive Officer of the assessed fee by the end of the port visit, the person shall nevertheless be responsible for payment of the appropriate fee as specified in this subsection (h) prior to leaving the California port or by a later date approved by the Executive Officer on a case-by-case basis.

(C) The Executive Officer shall enter into enforceable agreements with each port that will receive the fees. The agreements shall require that the fees be used by the ports only to fund projects that will substantially reduce emissions of diesel PM, NOx, and SOx from on-site sources, sources within 2 miles of port boundaries, or ocean-going vessels operated within the Regulated California Waters, except that the fees shall not be used to fund projects on vessels from which noncompliance fees were paid. Fees intended for ports that do not have such agreements at the time the fees are paid shall be deposited into the California Air Pollution Control Fund.

(i) Test Methods.

The following test methods or alternative test methods that are demonstrated to the written satisfaction of the Executive Officer to be equally or more accurate, shall be used to determine compliance with this section:

(1) Test methods used to determine whether fuels meet the requirements of marine gas oil (DMA or DMX) or marine diesel oil (DMB), as specified in subsection (e)(1), shall be the methods specified in International Standard ISO 8217 (as revised in 2005), which is incorporated herein by reference.

(2) The sulfur content of fuels shall be determined pursuant to International Standard ISO 8754 (as adopted in 2003), which is incorporated herein by reference.

(j) Sunset, Technology Re-evaluation, and Baseline and Test Method Review.

(1) If the Executive Officer determines that the International Maritime Organization or the United States Environmental Protection Agency have adopted regulations for auxiliary diesel engines and diesel-electric engines that will achieve equivalent or greater emission reductions from ocean-going vessels in California compared to the emission reductions resulting from this regulation, the Executive Officer shall propose to the Board for its consideration the termination of the requirements of this section or other modifications to the section as deemed appropriate by the Executive Officer.

(2) On or before July 1, 2008, the Executive Officer shall re-evaluate the feasibility of the emission limits based on using marine gas oil with no greater than 0.1 percent sulfur by weight specified in subsection (e)(1)(B). The re-evaluation shall consider, but not be limited to:

(A) the availability of 0.1 percent sulfur marine gas oil at bunkering ports worldwide;

(B) the ability of petroleum refiners and marine fuel suppliers to deliver 0.1 percent sulfur fuel by January 1, 2010;

(C) fuel lubricity;

(D) compatibility of the 0.1 percent sulfur marine gas oil with heavy fuel oil during fuel transitions; and

(E) the additional cost of 0.1 percent sulfur fuel compared to marine gas oil with other sulfur content levels.

(3) Pursuant to paragraph (2) of this subsection (j), if the Executive Officer determines that modifications to subsection (e)(1)(B) are necessary, the Executive Officer shall propose appropriate changes to the Board prior to January 1, 2009.

(4) The Executive Officer shall periodically review the California baseline determinations by the National Oceanic and Atmospheric Administration (NOAA) to determine if updates to the baseline maps incorporated by reference in this section are necessary. If modifications to the baseline maps are determined to be necessary, the Executive Officer shall conduct a public hearing as soon as practicable to amend this section accordingly.

(5) The Executive Officer shall periodically review the test methods incorporated by reference in this section to determine if updates to the referenced methods are necessary. If updates to the test methods are determined to be necessary, the Executive Officer shall conduct a public hearing as soon as practicable to amend this section accordingly.

(k) Severability.

Each part of this section shall be deemed severable, and in the event that any part of this section is held to be invalid, the remainder of this section shall continue in full force and effect.

**➡§ 93118.2. Airborne Toxic Control Measure for Fuel Sulfur and Other Operational Requirements for Ocean-Going Vessels Within California Waters and 24 Nautical Miles of the California Baseline.**

(a) Purpose.

The purpose of this section is to require the use of low sulfur marine distillate fuels in order to reduce emissions of particulate matter (PM), diesel particulate matter, nitrogen oxides, and sulfur oxides from the use of auxiliary diesel and diesel-electric engines, main propulsion diesel engines, and auxiliary boilers on ocean-going vessels within any of the waters subject to this regulation ( "Regulated California Waters").

(b) Applicability.

(1) Except as provided in subsection (c), this section applies to any person who owns, operates, charters, rents, or leases any ocean-going vessel that operates in any of the Regulated California Waters, which include all of the following:

(A) all California internal waters;

(B) all California estuarine waters;

(C) all California ports, roadsteads, and terminal facilities (collectively "ports");

(D) all waters within 3 nautical miles of the California baseline, starting at the California-Oregon border and ending at the California-Mexico border at the Pacific Ocean, inclusive;

(E) all waters within 12 nautical miles of the California baseline, starting at the California-Oregon border and ending at the California-Mexico border at the Pacific Ocean, inclusive;

(F) all waters within 24 nautical miles of the California baseline, starting at the California-Oregon border to 34.43 degrees North, 121.12 degrees West, inclusive; and

(G) all waters within the area, not including islands, between the California baseline and a line starting at 34.43 degrees North, 121.12 degrees West; thence to 33.50 degrees North, 118.58 degrees West; thence to 32.65 degrees North, 117.81 degrees West, and ending at the California-Mexico border at the Pacific Ocean, inclusive.

(2) Except as provided in subsection (c), this section applies to ocean-going vessels that are flagged in, registered in, entitled to fly the flag of, or otherwise operating under the authority of the United States ( "U.S.-flagged") or any other country ( "foreign-flagged").

(3) Nothing in this section shall be construed to amend, repeal, modify, or change in any way any applicable U.S. Coast Guard requirements. Any person subject to this section shall be responsible for ensuring compliance with both U.S. Coast Guard regulations and the requirements of this section, including but not limited to, obtaining any necessary approvals, exemptions, or orders from the U.S. Coast Guard.

(c) Exemptions.

(1) The requirements of this section do not apply to ocean-going vessel voyages that are comprised of continuous and expeditious navigation through any Regulated California Waters for the purpose of traversing such bodies of water without entering California internal or estuarine waters or calling at a port, roadstead, or terminal facility. "Continuous and expeditious navigation" includes stopping and anchoring only to the extent such stopping and anchoring are required by the U.S. Coast Guard; rendered necessary by force majeure or distress; or made for the purpose of rendering assistance to persons, ships, or aircraft in danger or distress. This exemption does not apply to the passage of an ocean-going vessel that engages in any of the prejudicial activities specified in United Nations Convention on the Law of the Seas (UNCLOS) 1982, Article 19, subpart 2. Further, notwithstanding any Coast Guard mandated stops or stops due to force majeure or the rendering of assistance, this exemption does not apply to a vessel that was otherwise scheduled or intended to enter California internal or estuarine waters or call at a port, roadstead or terminal facility.

(2) The requirements of this section do not apply to emergency generators.

(3) The requirements of this section do not apply to auxiliary engines, main engines or auxiliary boilers onboard ocean-going vessels owned or operated by any branch of local, state, or federal government, or by a foreign government, when such vessels are operated within Regulated California Waters on government non-commercial service. However, such vessels are encouraged to act in a manner consistent, so far as is reasonable and practicable, with this section.

(4) The requirements of this section do not apply to auxiliary engines, main engines, and auxiliary boilers while such engines and boilers are operating on alternative fuel in Regulated California Waters.

(5) The requirements of this section, including the payment of Noncompliance Fees as provided in subsection (h), do not apply if the master reasonably and actually determines that compliance with this section would endanger the safety of the vessel, its crew, its cargo or its passengers because of severe weather conditions, equipment failure, fuel contamination, or other extraordinary reasons beyond the master's reasonable control. This exemption applies only as long as and to the extent necessary to secure the safety of the vessel, its crew, its cargo, or its passengers and provided that;

(A) the master takes all reasonable precautions after the conditions necessitating the exemption have ended to avoid or minimize repeated claims of exemption under this subsection;

(B) the master notifies the Executive Officer of a safety exemption claim within 24 hours after the end of each such episode (i.e., the period of time during which the emergency conditions exist that necessitate the safety exemption claim, as provided in paragraph (5) above); and

(C) the master submits to the Executive Officer, within 4 working days after the notification in paragraph (B) above, all documentation necessary to establish the conditions necessitating the safety exemption and the date(s), local time, and position of the vessel (longitude and latitude) in Regulated California Waters at the beginning and end of the time period during which a safety exemption is claimed under this subsection. All documentation required under this paragraph shall be provided in English.

(6) Temporary Experimental or Research Exemption. As provided in this paragraph, the requirements of this section do not apply to vessels that have been granted a temporary experimental exemption by the Executive Officer for the duration of the approved exemption. A temporary experimental exemption may be granted by the Executive Officer for experimental purposes for up to three years with one extension for up to three additional years. The exemption will be limited in duration as specified by the Executive Officer in the Executive Order granting such an exemption or extension. All documentation and information submitted in support of an application for a temporary experimental exemption or extension shall be deemed non-confidential and available for public review under the Public Records Act.

(A) Pursuant to this paragraph, a person may operate an auxiliary engine, main engine or auxiliary boiler with fuel that does not meet the provisions of (e)(1), provided the person meets all of the following requirements:

1. the person obtains written approval for this exemption or extension, in the form of an Executive Order from the Executive Officer, before the vessel enters Regulated California Waters;

2. the person or master of the vessel takes all measures available to minimize emissions of diesel PM, NOx, and SOx to the extent feasible during the period in which the temporary experimental exemption is in effect;

3. the request for an exemption or extension is provided in writing, submitted to the Executive Officer at least 30 days before the vessel enters Regulated California Waters, and contains the following:

a. specifications for the non-compliant fuel that the person is proposing to use pursuant to this paragraph, including but not limited to, sulfur content (expressed to the nearest tenth weight percent); whether the fuel meets ASTM specifications for marine diesel oil (MDO), marine gas oil (MGO), or some other fuel (identify which ASTM specifications the fuel meets, if any); and

b. a clear and convincing demonstration that the use of the proposed non-compliant fuel will generate data as part of research that advances the state of knowledge of exhaust control technology or characterization of emissions. For purposes of this paragraph, the Executive Officer's determination that the person has provided a "clear and convincing demonstration" shall be based on whether the person's use of the proposed noncompliant fuel is an express part of a formal, executed research contract or project; a doctoral dissertation; or a master's thesis. A demonstration of the "state of knowledge" includes specific citations to scientific, academic, industry or regulatory literature existing or in progress at the time of the request;

c. identification of the purpose, goals, and objectives of the project, measures taken to minimize emission of air contaminants, and testing procedures and testing schedules;

(B) A person with an exemption granted pursuant to this provision shall:

1. bring the vessel into full compliance with the requirements of this section, including subsection (e)(1), prior to the expiration of the temporary experimental exemption as specified; and

2. provide a progress report annually from the date of the executive order, to the Executive Officer providing interim test data or other interim results, description of vessel modifications or retrofitting done as part of the projects or other information generated from the date of the prior progress report.

3. provide all official test data and all other results, data, or other information generated during the exemption period to the Executive Officer, in writing and final form, no more than 90 days after the expiration of the temporary experimental exemption or extension.

(C) No modifications to the terms and conditions of an approved temporary experimental exemption shall be valid unless in writing and agreed to by both the Executive Officer and the person. Any variance, deviance, or nonconformance with the terms and conditions of an approved temporary experimental exemption or extension shall be deemed a separate violation of this section.

(d) Definitions.

For purposes of this section, the following definitions apply:

(1) "Alternative fuel" means natural gas, propane, ethanol, methanol, hydrogen, electricity, or fuel cells. Alternative fuel also means any mixture that only contains these fuels.

(2) "ASTM" means ASTM International.

(3) "Auxiliary boiler" means any fuel-fired combustion equipment designed primarily to produce steam for uses other than propulsion, including, but not limited to, heating of residual fuel and liquid cargo, heating of water for crew and passengers, powering steam turbine discharge pumps, freshwater generation, and space heating of cabins. Exhaust gas economizers that exclusively use diesel engine exhaust as a heat source to produce steam are not auxiliary boilers.

(4) "Auxiliary engine" means a diesel engine on an ocean-going vessel designed primarily to provide power for uses other than propulsion or emergencies, except that all diesel-electric engines shall be considered "auxiliary diesel engines" for purposes of this section.

(5) "Baseline" means the mean lower low water line along the California coast, as shown on the following National Oceanic and Atmospheric Administration (NOAA) Nautical Charts as authored by the NOAA Office of Coast Survey, which are incorporated herein by reference:

(A) Chart 18600, Trinidad Head to Cape Blanco (January 2002);

(B) Chart 18620, Point Arena to Trinidad Head (June 2002);

(C) Chart 18640, San Francisco to Point Arena (August 2005);

(D) Chart 18680, Point Sur to San Francisco (June 2005);

(E) Chart 18700, Point Conception to Point Sur (July 2003);

(F) Chart 18720, Point Dume to Purisima Point (August 2008); and

(G) Chart 18740, San Diego to Santa Rosa Island (April 2005).

(6) "Diesel Engine" means an internal combustion, compression-ignition (CI) engine with operating characteristics significantly similar to the theoretical diesel combustion cycle. The regulation of power by controlling fuel supply in lieu of a throttle is indicative of a compression ignition engine.

(7) "Diesel Particulate Matter" means the particles found in the exhaust of diesel engines, which may agglomerate and adsorb other species to form structures of complex physical and chemical properties.

(8) "Diesel-electric engine" means a diesel engine connected to a generator that is used as a source of electricity for propulsion or other uses.

(9) "Emergency Generator" means a diesel-electric engine operated only during emergencies or to perform maintenance and testing necessary to ensure readiness for emergencies.

(10) "Essential Modification" means the addition of new equipment, or the replacement of existing components with modified components, that can be demonstrated to be necessary to comply with this regulation. Essential modifications do not include: (1) changes that are made for convenience or automation of fuel switching; or (2) replacement of components that would be replaced in the absence of this regulation, based on measured component wear, visual inspection, or expected service life, even if accelerated due to the fuel requirements. Additional tankage is considered essential only if existing available tankage has less than the capacity required for a complete voyage within Regulated California Waters.

(11) "Estuarine Waters" means an arm of the sea or ocean that extends inland to meet the mouth of a river.

(12) "Executive Officer" means the executive officer of the Air Resources Board (ARB), or his or her designee.

(13) "Hydrocarbon (HC)" means the sum of all hydrocarbon air pollutants.

(14) "Internal Waters" means any navigable river or waterway within the State of California.

(15) "IMO" means the International Maritime Organization.

(16) "ISO" means the International Organization for Standardization.

(17) "Main Engine" means a diesel engine on an ocean-going vessel designed primarily to provide propulsion, except that diesel-electric engines shall not be considered "main engines" for purposes of this section.

(18) "Marine Diesel Oil (MDO)" means any fuel that meets all the specifications for DMB grades as defined in Table I of International Standard ISO 8217, as revised in 2005, which is incorporated herein by reference.

(19) "Marine Gas Oil (MGO)" means any fuel that meets all the specifications for DMX or DMA grades as defined in Table I of International Standard ISO 8217, as revised in 2005, which is incorporated herein by reference.

(20) "Master" means the person who operates a vessel or is otherwise in charge of the vessel's operations.

(21) "Military Vessel" means any ship, boat, watercraft, or other contrivance used for any purpose on water, and owned or operated by the armed services.

(22) "Nitrogen Oxides (NOx)" means compounds of nitric oxide (NO), nitrogen dioxide (NO2), and other oxides of nitrogen, which are typically created during combustion processes and are major contributors to smog formation and acid deposition.

(23) "Non-Methane Hydrocarbons (NMHC)" means the sum of all hydrocarbon air pollutants except methane.

(24) "Ocean-going Vessel (OGV)" means a commercial, government, or military vessel meeting any one of the following criteria:

(A) a non-tanker vessel greater than or equal to 400 feet in length overall (LOA) as defined in 50 CFR § 679.2, as adopted June 19, 1996;

(B) a non-tanker vessel greater than or equal to 10,000 gross tons (GT ITC) per the convention measurement (international system) as defined in 46 CFR 69.51-.61, as adopted September 12, 1989;

(C) a non-tanker vessel propelled by a marine compression ignition engine with a per-cylinder displacement of greater than or equal to 30 liters; or

(D) a tanker that meets any one of the criteria in subsections (A)-(C).

For purposes of this section, "ocean-going vessel" does not include tugboats, towboats, or pushboats.

(25) "Operate" means steering or otherwise running the vessel or its functions while the vessel is underway, moored, anchored, or at dock.

(26) "Own" means having all the incidents of ownership, including the legal title, of a vessel whether or not that person lends, rents, or pledges the vessel; having or being entitled to the possession of a vessel as the purchaser under a conditional sale contract; or being the mortgagor of a vessel.

(27) "Particulate Matter" means any airborne finely divided material, except uncombined water, which exists as a liquid or solid at standard conditions (e.g., dust, smoke, mist, fumes or smog).

(28) "Person" includes all of the following:

(A) any person, firm, association, organization, partnership, business trust, corporation, limited liability company, or company;

(B) any state or local governmental agency or public district, or any officer or employee thereof;

(C) the United States or its agencies, to the extent authorized by federal law.

(29) "Port Visit" means any of the following:

(A) each separate and distinct entry of a vessel into a port, roadstead, or terminal facility (collectively "port") in Regulated California Waters that results in the vessel stopping, docking, mooring, or otherwise dropping anchor (collectively "stopping") at the port. The "port visit" continues if the vessel moves to a different berth within the same port, but the "port visit" ends when the vessel leaves for or is otherwise moved to another port within the same bay or any other port;

(B) except as provided in paragraph (C) below, each separate and distinct entry of a vessel into an offshore location in Regulated California Waters away from a port that results in the vessel stopping at that offshore location (e.g., Catalina Island or off Monterey). The "port visit" ends when the vessel leaves for or is otherwise moved to a port or another offshore location; or

(C) each separate and distinct entry of a vessel into an offshore location in Regulated California Waters away from a port that results in the vessel stopping, followed by entry into that port, shall constitute one "port visit", provided the offshore stop was conducted solely because the port could not accept the vessel as scheduled due to reasons beyond the reasonable control of the vessel operator or master.

(30) "Regulated California Waters" means all of the following:

(A) all California internal waters;

(B) all California estuarine waters;

(C) all California ports, roadsteads, and terminal facilities (collectively "ports");

(D) all waters within 3 nautical miles of the California baseline, starting at the California-Oregon border and ending at the California-Mexico border at the Pacific Ocean, inclusive;

(E) all waters within 12 nautical miles of the California baseline, starting at the California-Oregon border and ending at the California-Mexico border at the Pacific Ocean, inclusive;

(F) all waters within 24 nautical miles of the California baseline, starting at the California-Oregon border to 34.43 degrees North, 121.12 degrees West, inclusive; and

(G) all waters within the area, not including any islands, between the California baseline and a line starting at 34.43 degrees North, 121.12 degrees West; thence to 33.50 degrees North, 118.58 degrees West; thence to 32.65 degrees North, 117.81 degrees West; and ending at the California-Mexico border at the Pacific Ocean, inclusive.

(31) "Roadstead" means any facility that is used for the loading, unloading, and anchoring of ships.

(32) "Steamship" means a self-propelled vessel in which the primary propulsion and electrical power are provided by steam boilers.

(33) "Slow Speed Engine" means an engine with a rated speed of 150 revolutions per minute or less.

(34) "Sulfur Oxides" means compounds of sulfur dioxide ($SO_2$), and other oxides of sulfur, which are typically created during combustion of sulfur containing fuels.

(35) "Tanker" means a self-propelled vessel constructed or adapted primarily to carry, or that carries, oil or hazardous material in bulk as cargo or cargo residue.

(36) "Two-stroke Engine" means an internal combustion engine which operates on a two stroke cycle where the cycle of operation completes in one revolution of the crankshaft.

(37) "Vessel" means any tugboat, tanker, freighter, passenger ship, barge, or other boat, ship, or watercraft, except those used primarily for recreation and any of the following:

(A) a seaplane on the water;

(B) a watercraft specifically designed to operate on a permanently fixed course, the movement of which is restricted to a fixed track or arm to which the watercraft is attached or by which the watercraft is controlled.

(38) "Voyage" means each separate and distinct journey that begins when a vessel reaches Regulated California Waters from a point beyond Regulated California Waters, includes at least one port visit, and ends when the vessel departs from Regulated California Waters.

(e) Operational Requirements.

(1) Fuel Sulfur Content Limits.

(A) Auxiliary Diesel Engines:

1. Except as provided in subsections (c) and (h), upon the effective date of this regulation as approved by the Office of Administrative Law, a person subject to this section shall operate any auxiliary diesel engine, while the vessel is operating in Regulated California Waters, with either marine gas oil (MGO), with a maximum of 1.5 percent sulfur by weight, or marine diesel oil (MDO), with a maximum of 0.5 percent sulfur by weight, rounded as specified in subsection (i)(3);

2. Except as provided in subsections (c) and (h), beginning January 1, 2012, a person subject to this section shall operate any auxiliary diesel engine, while the vessel is operating in Regulated California Waters, with marine gas oil (MGO) with a maximum of 0.1% sulfur by weight or marine diesel oil (MDO) with a maximum of 0.1% sulfur by weight, rounded as specified in subsection (i)(3).

(B) Main Engines and Auxiliary Boilers:

1. Except as provided in subsections (c) and (h), beginning July 1, 2009, a person subject to this section shall operate any main engine or auxiliary boiler, while the vessel is operating in Regulated California Waters, with either marine gas oil (MGO), with a maximum of 1.5 percent sulfur by weight, or marine diesel oil (MDO), with a maximum of 0.5 percent sulfur by weight, rounded as specified in subsection (i)(3);

2. Except as provided in subsections (c) and (h), beginning January 1, 2012, a person subject to this section shall operate any main engine or auxiliary boiler, while the vessel is operating in Regulated California Waters, with marine gas oil (MGO) with a maximum of 0.1% sulfur by weight or marine diesel oil (MDO) with a maximum of 0.1% sulfur by weight, rounded as specified in subsection (i)(3).

(2) Recordkeeping, Reporting, and Monitoring Requirements.

(A) Recordkeeping.

Upon the effective date of this regulation, any person subject to this section shall retain and maintain records in English that contain the following information for at least three years following the date when the records were made:

1. The date, local time, and position (longitude and latitude) of the vessel for each entry into Regulated California Waters from waters outside Regulated California Waters, and each departure from Regulated California Waters to waters outside Regulated California Waters;

2. The date, local time, and position (longitude and latitude) of the vessel at the initiation and completion of any fuel switching procedures used to comply with subsection (e)(1) prior to entry into Regulated California Waters from waters outside Regulated California Waters;

3. The date, local time, and position (longitude and latitude) of the vessel at the initiation and completion of any fuel switching procedures within Regulated California Waters; completion of fuel switching procedures occurs the moment all engines subject to this section have completely transitioned from operation on one fuel to another fuel;

4. The type of fuel used (e.g., marine gas oil, marine diesel oil or heavy fuel oil) in each auxiliary engine, main engine, and auxiliary boiler operated in Regulated California Waters; and

5. The types, amounts, and the actual percent by weight sulfur content of all fuels purchased for use on the vessel, as reported by the fuel supplier or a fuel testing firm.

(B) Documentation of Fuel Switch Over Procedures.

Any person subject to this section that complies with the fuel sulfur content limits by switching fuels shall retain and maintain records in English on-board ship that contain the following information for auxiliary engines, main engines and auxiliary boilers:

1. A fuel system diagram that shows all storage, service, and mixing tanks, fuel handling, pumping, and processing equipment, valves, and associated piping. The diagram or other documentation shall list the fuel tank capacities and locations, and the nominal fuel consumption rate of the machinery at rated power;

2. Description of the fuel switch over procedure with detailed instructions and clear identification of responsibilities; and

3. The make, model, rated power, and serial numbers of all main engines, and auxiliary engines and make, model, rated output, and serial numbers of all auxiliary boilers subject to subsection (e)(1).

(C) Reporting and Monitoring.

1. Any person subject to this section shall provide in writing the information specified in subsection (e)(2)(A) and (e)(2)(B) to the Executive Officer upon request, either within 24 hours or by a later date approved by the Executive Officer. To the extent the person already collects the information specified in subsections (e)(2)(A) and (e)(2)(B) in English to comply with other regulatory requirements or standard practices, the person may provide the requested information in a format consistent with those other regulatory requirements or standard practices.

2. Any person subject to this section shall provide to the Executive Officer upon request additional information the Executive Officer determines to be necessary to determine compliance with this section.

3. Any person subject to this section shall provide to the Executive Officer access to the vessel for the purpose of determining compliance with the this section, including but not limited to, access to and review of records and information required under subsections (e)(2)(A) and (e)(2)(B), and for the purpose of collecting fuel samples for testing and analysis.

(f) Violations.

(1) Any person who is subject to this section and commits a violation of any provision, criteria or requirement in this section is subject to the penalties, injunctive relief, and other remedies specified in Health and Safety Code, sections 39674-39675 and 42400 et seq.; other applicable sections in the Health and Safety Code; and other applicable provisions as provided under California law for each violation. Nothing in this section shall be construed to limit or otherwise affect any applicable penalties or other remedies available under Federal law.

(2) Any failure to meet any provision, criteria or requirement in this section, including but not limited to the applicable fuel sulfur content limits; recordkeeping requirements; and Noncompliance Fee provision shall constitute a single, separate violation of this section for each hour that a person operates an ocean-going vessel in Regulated California Waters until such provision, criteria or requirement has been met.

(3) Any person who is subject to this section is liable for meeting the requirements of this section, notwithstanding any contractual arrangement that person may have with any third-parties.

(g) Noncompliance for Vessels Based on the Need for Essential Modifications.

If a person cannot meet the requirements of subsection (e)(1) without essential modifications, as defined in subsection (d), the Executive Officer will grant the person an exemption in whole or in part to subsection (e)(1). For this provision to apply, the person shall meet all of the following criteria:

(1) Notification Requirements.

For each voyage before the person's vessel enters Regulated California Waters from waters outside Regulated California Waters, a person who has demonstrated need under subsection (g)(2) must notify the Executive Officer that the person will not meet the requirements of subsection (e)(1) while operating within Regulated California Waters, but the person will instead meet the requirements of this subsection (g). If the Executive Officer has not received such notice and the person enters Regulated California Waters, the person will be in violation of this section.

(2) Demonstration of Need.

At least 45 days prior to a vessel's first reliance on subsection (g) when entering Regulated California Waters, or at the earliest practicable date prior to entry into Regulated California Waters if first reliance on subsection (g) is less than 45 days after the effective date of this section, the person shall provide, in writing, the Executive Officer with an Essential Modification Report attested to under the penalty of perjury by the Chief Engineer of the person's vessel. The Executive Officer has 30 days to act on the Essential Modification Report. Additional information may be provided by the applicant or requested by the Executive officer after submittal of the original Essential Modification Report. The Executive Officer will have an additional 15 days to review the additional submittal and act on the amended Essential Modification Report. The Essential Modification Report shall, to the satisfaction of the Executive Officer:

(A) identify the specific essential vessel modifications ( "essential modifications" as defined in subsection (d)) required to meet the requirements of subsection (e)(1);

(B) demonstrate that modifications to the vessel are necessary to meet the requirements of subsection (e)(1); and

(C) identify the maximum extent, with respect to trip distance or regulated equipment type, to which the vessel can meet the requirements of (e)(1) without essential modifications where feasible and safe for each of the auxiliary engines, main engines, and auxiliary boilers.

(3) While the vessel is operating in Regulated California Waters, a person subject to this subsection shall:

(A) operate each main engine meeting the requirements of (e)(1) to the extent identified in (g)(2)(C);

(B) operate each auxiliary boiler meeting the requirements of (e)(1) to the extent identified in (g)(2)(C); and

(C) operate each auxiliary engine meeting the requirements of (e)(1) to the extent identified in (g)(2)(C).

(h) Noncompliance Fee in Lieu of Meeting Subsection (e)(1).

The Executive Officer may permit a person ( "person") to pay noncompliance fees ( "fees") in lieu of meeting the requirements of subsection (e)(1). Payment of the fees notwithstanding, all other provisions of this section shall continue to apply. No person shall be permitted to pay the fees unless the person meets the notification requirements in subsection (h)(1) and the requirements in either subsections (h)(2), (h)(3), or (h)(4), as specified below:

(1) Notification Requirements.

Before the person's vessel enters Regulated California Waters from waters outside Regulated California Waters, the Executive Officer must receive notice that the person will not meet the requirements of subsection (e)(1) while operating within Regulated California Waters, but the person will instead meet the requirements of this subsection (h). If the Executive Officer has not received such notice and the person enters Regulated California Waters, the person will be in violation of this section and will not be permitted to pay the fees in lieu of meeting the requirements of subsection (e)(1).

(2) Noncompliance for Reasons Beyond a Person's Reasonable Control.

Any person wishing to pay the fees under this subsection (h)(2) shall meet the following criteria:

(A) Demonstration of Need.

The person shall, through adequate documentation, demonstrate to the Executive Officer's satisfaction that the person's noncompliance with the requirements of subsection (e)(1) is beyond the person's reasonable control. For the purposes of this paragraph, "beyond the person's reasonable control" applies only when one or more of the following sets of circumstances (1, 2, or 3) applies:

1. Unplanned Redirection.

This provision applies only when all of the following criteria are met:

a. after leaving the last port of call, the person's vessel was redirected from his/her original, officially logged, non-California destination to a California port, roadstead, or terminal facility (collectively "port"); and

b. the vessel does not contain a quantity of fuel sufficient for the auxiliary engines, main engines, and auxiliary boilers to meet the requirements of subsection (e)(1).

2. Inadequate Fuel Supply.

This provision applies only when all of the following criteria are met:

a. the person made good faith efforts to acquire a quantity of fuel sufficient for the auxiliary engines, main engines, and auxiliary boilers to meet the requirements of subsection (e)(1); and

b. the person was unable to acquire fuel sufficient for auxiliary engines, main engines, and auxiliary boilers to meet the requirements of subsection (e)(1).

3. Inadvertent Purchase of Defective Fuel.

This provision applies only when all of the following criteria are met:

a. based on the fuel supplier's certification of the fuel specifications, the person reasonably believed, and relied on such belief, that the fuel the person purchased on the route from the vessel's home port to California would enable the auxiliary engines, main engines, and auxiliary boilers to meet the requirements of subsection (e)(1);

b. the person determined that the auxiliary engines, main engines, and auxiliary boilers in fact will not meet the requirements of subsection (e)(1) using any of the fuel purchased under paragraph 3.a; and

c. the vessel is already on its way to California, and there are no other ports of call on the vessel's route where fuel can be purchased sufficient to meet the requirements of subsection (e)(1).

(B) Payment of Fees.

Upon meeting the requirements of paragraph (A) in this subsection (h)(2), the person shall pay the fees for every port visit, as specified in subsection (h)(5) below.

(C) Executive Officer Review.

For the purposes of verifying the demonstration of need as specified in paragraph (A) above, the Executive Officer may consider and rely on any facts or circumstances the Executive Officer believes are appropriate, including but not limited to: the fuel supplier's ability or failure to provide adequate fuel ordered by the person; any material misrepresentation by the fuel supplier concerning the fuel

specifications; the reasonableness of the person's reliance on fuel suppliers with a history of supplying fuel inadequate for meeting the requirements of subsection (e)(1); and force majeure.

(3) Noncompliance for Vessels to Be Taken Out of Service for Modifications.

If a person cannot meet the requirements of subsection (e)(1) without vessel modifications, and elects not to comply under section (g), and such modifications cannot be completed prior to the effective date of subsection (e)(1), the Executive Officer may permit the person to pay the fees as specified in this subsection. The vessel must be scheduled to complete the necessary modifications (e.g. during a dry dock operation) as soon as possible, but no later than December 31, 2014. For this provision to apply, the person shall meet all of the following criteria:

(A) Demonstration of Need.

The person shall provide the Executive Officer a Compliance Report, signed by the Chief Engineer of the person's vessel, which:

1. identifies the specific vessel modifications ( "modifications") (e.g., installation of additional fuel tanks, fuel cooling systems) the person plans to use for meeting the requirements of subsection (e)(1);

2. identifies the specific date by which the modifications will be completed (i.e., while the vessel is in dry dock); and

3. demonstrates to the satisfaction of the Executive Officer that the modifications will be made at the earliest possible date (e.g., the vessel has been scheduled for the earliest available dry dock appointment).

(B) Payment of Fees.

Upon meeting the requirements of paragraph (A) in this subsection (h)(3), the person shall pay the fees for every port visit, as specified in subsection (h)(5) below.

(C) Proof of Modifications Actually Performed.

Within ten (10) business days after the scheduled or actual completion of the modifications, whichever occurs first, the person shall provide written certification to the Executive Officer that the modifications specified under this subsection (h)(3) have been completed. If the modifications have not been completed, the person shall certify which modifications have been completed, which have not, and the anticipated completion date for the remaining modifications. The notification requirement specified in this paragraph, the notification requirements in subsection (h)(1) above, and the fee provisions in subsection (h)(5) below shall apply until all the modifications have been completed.

(4) Noncompliance Based on Infrequent Visits and Need for Vessel Modifications.

If a person cannot meet the requirements of subsection (e)(1) without modifications for the vessel at issue, and elects not to comply under section (g), and that vessel will make no more than two California voyages per calendar year, and no more than 4 California voyages after the effective date of the regulation, during the life of the vessel, the Executive Officer may permit the person to pay the fees as specified in this subsection. This provision terminates on December 31, 2014.

(A) Demonstration of Need.

The person shall demonstrate to the satisfaction of the Executive Officer that modifications to the vessel are necessary to meet the requirements of subsection (e)(1), and that the vessel shall meet the visitation limits specified in this subsection (h)(4).

(B) Payment of Fees.

Upon meeting the requirements of paragraph (A) above, the person shall pay the fees for every port visit as specified in subsection (h)(5) below.

(5) Calculation and Payment of Fees.

For each port visit, the person who elects to pay the fees pursuant to this subsection (h) shall pay the applicable fees shown in Table 1 prior to leaving the California port or by a later date approved by the Executive Officer. The person shall deposit the fees in the port's Noncompliance Fee Settlement and Air Quality Mitigation Fund. If no such port fund exists, the person shall deposit the fees into the California Air Pollution Control Fund, as directed by the Executive Officer. Port visits shall be cumulative for all non-compliant port visits over the life of the vessel. For the purposes of this paragraph, any port visit where the non-compliance fee is waived shall not be included in the cumulative total.

(A) Noncompliance Fee Schedule.

Table 1: Noncompliance Fee Schedule, Per Vessel

| Port Visit | Per-Port Visit Fee |
|---|---|
| 1st Port Visited | $45,500 |
| 2nd Port Visited | $91,000 |
| 3rd Port Visited | $136,500 |
| 4th Port Visited | $182,000 |
| 5th or more Port Visited | $227,500 |

(B) The fees shown in Table 1 shall be assessed by the Executive Officer at the time of the port visit.

(C) For subsection (h)(2), beginning January 1, 2012, the fee will be waived once per vessel during each calendar year until December 31, 2014, when all of the following are met:

1. a person acquires fuel and meets the requirements of subsection (e)(1) prior to leaving the first port visited during the voyage and meets the requirements of (e)(1) for the remainder of the voyage; and

2. during any non-compliant portion of the voyage, a person operates each auxiliary engine, main engine, and auxiliary boiler with either marine gas oil (MGO), with a maximum of 1.5 percent sulfur by weight, or marine diesel oil (MDO), with a maximum of 0.5 percent sulfur by weight, rounded as specified in subsection (i)(3).

(D) The Executive Officer may enter into enforceable agreements with each port that will receive the fees. The agreements shall require that the fees be used by the ports only to fund projects that will substantially reduce emissions of diesel PM, NOx, and SOx from on-site sources, sources within 2 miles of port boundaries, or ocean-going vessels operated within the Regulated California Waters, except that the fees shall not be used to fund projects on vessels from which noncompliance fees were paid. Fees intended for ports that do not have such agreements at the time the fees are paid shall be deposited into the California Air Pollution Control Fund.

(E) If for any reason the person is not notified by the Executive Officer of the assessed fee by the end of the port visit, the person shall nevertheless be responsible for payment of the appropriate fee as specified in this subsection (h) prior to leaving the California port or by a later date approved by the Executive Officer.

(i) Test Methods.

The following test methods or alternative test methods that are demonstrated to the written satisfaction of the Executive Officer to be equally or more accurate, shall be used to determine compliance with this section:

(1) Test methods used to determine whether fuels meets the requirements of marine gas oil (DMA or DMX) or marine diesel oil (DMB), as specified in subsection (e)(1), shall be the methods specified in International Standard ISO 8217 (as revised in 2005), which is incorporated herein by reference.

(2) The sulfur content of fuels shall be determined pursuant to International Standard ISO 8754 (as adopted in 2003), which is incorporated herein by reference.

(3) For purposes of determining compliance with the specifications in (e)(1)(A), an observed value or a calculated value shall be rounded "to the nearest unit" in the last right-hand digit used in expressing the specification limit, in accordance with the rounding method of ASTM E 29-93a Standard Practice for Using Significant Digits in Test Data to Determine Conformance Specifications (published May 1993), which is incorporated herein by reference.

(j) Sunset, Baseline, and Test Method Review.

(1) The requirements specified in subsection (e) shall cease to apply if the United States adopts and enforces requirements that will achieve emissions reductions within the Regulated California Waters that are equivalent to those achieved by this section. Equivalent requirements may be from IMO regulations that are adopted and enforced by the United States or may be contained in regulations that are initiated by the U.S. Environmental Protection Agency. Subsection (e) shall remain in effect under this subsection until the Executive Officer issues written findings that federal requirements are in place that will achieve equivalent emissions reductions within the Regulated California Waters and are being enforced within the Regulated California Waters.

(2) The Executive Officer shall periodically review the California baseline determinations by the National Oceanic and Atmospheric Administration (NOAA) to determine if updates to the baseline charts incorporated by reference in this section are necessary. If modifications to the baseline charts are determined to be necessary, the Executive Officer shall conduct a public hearing as soon as practicable to amend this section accordingly.

(3) The Executive Officer shall periodically review the test methods incorporated by reference in this section to determine if updates to the referenced methods are necessary. If updates to the test methods are determined to be necessary, the Executive Officer shall conduct a public hearing as soon as practicable to amend this section accordingly.

(k) Severability.

Each part of this section shall be deemed severable, and in the event that any part of this section is held to be invalid, the remainder of this section shall continue in full force and effect.

**➡§ 93118.3. Airborne Toxic Control Measure for Auxiliary Diesel Engines Operated on Ocean-Going Vessels At-Berth in a California Port.**

(a) Purpose.

The purpose of this section is to reduce oxides of nitrogen (NOx) and diesel particulate matter (PM) emissions from the operation of auxiliary engines on container vessels, passenger vessels, and refrigerated cargo vessels while these vessels are docked at berth at a California port. This section reduces emissions by limiting the time during which auxiliary diesel engines are operated on the regulated vessels while such vessels are docked at-berth in a California port, as well as by applying other requirements. This section implements provisions of the Goods Movement Emission Reduction Plan, adopted by the Air Resources Board (ARB) in April 2006, to reduce emissions and health risk from ports and the movement of goods in California. This section also helps achieve the goals specified in the California Global Warming Solutions Act of 2006, established under California law by Assembly Bill 32 (Stats. 2006, ch. 488) and set forth in Health and Safety Code § 38500 et seq.

(b) Applicability and General Exemptions.

(1) Except as provided in this subsection (b), this section applies to any person who owns, operates, charters, rents, or leases any U.S. or foreign-flagged container vessel, passenger vessel, or refrigerated cargo vessel that visits a California port. In addition, this section also applies to any person who owns or operates a port or terminal located at a port where container, passenger, or refrigerated cargo vessels visit.

(2) Nothing in this section shall be construed to amend, repeal, modify, or change in any way any applicable U.S. Coast Guard requirements. Any person subject to this section shall be responsible for ensuring compliance with both U.S. Coast Guard regulations and the requirements of this section, including but not limited to, obtaining any necessary approvals, exemptions, or orders from the U.S. Coast Guard.

(3) The requirements of this section do not apply to:

(A) Ocean-going vessel voyages that consist of continuous and expeditious navigation through any of the Regulated California Waters for the purpose of traversing such bodies of water without entering California internal or estuarine waters or calling at a port, roadstead, or terminal facility. "Continuous and expeditious navigation" includes:

1. Stopping and anchoring only to the extent such stopping and anchoring are required by the U.S. Coast Guard;

2. Rendered necessary by force majeure or distress; or

3. Made for the purpose of rendering assistance to persons, ships, or aircraft in danger or distress.

This exemption does not apply to the passage of an ocean-going vessel that engages in any of the prejudicial activities specified in United Nations Convention on the Law of the Seas (UNCLOS) 1982, Article 19, subpart 2. Further, notwithstanding any Coast Guard mandated stops or stops due to force majeure or the rendering of assistance, this exemption does not apply to a vessel that was otherwise scheduled or intended to enter California internal or estuarine waters or call at a port, roadstead or terminal facility.

(B) Auxiliary engines onboard ocean-going vessels owned or operated by any branch of local, state, federal government, or by a foreign government, when such vessels are operated on government non-commercial service. However, such vessels are encouraged to act in a manner consistent, so far as is reasonable and practicable, with this section.

(C) Steamships while berthed at a California port.

(D) Auxiliary engines while such engines are operating primarily on liquefied natural gas or compressed natural gas.

(E) Except as otherwise specified in subsection (d)(1)(I), fleets meeting the following criteria:

1. A fleet composed solely of container or refrigerated cargo vessels that visits the same California port fewer than 25 times total in a calendar year; and

2. A fleet composed solely of passenger vessels that visits the same California port fewer than 5 times total in a calendar year.

(c) Definitions.

For purposes of this section, the definitions in Health and Safety Code sections 39010 through 39060 shall apply, except as otherwise specified in this section:

(1) "Alternative Control Technologies" means technologies, techniques, or measures that reduce the emissions of NOx and PM from an auxiliary diesel engine other than shutting down the engine.

(2) "Auxiliary Engine" means an engine on an ocean-going vessel designed primarily to provide power for uses other than propulsion, except that all diesel-electric engines shall be considered "auxiliary diesel engines" for purposes of this section.

(3) "Baseline Fleet Emissions" means the total emissions from all vessels in a fleet during all berthing times in a calendar year or other specified time period. For purposes of calculating the baseline fleet emissions, the auxiliary engines on the vessels in the fleet shall be assumed to use marine gas oil or marine diesel oil while at berth.

(4) "Baseline Fleet Power Generation" refers to the electrical power used by all vessels in the fleet while the vessels are docked at berths located at a California Port during a calendar quarter or other time period specified in the regulation.

(5) "Berthing Time" means the time period that begins when the vessel is first tied to the berth and ends when the vessel is untied from the berth.

(6) "California Ports" means:

(A) The Port of Hueneme, the Port of Los Angeles (POLA) and Port of Long Beach (POLB), the Port of Oakland, the Port of San Diego, and the Port of San Francisco; and

(B) For purposes of this section, POLA and POLB are treated as one port.

(7) "Charter Agreement" means a lease or agreement to hire a vessel or other means of conveyance to transport goods or passengers to one or more designated locations.

(8) "Container Vessel" means a self-propelled ocean-going vessel constructed or adapted primarily to carry uniform-sized ocean freight containers.

(9) "Diesel Engine" means an internal combustion, compression-ignition (CI) engine with operating characteristics significantly similar to the theoretical diesel combustion cycle. The regulation of power by controlling fuel supply in lieu of a throttle is indicative of a compression ignition engine.

(10) "Diesel-Electric Engine" means a diesel engine connected to a generator that is used as a source of electricity for propulsion or other uses.

(11) "Diesel Particulate Matter" means the particles found in the exhaust of diesel engines, which may agglomerate and adsorb other species to form structures of complex physical and chemical properties.

(12) "Distributed Generation" shall have the same meaning as that term is defined in title 17, CCR, section 94202.

(13) "Docked at the Berth" means the state of being tied to a berth.

(14) "Emergency Event" means the period of time during which any of the following events occurs; the emergency event begins when such an event begins and ends when the event is over:

(A) Any situation arising from a sudden and reasonably unforeseeable event beyond the control of the master that threatens the safety of the vessel; or

(B) The utility serving the port cannot provide electrical power to the port as a result of equipment failure, a transmission emergency, distribution emergency, a California Independent System Operator (CAISO) or Los Angeles Department of Water and Power (LADWP) Stage 3 emergency, or the utility needs to reduce power to the port because of a sudden and reasonably unforeseeable natural disaster, such as, but not limited to, an earthquake, flood, or fire; or

(C) When the utility providing electrical power to the port notifies the terminal operator(s) to reduce the use of grid-based electrical power in response to a transmission or distribution emergency, a CAISO or LADWP Stage 3 emergency, or to avoid a Stage 3 emergency if one is anticipated. The emergency event ends when CAISO or LADWP cancels the Stage 3 emergency or the utility notifies the terminal operator(s) that reduction in the use of grid-based electrical power is no longer necessary. The port may contact the terminal operator(s) on behalf of the utility if such an agreement exists between the utility and the port; or

(D) The electrical system at the terminal cannot provide electrical power as a result of equipment failure.

(15) "Executive Officer" means the executive officer of the Air Resources Board (ARB), or his or her designee.

(16) "Fleet" means all container, passenger, and refrigerated cargo vessels, visiting a specific California port, which are owned and operated by, or otherwise under the direct control, of the same person. Direct control includes, but is not limited to, vessels that carry cargo or passengers for the person pursuant to a charter agreement or other arrangement with a third-party for the third-party to operate the vessel. For purposes of this definition, "direct control" does not include the vessel master or any other member of the vessel crew, unless the crew member is also the owner of the vessel. For the purposes of this section, a person shall be deemed to have separate fleets for each California port visited and each fleet is composed of one type of vessel. For example, if a person owns or operates vessels that visit both the Port of Los Angeles and Port of Oakland, that person is deemed to have two fleets, one a "POLA-based fleet" and the other a "Port of Oakland-based fleet."

(17) "Marine Diesel Oil" means any fuel that meets all the specifications for DMB grades as defined in Table I of International Standard ISO 8217, as revised in 2005, which is incorporated herein by reference.

(18) "Marine Gas Oil" means any fuel that meets all the specifications for DMX or DMA grades as defined in Table I of International Standard ISO 8217, as revised in 2005, which is incorporated herein by reference.

(19) "Master" means the person who operates an ocean-going vessel or is otherwise in charge of the vessel's operations.

(20) "Ocean-Going Vessel" means a commercial, government, or military vessel meeting any one of the following criteria:

(A) A vessel greater than or equal to 400 feet in length overall (LOA) as defined in 50 Code of Federal Regulations (CFR) § 679.2, as adopted June 19, 1996;

(B) A vessel greater than or equal to 10,000 gross tons (GT ITC) pursuant to the convention measurement (international system) as defined in 46 CFR § 69.51-.61, as adopted September 12, 1989; or

(C) A vessel propelled by a marine compression ignition engine with a per-cylinder displacement of greater than or equal to 30 liters.

For the purposes of this section, "ocean-going vessel" will be used interchangeably with the term "vessel."

(21) "Operate" means steering or otherwise running the vessel or its functions while the vessel is underway, moored, anchored, or at berth.

(22) "Own" means having all the incidents of ownership, including the legal title, of a vessel whether or not that person lends, rents, or pledges the vessel; having or being entitled to the possession of a vessel as the purchaser under a conditional sale contract; or being the mortgagor of a vessel.

(23) "Oxides of Nitrogen" (NOx) means compounds of nitric oxide (NO), nitrogen dioxide ($NO_2$), and other oxides of nitrogen, which are typically created during combustion processes and are major contributors to smog formation and acid deposition.

(24) "Particulate Matter" means any airborne finely divided material, except uncombined water, which exists as a liquid or solid at standard conditions (e.g., dust, smoke, mist, fumes, or smog).

(25) "Passenger Vessel" means a self-propelled vessel constructed or adapted primarily to carry people.

(26) "Person" includes all of the following:

(A) Any person, agent, firm, association, organization, partnership, business trust, corporation, limited liability company, company, consortium, or any other commercial relationship;

(B) Any state or local governmental agency or public district, or any officer or employee thereof; and

(C) The United States or its agencies, to the extent authorized by federal law.

(27) "Post-Baseline Fleet Emissions" means the total emissions from all vessels in a fleet after the application of one or more control techniques, such as alternative control technologies, electrical power from the utility grid, and electrical power from sources that are not part of the utility's electrical grid (distributed generation), during all berthing times in a calendar year or other specified time period. For purposes of calculating the baseline fleet emissions, the auxiliary engines on the vessels in the fleet shall be assumed to use marine gas oil or marine diesel oil while at berth.

(28) "Refrigerated Cargo Vessel" (commonly known as "reefer") means a self-propelled vessel constructed or adapted primarily to carry refrigerated cargo. Refrigerated cargo vessels include vessels where the cargo may be stored in large refrigerated rooms within the vessel or vessels that carry refrigerated cargo containers exclusively.

(29) "Regulated California Waters" means all of the following:

(A) all California internal waters;

(B) all California estuarine waters;

(C) all California ports, roadsteads, and terminal facilities (collectively "ports");

(D) all waters within 3 nautical miles of the California baseline, starting at the California-Oregon border and ending at the California-Mexico border at the Pacific Ocean, inclusive;

(E) all waters within 12 nautical miles of the California baseline, starting at the California-Oregon border and ending at the California-Mexico border at the Pacific Ocean, inclusive;

(F) all waters within 24 nautical miles of the California baseline, starting at the California-Oregon border to 34.43 degrees North, 121.12 degrees West; inclusive; and

(G) all waters within the area, not including any islands, between the California baseline and a line starting at 34.43 degrees North, 121.12 degrees West; thence to 33.50 degrees North, 118.58 degrees West; thence to 32.65 degrees North, 117.81 degrees West; and ending at the California-Mexico border at the Pacific Ocean, inclusive.

(30) "Responsible Official" means the individual(s) with the authority to certify that all vessels in a fleet comply with applicable requirements of this regulation.

(31) "Shore power" refers to electrical power being provided by either the local utility or by distributed generation.

(32) "Steamship" means a self-propelled vessel in which the primary propulsion and electrical power are provided by steam boilers.

(33) "Synchronous Power Transfer" means the synchronized switchover in vessel-based power to shore-based power without a loss in power during such transfer.

(34) "Terminal" means a facility consisting of wharves, piers, docks and other berthing locations and adjacent storage, which are used primarily for loading and unloading of passengers, cargo or material from vessels or for the temporary storage of this cargo or material on-site.

(35) "Terminal Operator" means a person who leases terminal property from a port for the purpose of loading and unloading of passengers, cargo or material from vessels or for the temporary storage of this cargo or material on-site.

(36) "Utility" shall have the same meaning and be used interchangeably with the term "Electric Utility" as defined in Public Resources Code section 25108.

(37) "Verified Emission Control Strategy" means an emission control strategy that has been verified pursuant to the "Verification Procedure for In-Use Strategies to Control Emissions from Diesel Engines" in title 13, California Code of Regulations, commencing with section 2700, which is incorporated herein by reference.

(38) "Visit" means the time period that begins when an ocean-going vessel initially ties to a berth (the beginning of the visit) and ends when it casts off the lines (the end of the visit) at a berth in a California port. For the purposes of determining the number of visits by a fleet, separate and sequential visits shall collectively be deemed a single visit when a vessel ties to two or more berths at the same California port and the time interval between leaving one berth and tying to another berth in the same port is less than two hours.

(d) Vessel In-Use Operational Requirements.

(1) Reduced Onboard Power Generation Option

(A) 2014 Requirements

Except as provided in subsection (d)(2), beginning January 1, 2014, the following shall apply to a fleet visiting a California port:

1. At least 50 percent of the fleet's visits to the port shall meet the onboard auxiliary diesel engine operational time limits in subsection (d)(1)(D); and

2. The fleet's onboard auxiliary-diesel-engine power generation while docked at the berth shall be reduced by at least 50 percent from the fleet's baseline power generation.

(B) 2017 Requirements

Except as provided in subsection (d)(2), beginning January 1, 2017, the following shall apply to a fleet visiting a California port:

1. At least 70 percent of the fleet's visits to the port shall meet the onboard auxiliary diesel engine operational time limits in subsection (d)(1)(D); and

2. The fleet's onboard auxiliary-diesel-engine power generation while docked at the berth shall be reduced by at least 70 percent from the fleet's baseline power generation.

(C) 2020 Requirements

Except as provided in subsection (d)(2), beginning January 1, 2020, the following shall apply to a fleet visiting a California port:

1. At least 80 percent of a fleet's visits to the port shall meet the onboard auxiliary diesel engine operational time limits in subsection (d)(1)(D); and

2. The fleet's onboard auxiliary-diesel-engine power generation while docked at the berth shall be reduced by at least 80 percent from the fleet's baseline power generation.

(D) Limits on Hours of Operation

1. Except as exempt in subsection (d)(1)(E), auxiliary diesel engines onboard vessels subject to subsection (d)(1)(A), (d)(1)(B), and (d)(1)(C) shall meet the following operational limits while at berth for the specified percentage of visits by the fleet:

a. Three hours total per visit to a berth, provided the visiting vessel uses a synchronous power transfer process to change from vessel-based power to shore-based power; or

b. Five hours total per visit to a berth, provided the visiting vessel does not use a synchronous power transfer process to change from vessel-based power to shore-based power.

For example, if a fleet is subject to subsection (d)(1)(A) and makes 10 visits to a California port in a calendar quarter, in at least 5 of those visits, the auxiliary diesel engines on the vessels shall be operated no more than a combined 3 or 5 hours total, depending on whether a synchronous power transfer is used. The 3- and 5-hour limit applies to the combined operating time for all auxiliary diesel engines used in a vessel visit, rather than on a per-engine basis.

(E) Exemptions to Limits on Hours of Operation

1. Emergency Event

All of the following requirements apply to claimed exemptions to limits on hours of operation based on emergency events:

a. If the master of the vessel reasonably and actually determines that an emergency event, as defined in subsection (c)(14), occurs during the vessel's visit to a California port, the master of the vessel may operate the vessel's auxiliary engines during the emergency event:

b. The master shall not operate the vessel's auxiliary engines for more than one hour beyond the time when the master receives notification that the emergency event is over or determines that the emergency event is over; and

c. The provisions of paragraph (b) above notwithstanding, the master may continue to operate the auxiliary engines for no more than five hours if the master receives notification that the emergency event is over or determines that the emergency event is over, and the vessel is scheduled to leave port within five hours.

2. Delays Caused By the United States (U.S.) Coast Guard or Department of Homeland Security Inspections

The Executive Officer may extend the three-hour/five-hour operational requirement in subsection (d)(1)(D) if the following criteria are met:

a. The initial inspection and clearance of the vessel by the Department of Homeland Security exceeds one hour. The time extension granted shall be commensurate with the excess time necessary for inspection and clearance; or

b. After the auxiliary engines have been put back into service pending departure from the berth, the scheduled departure of the vessel has been delayed by U.S. Coast Guard or the Department of Homeland Security.

(F) Adjustments for Visits Meeting Exemption Criteria

The following adjustments can be made to visits meeting the exemption criteria where the vessel is capable of using shore power:

1. Visits exceeding the operational time limits in (d)(1)(D) that meet the exemption criteria in (d)(1)(E) shall be counted towards compliance with the minimum-visit requirements of (d)(1)(A), (d)(1)(B), and (d)(1)(C).

2. The onboard auxiliary diesel engine power generation associated with each visit meeting the exemption criteria in (d)(1)(E) above shall be excluded from the fleet's power reduction calculations pursuant to section (e)(1)(D).

(G) Compliance Periods

Compliance with the requirements in subsection (d)(1)(A), (d)(1)(B), and (d)(1)(C), shall be determined quarterly for the periods specified as follows:

1. January 1 through March 31, inclusive;

2. April 1 through June 30, inclusive;

3. July 1 through September 30, inclusive; and

4. October 1 through December 31, inclusive.

(H) No person shall sell, supply, offer to supply, or purchase electrical power for use on a vessel during a visit in lieu of using the on-board auxiliary diesel engines, unless such electrical power is either supplied by the local utility or is otherwise generated by equipment that meets the following emission standards:

1. NOx emissions no greater than 0.03 gram per kilowatt-hour (g/kW-hr);

2. PM emissions equivalent to the combustion of natural gas with a fuel sulfur content of no more than one grain per 100 standard cubic foot;

3. Carbon dioxide ($CO_2$) emissions shall be no greater than 500 g/kW-hr; and

4. Ammonia emissions no greater than five parts per million on a dry volume basis (ppmdv), if selective catalytic reduction (SCR) is used.

(I) Notwithstanding the requirements specified in subsection (d)(1)(A), (d)(1)(B), and (d)(1)(C), any ocean-going vessel equipped to receive shore power that visits a terminal with a berth equipped to provide compatible shore power shall utilize the shore power during every visit to that berth, unless the berth is already occupied with a vessel receiving shore power. This requirement shall not apply under the following circumstances:

1. The master of the vessel reasonably and actually determines that an emergency event, as defined in subsection (c)(14)(A), is in effect and the use of shore power during the emergency event would endanger the vessel's safety. Shore power shall be used for the remainder of the visit once the master determines that the emergency event no longer exists;

2. An emergency event, as defined in subsection (c)(14)(B), (c)(14)(C), or (c)(14)(D) is in effect. Shore power shall be used for the remainder of the visit once the emergency event is no longer in effect; or

3. The equipment on the vessel that allows the use of electricity from the terminal fails to function and the master of the vessel has made the necessary effort to repair the equipment as documented pursuant to subsection (g)(1)(B)1g.

(2) Equivalent Emissions Reduction Option

The purpose of this provision is to allow any person the option of complying with the requirements of this subsection (d)(2) in lieu of meeting the requirements of subsection (d)(1).

(A) Requirements

For fleets using one or more control techniques including electric power from the utility grid, electrical power from sources that are not part of an utility's electrical grid (distributed generation), or alternative control technologies to reduce the emissions of the fleet, the owner or operator of the fleet shall comply with the following schedule and compliance period:

1. For each calendar year beginning on January 1, 2010 through December 31, 2011, inclusive, the NOx and PM emissions from the fleet's auxiliary engines when the vessels in the fleet are docked at the berth must be reduced by10 percent from the baseline fleet emissions.

2. For each calendar year beginning on January 1, 2012, through December 31, 2013, inclusive, the NOx and PM emissions from the fleet's auxiliary engines when the vessels in the fleet are docked at the berth must be reduced by 25 percent from the baseline fleet emissions.

3. For the quarter beginning on January 1, 2014, and each subsequent quarter through December 31, 2016, inclusive, the NOx and PM emissions from the fleet's auxiliary engines when the vessels in the fleet are docked at the berth must be reduced by 50 percent from the baseline fleet emissions.

4. For the quarter beginning on January 1, 2017, and each subsequent quarter through December 31, 2019, inclusive, the NOx and PM emissions from the fleet's auxiliary engines when the vessels in the fleet are docked at the berth must be reduced by 70 percent from the baseline fleet emissions.

5. For the quarter beginning on January 1, 2020, and each subsequent quarter thereafter, the NOx and PM emissions from the fleet's auxiliary engines when the vessels in the fleet are docked at the berth must be reduced by 80 percent from the baseline fleet emissions.

(B) Vessels Using Grid-Based Shore Power as a Control Technique

If a vessel is equipped to receive shore power provided by the utility grid but is unable to do so while at berth due to an emergency event, the onboard diesel auxiliary engine emissions from such visits shall be excluded from the fleet's emissions reduction calculations pursuant to (e)(2)(C).

(C) Applying Early or Excess Emissions Reduction to the 2010, 2012, or 2017 Emission Requirements

Early or excess emissions reduction that are approved by the Executive Officer pursuant to section (e)(2)(D) can be used towards compliance with requirements in (d)(2)(A)1, (d)(2)(A)2, or (d)(2)(A)4 as follows:

1. Reductions achieved before January 1, 2010 can be used towards complying with requirements in (d)(2)(A)1, (d)(2)(A)2, or (d)(2)(A)4.

2. Reductions achieved between January 1, 2010 and December 31, 2011, which exceed the amount required by (d)(2)(A)1, can be used towards complying with requirements in (d)(2)(A)2 and (d)(2)(A)4.

3. Reductions achieved between January 1, 2012 and December 31, 2013, which exceed the amount required by (d)(2)(A)2, can be used towards complying with (d)(2)(A)4.

4. Early or excess emission reductions cannot be used towards complying with the requirements in (d)(2)(A)3 or (d)(2)(A)5.

(D) Compliance with the requirements of subsection (d)(2)(A)3, (d)(2)(A)4, and (d)(2)(A)5 shall be determined quarterly for the periods specified as follows:

1. January 1 through March 31, inclusive;

2. April 1 through June 30, inclusive;

3. July 1 through September 30, inclusive; and

4. October 1 through December 31, inclusive.

(E) No person shall sell, supply, offer to supply, or purchase electrical power for use on a vessel during a visit in lieu of using the on-board auxiliary diesel engines, unless such electrical power is either supplied by the local utility or is otherwise generated by equipment that meet the following emission standards:

1. NOx Emissions;

a. Up to and including December 31, 2013, the NOx emissions shall be no greater than 2 g/kW-hr at any time; and

b. Beginning January 1, 2014, the NOx emissions shall be no greater than 0.2 g/kW-hr at any time.

2. PM emissions shall be no greater than the PM emissions from combustion of natural gas with a fuel sulfur content of no more than one grain per 100 standard cubic foot;

3. $CO_2$ emissions shall be no greater than 500 g/kW-hr; and

4. Ammonia emissions shall be no greater than five ppmdv if selective catalytic reduction is used.

(F) Alternative control technologies using SCR to comply with subsection (d)(2)(A) shall have ammonia emissions no greater than five ppmdv.

(3) Limitations on Changing Compliance Options

Prior to January 1, 2014, fleets cannot change compliance options from (d)(1), the reduced onboard power generation option, to (d)(2), the equivalent emission reduction option, unless all of the following have been satisfied:

(A) Adequate emission reductions were achieved by the fleet prior to switching compliance options such that the requirements of (d)(2)(A)1 or (d)(2)(A)2, whichever is applicable, are satisfied;

(B) The Responsible Official of the fleet has submitted to the Executive Officer an application for the compliance option change that contains the following information:

1. A demonstration that the requirements of (d)(2)(A)1 or (d)(2)(A)2, whichever is applicable, are satisfied at the time of the application; and

2. An updated vessel plan demonstrating compliance with (d)(2).

(C) The Executive Officer determines that the information in the application satisfies (d)(3)(A) and that the fleet will comply with all applicable requirements of (d)(2).

(e) Calculations for Reduced Onboard Power Generation Option in Subsection (d)(1) and Equivalent Emissions Reduction Option in Subsection (d)(2).

(1) Reduced Onboard Power Generation

For the purposes of subsection (d)(1), the percent reduction of onboard electrical generation from auxiliary diesel engines while vessels are docked at berth shall be calculated as follows:

```
Percent Reduction =  [Baseline fleet power generation (BFPG) -
                     Power provided by fleet's auxiliary engines] /
                     (BFPG)
```

Where the baseline fleet power generation and the power provided by the fleet's auxiliary engines are calculated as follows:

(A) Baseline Fleet Power Generation (BFPG)

The baseline power generation for the fleet shall be calculated using the following formula:

```
Baseline Fleet Power Generation =  <<sigma>> (berthing time x power
                                    requirement)
```

Where:

"Berthing time" is the actual berthing time for each visit falling within the applicable period specified in subsection (d)(1)(G);

"Power requirements" means the electrical power requirement for the vessel making each visit as determined pursuant to subsection (e)(1)(C); and

"<<sigma>>" means the summation of all visits made by the fleet in the applicable period specified in subsection (d)(1)(G).

(B) Power provided by fleet's auxiliary engines

The power provided by the fleet's auxiliary engines is calculated as follows:

```
Power provided by the =  <<sigma>>(Auxiliary engine operating
auxiliary engines         time x
                          fleet's power requirement)
```

Where:

"Auxiliary engine operating time" is the actual time period these engines operated for each visit falling within the applicable period specified in subsection (d)(1)(G). Three hours for vessels using synchronous power transfer to grid-based shore power or five hours for vessels not using synchronous power transfer to grid-based shore power can be substituted for the actual operating times of the engines;

"Power requirements" means the electrical power requirement for the vessel making each visit as determined pursuant to subsection (e)(1)(C); and

"<<sigma>>" means the summation of all visits made by the fleet in the applicable period specified in subsection (d)(1)(G).

(C) Power Requirements

1. The following values in Table 1 may be used as default values for power requirements:

Table 1.

| Vessel Category | Size/Type | Default Power Requirement (kW) |
|---|---|---|
| Container Vessel | <1000 TEU | 1,000 |
| | 1,000-1,999 TEU | 1,300 |
| | 2,000-2,999 TEU | 1,600 |
| | 3,000-3,999 TEU | 1,900 |
| | 4,000-4,999 TEU | 2,200 |
| | 5,000-5,999 TEU | 2,300 |
| | 6,000-6,999 TEU | 2,500 |
| | 7,000-7,999 TEU | 2,900 |
| | 8,000-9,999 TEU | 3,300 |
| | 10,000-12,000 TEU | 3,700 |
| Passenger Vessel | | No Default Value Use Actual Load |
| Refrigerated Cargo Vessel | Break Bulk | 1,300 |
| | Fully Containerized | 3,300 |

TEU = twenty-foot equivalent unit.
kW = kilowatt

2. In lieu of the default values above, the fleet operator may, with adequate supporting documentation, use the actual power usage, on a monthly basis, rounded to the nearest whole kW-hrs.

(D) The onboard auxiliary diesel engine power generation associated with each visit that meets the exemption criteria in (d)(1)(E) shall be excluded from the calculation for the fleet's baseline power generation and the calculation for the power provided by the fleet's auxiliary engines.

(2) Equivalent Emissions Reduction Option

For the purposes of subsection (d)(2)(A) the percent emission reduction shall be calculated as follows:

Percent Reduction = (BFE - PBFE - FEC) / BFE

Where, the baseline fleet emissions, post-baseline fleet emissions, and fleet emission credits are calculated as follows:

(A) Baseline Fleet Emissions (BFE)

The baseline fleet emissions of NOx and PM shall be calculated using the following formula:

```
Baseline Fleet Emissions =  <<sigma>>(emission rate x average
                             berthing time x power
                             requirement x visits)
```

Where:

"Emission rate" for each auxiliary engine is determined pursuant to subsection (e)(3);

"Average berthing time" for each vessel is determined for the applicable period specified in (d)(2)(D);

"Power requirements" means the electrical power requirement for each vessel as determined pursuant to subsection (e)(1)(C);

"Visits" means the total number of visits by the vessel during the applicable period specified in the appropriate subsection in (d)(2)(A) or subsection (d)(2)(D); and

"<<sigma>>" means the summation over the entire fleet subject to the emission reduction option.

(B) Post-Baseline Fleet Emissions (PBFE)

The post-baseline fleet emissions of NOx and PM shall be calculated using the following formula:

```
Post-Baseline Fleet Emissions =  <<sigma>>(emission rate x average
                                  berthing time x power
                                  requirement x visits x control factor)
```

Where:

"Emission rate" for each auxiliary engine is determined pursuant to subsection (e)(3);

"Average berthing time" for each vessel is determined for the applicable period specified in the appropriate subsection in (d)(2)(A) or subsection (d)(2)(D);

"Power requirements" means the electrical power requirement for each vessel as determined pursuant to subsection (e)(1)(C);

"Visits" means the total number of visits by the vessel during the applicable period specified in the appropriate subsection in (d)(2)(A) or subsection (d)(2)(D);

"Control factor" means the applicable control factor specified in subsection (e)(4); and

"<<sigma>>" means the summation over the entire fleet subject to the emission reduction option.

(C) Adjustments to Baseline Fleet Emissions and Post-Baseline Fleet Emissions Calculations for Vessels Choosing to Use Grid-Based Shore Power

Emissions from a vessel capable of using shore power during a visit that can be classified as an emergency event shall be excluded from paragraphs (A) and (B) above.

(D) Fleet Emission Credits (FEC)

Fleets that achieve reductions of NOx and PM emissions earlier than January 1, 2010, or in excess of the requirements of (d)(2)(A)1 or (d)(2)(A)2 may apply for fleet emission credits (FEC) that can be used toward compliance with the requirements in (d)(2)(A)1, (d)(2)(A)2, or (d)(2)(A)4. FECs can only be used by a fleet achieving the early or excess emission reductions, can be used only at the port where the early or excess emission reductions occurred, cannot be used in any other program administered by the Air Resources Board or local air district, and expire on March 1, 2018.

1. Eligible emission reductions are as follows:

a. Emission reductions achieved prior to January 1, 2010.

b. Emission reductions achieved between January 1, 2010, to December 31, 2011, beyond the amount required by (d)(2)(A)1.

c. Emission reductions achieved between January 1, 2012, to December 31, 2013, beyond the amount required by (d)(2)(A)2.

2. Ineligible emission reductions

Emission reductions which are a result of a project that has received incentive funds through a contract or other binding agreement from the Air Resources Board or a local air district are not eligible emission reductions.

3. Applying for fleet emission credits

Applications for fleet emission credits must demonstrate that the emission reductions are quantifiable and occurred earlier than January 1, 2010, or were in excess of the requirements of (d)(2)(A)1 or (d)(2)(A)2. The information shall be submitted on forms specified by the Executive Officer according to the following schedule:

a. Application for fleet emission credits for reductions achieved prior to January 1, 2010, shall be submitted to the Executive Officer by March 1, 2010.

b. Application for fleet emission credits for excess reductions beyond those required for (d)(2)(A)1 shall be submitted to the Executive Officer as part of the fleet's March 1, 2012 annual statement of compliance required pursuant to subsection (g)(2)(A)3.

c. Application for fleet emission credits for excess reductions beyond those required for (d)(2)(A)2 shall be submitted to the Executive Officer as part of the fleet's March 1, 2014 annual statement of compliance required pursuant to subsection (g)(2)(A)3.

4. Approval of fleet emission credits

a. Within 30 calendar days of receipt of an application, the Executive Officer shall inform the Applicant in writing if the application is complete or deficient. If deemed deficient, the Executive Officer shall identify the specific information required to make the application complete.

b. Within 60 calendar days of the application being deemed complete, the Executive Officer shall approve or deny the fleet emission credit.

c. An applicant dissatisfied with the decision of the Executive Officer regarding the approval or denial of the fleet emission credit may appeal the decision within 30 calendar days in accordance with the Administrative Hearing Procedure for Petitions for Review of Executive Officer Decisions, Title 17 California Code of Regulations, commencing with section 60055.1.

d. Upon approval of the fleet emission credit, the Executive Officer shall issue a Certificate to the applicant. The Certificate shall identify the recipient of the certificate, the quantity of the fleet emission credit of each pollutant in tons per year, the port at which the reduction was created, and any other data deemed appropriate by the Executive Officer.

5. Using fleet emission credits

a. Fleet emission credits may be applied to the percent emission reduction calculations used by the fleet to demonstrate compliance with the requirements in (d)(2)(A)1, (d)(2)(A)2, and (d)(2)(A)4. The fleet shall surrender the FEC Certificate(s) as part of the applicable annual compliance statement. If the entire FEC is used, the Executive Officer shall retain the Certificate. If only part of the FEC is used, the Executive Officer shall retain the old Certificate and issue a new Certificate identifying the remaining portion of the FEC.

b. The Executive Officer shall monitor the accumulation and use of the fleet emission credits.

c. Fleet emission credits cannot be used to comply with requirements in (d)(2)(A)3 or (d)(2)(A)5.

d. Fleets that switch compliance options from (d)(1), the reduced onboard power generation option, to (d)(2), the equivalent emission reduction option, cannot accumulate or use fleet emission credits.

(3) A person complying with the requirements of subsection (d)(2) may choose any of the following emissions rates for use in the calculations specified in subsection (e)(2)(A) and (e)(2)(B):

(A) Results from emission measurements for similar auxiliary diesel engines that are used to satisfy a marine engine standard, including U.S. Environmental Protection Agency (EPA) emission standards for marine engines (40 CFR Part 94), and the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 (MARPOL 73/78), both of which are incorporated herein by reference;

(B) Emission measurements approved by the Executive Officer and using the test methods specified in subsection (e)(4)(B)(3); or

(C) In lieu of test data measured pursuant to paragraph (A) or (B) above, the following emission rates may be used as default values:

1. 13.9 g/kW-hr for NOx.

2. 0.38 g/kW-hr for PM if 0.11 to 0.5 percent sulfur marine gas oil or marine diesel oil is used as a fuel.

3. 0.25 g/kW-hr for PM if 0.10 or less sulfur content marine gas oil or marine diesel oil is used as a fuel.

(4) Control Factors

(A) The emissions from vessels using grid power in lieu of the vessel's auxiliary engines when the vessels are at berth are presumed to be reduced by 90 percent.

(B) No control efficiencies for alternative control technologies shall be used to comply with the requirements of this provision unless the control efficiencies are calculated or measured as follows:

1. The control efficiencies shall be based on an emission test protocol that is approved by the Executive Officer prior to conducting the emission measurements;

2. The results of the emission measurements conducted pursuant to paragraph 1 above are approved by the Executive Officer; and

3. Emission measurements are conducted using the following test methods. Alternative tests methods may be used upon written approval from the Executive Officer:

a. NOx and $CO_2$ shall be measured using California Air Resources Board (CARB) Test Method 100, dated July 1997, which is incorporated herein by reference, or equivalent district-approved test method;

b. Diesel PM shall be measured using ISO 8178 Test Procedures: ISO 8178-1: 1996(E) ( "ISO 8178 Part 1"); ISO 8178-2:1996(E) ( "ISO 8178 Part 2"); and ISO 8178-4: 1996(E)( "ISO 8178 Part 4"), all of which are incorporated herein by reference;

c. Ammonia slip shall be measured using the Bay Area Air Quality Management District Source Test Procedure ST-1B, Ammonia Integrated Sampling, dated January 1982, which is incorporated herein by reference, or other equivalent district approved test method; and

d. The sulfur content of fuels shall be determined pursuant to International Standard ISO 8754 (as adopted in 2003), which is incorporated herein by reference.

(C) Results from emission measurements from a verified emission control strategy may be used in conjunction with engine emission information.

(D) The Executive Officer may request periodic emission testing or other types of monitoring to verify the proper operation of alternative control technologies or distributed generation equipment, or to verify the emission rate of an auxiliary engine.

1. At a minimum, emission control technologies shall be tested as follows and the results of such testing provided to the Executive Officer within 30 days of the testing:

a. Shore-based systems shall be tested annually to demonstrate the overall percentage of emission reduction being achieved.

b. Catalyst based air pollution control systems installed on vessels shall be tested after every 1,000 hours of operation to determine the overall percentage of emission reduction being achieved.

c. If SCR is used as a control technology, the emissions of ammonia shall also be measured at the same time the NOx emissions are being measured.

2. The Executive Officer may modify the testing frequency as he/she deems appropriate.

(f) Terminal Plan Requirements.

(1) The operator of a terminal that receives more than 50 vessel visits in 2008 shall submit for the Executive Officer's approval, a plan, and subsequent updates, that discusses how the terminal will accommodate the vessels that will visit the terminal and are subject to subsection (d)(1) and (d)(2). The initial plan shall address requirements in subsection (d)(1) and (d)(2) through 2020. The plan updates shall address any contingencies that may be necessary for the vessels to meet the requirements of subsection (d)(1) and (d)(2) by the applicable dates.

(A) Schedule for Plan Submittals

The terminal operator shall submit the initial plan and subsequent updates to the plan according to the schedule below (Table 2).

Table 2.

| Vessel Compliance Option | Initial Terminal Plan Due Date | Subsequent Terminal Plan Updates |
|---|---|---|
| Reduced Onboard Power Generation Option: (d)(1) | July 1, 2009 | July 1, 2013<br>July 1, 2016<br>July 1, 2019 |
| Equivalent Emissions Reduction Option: (d)(2) | July 1, 2009 | July 1, 2011<br>July 1, 2013<br>July 1, 2016<br>July 1, 2019 |

(B) Approval of Plans

a. Within 30 calendar days of receipt of a plan, the Executive Officer shall inform the terminal operator in writing if the plan is complete or deficient. If deemed deficient, the Executive Officer shall identify the specific information required to make the plan complete.

b. Within 60 calendar days of the plan being deemed complete, the Executive Officer shall approve or disapprove the plan based on a determination of it meeting the requirements of (f)(2) or (f)(3), whichever is applicable.

(2) Plan Requirements for Reduced Onboard Power Generation Option

The plan shall include discussion of necessary infrastructure modifications needed for affected fleets to satisfy the requirements of subsection (d)(1) by the 2014, 2017, and 2020 compliance dates. The plan

shall also include the schedule for implementing the modifications. The discussion shall include the following:

(A) Discussion of ship activity and projected power demands at the terminal:

1. Number of ships and visits to the terminal;

2. The projected amount of electric power needed from the utility grid on an annual basis and the maximum power capacity;

(B) Discussion of available power at the terminal;

(C) Discussion of major infrastructure improvements to terminal that would be needed to provide projected power loads at the berth, including identification of existing berths to be modified or new berths to be constructed;

(D) Discussion of improvements to port infrastructure that would be needed to provide projected power loads;

(E) Discussion of utility infrastructure improvements, if any, outside the port boundary that would be needed to provide projected power loads; and

(F) A schedule for each activity needed to implement (C), (D), and (E) above.

(3) Plan Requirements for Equivalent Emissions Reduction Option

(A) The plan shall include a description of the control techniques that will be used to reduce in-berth vessel emissions needed for affected fleets to satisfy requirements of subsection (d)(2) by the 2010, 2012, 2014, 2017, and 2020 compliance dates. These techniques would include electric power from the utility grid (grid-based shore power), electrical power from sources that are not part of a utility's electrical grid (distributed generation), and alternative control technologies;

(B) For berths where grid-based shore power will be implemented, the plan shall contain the information specified in subsection (f)(2);

(C) For berths where distributed generation will be implemented, the plan shall contain the following information:

1. Identification and description of distributed generation equipment, including estimated electrical output and fuel input;

2. Berth(s) where the equipment will be used;

3. Number of ships and corresponding visits to the berth(s);

4. Projected amount of electric power that will be needed at the berth(s) from the distributed generation equipment, calculated on an annual and maximum capacity basis;

5. Schedule for deploying distributed generation equipment; and

6. The estimated reductions in NOx and PM emissions from vessels using the distributed generation equipment, including documentation supporting the anticipated reductions.

(D) For berths where alternative controls will be implemented, the plan shall contain the following information;

1. Identification and description of equipment, including whether it will be located on the ship or on the shore;

2. Number of ships and corresponding visits using ship-side equipment;

3. Number of ships and corresponding visits using shore-side equipment;

4. Berth(s) where shore-side equipment will be used;

5. Schedule for implementing equipment; and

6. Estimated reductions in NOx and PM emissions from vessels using the ship- side and shore-side equipment, including documentation supporting the anticipated reductions.

(4) A port may submit terminal plans required under subsection (f)(1) on behalf of the terminals located at that port.

(g) Reporting and Recordkeeping Requirements.

(1) Reporting and Recordkeeping Requirements for Persons that Comply with Subsection (d)(1)

(A) The Responsible Official shall provide the following reports to the Executive Officer:

1. A vessel fleet plan for each California port visited by a fleet, where the fleet is not exempt pursuant to section (b)(3)(E).

a. The plan is due to the Executive Officer by July 1, 2013, and an updated plan is due by July 1, 2016, and July 1, 2019.

b. The plan must address the vessels in the fleet that visit the port and would be affected by the requirements specified in subsection (d)(1). The following information shall be included in the vessel fleet plan and subsequent updates:

i. Fleet information, including: vessel category for the fleet (container, passenger, or refrigerated cargo), name of the port visited by the fleet, name of terminals visited, number of ships visiting the port annually, and total number of ship visits to the port annually.

ii. Information on the vessels in the fleet that will have their emissions reduced to satisfy the requirements of subsection (d)(1).

I. Vessel plans that are due July 1, 2013, shall include the following vessel information:

1. Name and Lloyd's number of each vessel capable of using shore power by January 1, 2014, maximum power requirement of the vessel while at berth, and total number of annual visits to the port;

2. The number of vessels that will have the capabilities for using shore power by January 1, 2017, the maximum amount of power expected to be used by these vessels while at berth, and the total number of annual visits expected to be made by these ships to the port; and

3. The number of vessels that will have the capabilities for using shore power by January 1, 2020, the maximum amount of power expected to be used by these vessels while at berth, and the total number of annual visits expected to be made by these ships to the port.

II. Vessel plan updates that are due July 1, 2016, shall have the following vessel information:

1. Name and Lloyd's number of each vessel capable of using shore power by January 1, 2017, maximum power requirement of the vessel while at berth, and total number of annual visits to the port; and

2. The number of vessels that will have the capabilities for using shore power by January 1, 2020, the maximum amount of power expected to be used by these vessels while at berth, and the total number of annual visits expected to be made by these ships to the port.

III. Vessel plan updates that are due July 1, 2019, shall include the following vessel information:

Name and Lloyd's number of each vessel capable of using shore power by January 1, 2020, maximum power requirement of the vessel while at berth, and total number of annual visits to the port.

2. An annual statement of compliance pursuant to subsection (d)(1).

a. The initial annual statement of compliance is due to the Executive Officer by March 1, 2015. This statement is for the 2014 calendar year. Thereafter, the annual statement is due to the Executive Officer by March 1 of each year, certifying compliance with the requirements for the previous calendar year.

b. The following information shall be included with the statement of compliance:

i. A statement signed by the Responsible Official that the requirements specified in subsection (d)(1) have been met for each California port visited by a fleet, where the fleet is not exempt pursuant to section (b)(3)(E).

ii. Information on visits and power requirements while at berth for all vessels within the fleet that visited the California port including:

I. Current name of the vessel;

II. Lloyd's number for the vessel;

III. Vessel type (container, passenger, refrigerated cargo);

IV. TEU capacity (container vessels only);

V. Total visits, by terminal;

VI. Number of visits where the vessel satisfied the requirements of (d)(1)(D);

VII. Number of visits where the visit for the vessel would fall within the exemptions identified in (d)(1)(E);

VIII. Average berthing time at the port; and

IX. Average power requirement for the vessel while at berth, in MW-hr.

iii. The information submitted pursuant to paragraph ii. above shall be reported for the following periods:

I. January 1 through March 31, inclusive;

II. April 1 through June 30, inclusive;

III. July 1 through September 30, inclusive; and

IV. October 1 through December 31, inclusive.

(B) Recordkeeping

1. The following records shall be kept at a central location by the vessel operator. A logbook that records, for each visit, the dates, times, and other information as specified below:

a. Name of the vessel, the port and terminal visited;

b. Power requirement while at berth;

c. When the vessel initially tied to the berth and when the vessel cast-off the tie lines;

d. When the auxiliary engines were shut down and subsequently restarted;

e. Whether departure from the berth was delayed by the U.S. Coast Guard or other federal agency. Identification of the agency that caused the delay, reason for the delay, and when the federal agency released the vessel;

f. If an emergency event occurred, a description and duration of that emergency event; and

g. For vessels subject to (d)(1)(I), a discussion of any onboard equipment failure that prevents the usage of shore power equipment. This discussion should include the date when equipment initially failed, identification of equipment that failed, and dates and description of each effort to repair the equipment.

2. All records required pursuant to this provision shall be retained for a minimum of five years. This information shall be supplied to the Executive Officer within 30 days of a request from ARB staff.

(2) Reporting and Recordkeeping Requirements for Persons Opting to Comply with the Equivalent Emissions Reduction Option in Subsection (d)(2)

(A) The Responsible Official shall provide the following reports to the Executive Officer:

1. A vessel fleet plan for each California port visited by a fleet, where the fleet is not exempt pursuant to section (b)(3)(E).

a. The plan is due to the Executive Officer by July 1, 2009, and an updated plan is due by July 1, 2011, July 1, 2013, July 1, 2016, and July 1, 2019.

b. The plan must address the vessels in the fleet that visit the port and would be affected by the requirements specified in subsection (d)(2). The following information shall be included in the vessel fleet plan and subsequent updates:

i. Fleet information, including: vessel category for the fleet (container, passenger, or refrigerated cargo), name of the port visited by the fleet, name of terminals visited, number of ships visiting the port annually, and total number of ship visits to the port annually.

ii. Information on the vessels in the fleet that will have their emissions reduced to satisfy the requirements of subsection (d)(2).

I. Vessel plans that are due July 1, 2009, shall include the following vessel information:

1. Name and Lloyd's number of each vessel that will have its emissions reduced to satisfy the requirements of (d)(2) as of January 1, 2010, type of control technique used (electric power from the utility grid, electrical power from sources that are not part of an utility's electrical grid (distributed generation), or alternative control technologies), maximum power requirement of the vessel while at berth (if using power from the grid or distributed generation), and total number of annual visits to the port, and

2. The number of vessels that are expected to have their emissions reduced, by each type of control technique, to satisfy the requirements of (d)(2) by January 1, 2012, January 1, 2014, January 1, 2017 and January 1, 2020, and the total number of annual visits expected to be made by these ships to the port.

II. Vessel plan updates that are due July 1, 2011, shall include the following vessel information:

1. Name and Lloyd's number of each vessel that will have its emissions reduced to satisfy the requirements of (d)(2) as of January 1, 2012, type of control technique used, maximum power requirement of the vessel while at berth (if using power from the grid or distributed generation), and total number of annual visits to the port; and

2. The number of vessels that are expected to have their emissions reduced, by each type of control technique, to satisfy the requirements of (d)(2) by January 1, 2014, January 1, 2017 and January 1, 2020, and the total number of annual visits expected to be made by these ships to the port.

III. Vessel plan updates that are due July 1, 2013, shall include the following vessel information:

1. Name and Lloyd's number of each vessel that will have its emissions reduced to satisfy the requirements of (d)(2) as of January 1, 2014, type of control technique used, maximum power requirement of the vessel while at berth (if using power from the grid or distributed generation), and total number of annual visits to the port; and

2. The number of vessels that are expected to have their emissions reduced, by each type of control technique, to satisfy the requirements of (d)(2) by January 1, 2017, and January 1, 2020, and the total number of annual visits expected to be made by these ships to the port.

IV. Vessel plan updates that are due July 1, 2016, shall include the following vessel information:

1. Name and Lloyd's number of each vessel that will have its emissions reduced to satisfy the requirements of (d)(2) as of January 1, 2017, type of control technique used, maximum power requirement of the vessel while at berth (if using power from the grid or distributed generation), and total number of annual visits to the port; and

2. The number of vessels that are expected to have their emissions reduced to satisfy the requirements of (d)(2) by January 1, 2020, by each type of control technique, and the total number of annual visits expected to be made by these ships to the port.

V. Vessel plan updates that are due July 1, 2019, shall include the following information:

Name and Lloyd's number of each vessel that will have its emissions reduced to satisfy the requirements of (d)(2) by January 1, 2020, type of control technique used, maximum power requirement of the vessel while at berth (if using power from the grid or distributed generation), and total number of annual visits to the port.

iii. Description of the control technique(s) that will be used to reduce the vessels' auxiliary engine emissions to achieve the requirements specified in subsection (d)(2), including identifying the pollutant being reduced, the expected emission reduction (percent reduced), and the basis for determining the expected emission reduction, including submittal of emission testing results or other documentation.

2. If the Responsible Official submits an update to the vessel fleet plan for a fleet switching from the reduced onboard power generation compliance option to the equivalent emissions reduction option pursuant to (d)(3), the updated plan shall contain the same information required in (g)(2)(A)1.

3. An annual statement of compliance.

a. The initial annual statement of compliance is due to the Executive Officer by March 1, 2011. This statement is for the 2010 calendar year. Thereafter, the annual compliance statement is due to the Executive Officer by March 1 of each year, certifying compliance with the requirements for the previous year.

b. The following items should be included with the statement of compliance:

i. A statement signed by the Responsible Official indicating that the NOx and PM emission reductions specified by (d)(2) have been achieved for each California port visited by a fleet, where the fleet is not exempt pursuant to section (b)(3)(E);

ii. The calculated NOx and PM baseline and post-baseline emissions for each fleet. The emissions must be calculated on a calendar year basis if complying with subsection (d)(2)(A)1 or subsection (d)(2)(A)2 and on a quarterly basis if complying with subsection (d)(2)(A)3, (d)(2)(A)4 and (d)(2)(A)5 as specified in (d)(2)(D). The following information shall be included for each vessel in the fleet:

I. Current name;

II. Lloyd's number;

III. Vessel type (container, passenger, refrigerated cargo);

IV. Total visits by terminal;

V. Average berthing time at the port;

VI. Average power requirement for the vessel while at berth, in MW-hr;

VII. TEU capacity (container vessels only);

VIII. Type of control technique used (electrical power from the utility grid, distributed generation, or alternative control technologies); and

IX. Emissions of NOx and PM, in pounds, for the reporting period.

iii. The fleet emission credits that will be applied to the NOx and PM emission reduction calculations for the fleet and the Certificate(s) for these credits that were issued pursuant to section (e)(2)(D); and

iv. Description of the control technique(s) used, achievable emission reductions, and supporting documentation (e.g., reference source test results pursuant to (e)(4)(D)1 or verification documentation). For subsequent statements of compliance, the supporting documents can be referenced, including the most recent source test submitted to the Executive Officer.

(B) Recordkeeping

The following records shall be kept at a central location by the fleet vessel operator.

1. For each calendar year of vessel activity, an annual summary of emissions that demonstrates compliance with the applicable emission reduction for 2010 and 2012, and a quarterly summary of emissions that demonstrates compliance with the applicable emission reduction for 2014, 2017, or 2020, which includes the following:

a. The fleet's baseline and post-baseline levels for NOx and PM emissions for each California port; and

b. Each vessel's contribution to fleet's baseline and post-baseline NOx and PM emissions, including the following information:

i. Name of each vessel;

ii. Lloyd's number for each vessel;

iii. Fuel type and average sulfur content of fuel for each vessel;

iv. NOx and PM emissions for each vessel, in pounds;

v. Average berthing time for each vessel;

vi. Average power requirements for each vessel while at berth;

vii. Total visits to each terminal at the California port made by the vessel;

viii. Technology used to reduce emissions and associated control factor used; and

ix. Any equipment failure aboard a vessel that prevented the vessel from using the emissions reduction technology.

2. Additional recordkeeping requirements for fleets using grid-based shore power to satisfy (d)(2):

If the vessel could not use shore power as a result of an emergency event, a description and duration of that emergency event.

3. Records made pursuant to paragraph (2)(B) above shall be kept for a minimum of five years. This information shall be supplied to the Executive Officer within 30 days of a request from ARB staff.

(3) Reporting Requirements for Ports and Terminals

(A) Each California port shall provide wharfinger information to the Executive Officer annually, beginning with the wharfinger information for calendar year 2010.

1. This information shall be provided to the Executive Officer no later than April 1 of the following year.

2. At a minimum, the wharfinger information shall include for each vessel visiting the port:

a. Name of the vessel;

b. Vessel type;

c. Company operating the vessel;

d. Lloyd's number for each vessel;

e. Berth used by the vessel; and

f. Date(s) and time the vessel was initially tied to the berth and subsequently released from the berth.

(B) The terminal operator shall keep the following records. These records shall be supplied to the Executive Officer within 30 days of a request from ARB staff:

1. Electricity usage for shore power:

a. Monthly utility billing statements that separately identify electricity supplied for shore power;

b. Episodes of electrical service interruption by local utility company, as confirmed and documented by local utility company; and

c. For distributed generation, monthly records that contain the following:

i. Names of vessels serviced;

ii. Location of vessels serviced, by berth;

iii. Date and time of use; and

iv. Power, in megawatts, supplied to the vessels.

2. Date, time, and description of equipment failure located at the terminal that affected the ability of vessels to turn off their auxiliary engines or use alternative control technologies to reduce emissions pursuant to (d)(2);

3. Record of each vessel that did not operate its auxiliary engines while the vessel was docked at the berth:

a. Name of vessel; and

b. Date and time each vessel was initially tied to the terminal.

4. Records made pursuant to paragraph (3)(B) above shall be kept for five years.

(4) Electronic submittals of records and other information required under this section may be approved by the Executive Officer upon request, provided such electronic submittals use digital signatures that meet the requirements specified in Government Code section 16.5. Notwithstanding the approved submittal of electronic records, the Executive Officer may request the submittal of a hard copy of any electronic submittal.

(h) Violations.

(1) Except as otherwise specified in this subsection, any person who is subject to this section and commits a violation of any provision, prohibition, limit, standard, criteria, or requirement in this section is subject to the penalties, injunctive relief, and other remedies specified in Health and Safety Code section 42400 et seq., other applicable sections in the Health and Safety Code; and other applicable provisions as provided under California law for each violation. Nothing in this section shall be construed to limit or otherwise affect any applicable penalties or other remedies available under federal law.

(2) Except as otherwise specified in this subsection, any failure to meet any provision, prohibition, limit, standard, criteria, or requirement in this section, including but not limited to the applicable emission limits for supplied shore power and hours of engine operation limits, shall constitute a single, separate violation of this section for each hour that a person operates the auxiliary diesel engine until such provision, prohibition, limit, standard, criteria, or requirement has been met.

(A) The number of violations if the provisions of (d)(1) are not satisfied are determined as given below:

1. If the fleet fails to achieve the baseline power reduction requirement as specified in (d)(1)(A), (d)(1)(B), or (d)(1)(C), the number of violations shall be determined with the formula in (h)(2)(C)1;

2. If the fleet fails to achieve the applicable percentage of visits satisfying (d)(1)(D) as specified in (d)(1)(A), (d)(1)(B), or (d)(1)(C), the number of violations shall be determined with the formula in (h)(2)(C)2;

3. If the fleet fails to achieve both the baseline power reduction and the applicable percentage of visits satisfying (d)(1)(D) as specified in (d)(1)(A), (d)(1)(B), or (d)(1)(C), the number of violations shall be determined with the formula in (h)(2)(C)3; and

4. If a vessel subject to (d)(1)(I) does not use shore power for every visit to terminals that have available shore power, the number of violations shall be determined with the formula in (h)(2)(C)2.

(B) If the emission reductions, pursuant to (d)(2), do not achieve the applicable percentage of reduction, the number of violations shall be determined with the formula in (h)(2)(C)4.

(C) Formulas for Determining Number of Violations:

1. Number of reduced onboard power violations = MW-Hr shortfall / 1.8

2. Number of visits violations = visits *MW-Hr per visit / 1.8

"Visits" refers to the shortfall in the number of visits in the applicable quarter that should have satisfied the requirements of (d)(1)(A), (d)(1)(B), or (d)(1)(C).

"MW-Hr per visit" shall be based on the average MW-Hr for a visit for the applicable quarter (<<sigma>>total MW-Hr in quarter / total visits in quarter).

3. Number of both reduced onboard power and visits violations =

MW-Hr shortfall for the applicable quarter / 1.2

4. Number of emission reduction violations =

[NOx + PM shortfall (pounds)] / 57

(3) A violation of the recordkeeping and reporting requirements in this section shall constitute a single, separate violation of this section for each day that the applicable recordkeeping or reporting requirement has not been met.

(i) Severability.

If any subsection, paragraph, subparagraph, sentence, clause, phrase, or portion of this regulation is, for any reason, held invalid, unconstitutional, or unenforceable by any court of competent jurisdiction, such portion shall be deemed as a separate, distinct, and independent provision, and such holding shall not affect the validity of the remaining portions of the regulation.

## ➡§ 93118.5. Airborne Toxic Control Measure for Commercial Harbor Craft.

(a) Purpose.

The purpose of this section is to reduce diesel particulate matter (PM), oxides of sulfur (SOx), and oxides of nitrogen (NOx) from diesel propulsion and auxiliary engines on harbor craft that operate in any of the waters subject to this section ( "Regulated California Waters"). This section implements provisions of the Goods Movement Emission Reduction Plan, adopted by the California Air Resources Board (ARB or CARB) in April 2006, to reduce emissions and health risk from ports and the movement of goods in California.

(b) Applicability.

(1) Except as provided in subsections (b) and (c), this section applies to any person who sells, supplies, offers for sale, purchases, owns, operates, leases, charters, or rents any new or in-use diesel fueled harbor craft that is operated in any of the Regulated California Waters.

(2) Engine Subject to Multiple ARB Regulations. The requirements of this section shall control in the event an engine on a harbor craft is subject to the requirements:

(A) of this section, and either

(B) the regulation for portable compression ignition (CI) engines and equipment (sections 93116-93116.5, title 17, California Code of Regulations (CCR)), or

(C) the regulation for off-road CI engines and equipment (sections 2420-2427, title 13, CCR).

This provision shall apply only to each engine on the vessel that meets the above requirements and is permanently affixed to the vessel (i.e., the engine, its fueling system, or its exhaust system is welded or otherwise physically connected to the vessel or other vessel system in such a way that the engine cannot be easily removed for use in a land-based application without modifications).

(3) This section applies to towboats and tugboats engaged in or intending to engage in the service of pulling, pushing, or hauling alongside tank vessels or tank barges.

(4) Notwithstanding the provisions of title 13, CCR, section 2299.1 and title 17, CCR, section 93118, this section shall apply to any ocean-going tugboats and towboats and shall supersede the requirements of 13 CCR 2299.1 and 17 CCR 93118 in their entirety for ocean-going tugboats and towboats. For purposes of this paragraph, "ocean-going tugboats and towboats" shall mean tugboats and towboats with a "registry" (foreign trade) endorsement on its United States (U.S.) Coast Guard certificate of documentation, or tugboats and towboats that are registered under the flag of a country other than the United States.

(5) Nothing in this section shall be construed to amend, repeal, modify, or change in any way any other applicable State, U.S. Coast Guard, or other federal requirements. Any person subject to this section shall be responsible for ensuring compliance with both U.S. Coast Guard regulations and the requirements of this section and any other applicable State and federal requirements, including but not limited to, obtaining any necessary approvals, exemptions, or orders from the U.S. Coast Guard.

(6) This section shall not apply to any engine and equipment that fall within the scope of the preemption of Section 209(e)(1)(A) of the Federal Clean Air Act (42 United States Code (U.S.C.) 7543(e)(1)(A)) and as defined by regulation of the U.S. Environmental Protection Agency (U.S. EPA).

(c) Exemptions.

All or portions of this section do not apply to the following, as provided below, but vessels that are partly or wholly exempt from this section may be subject to other State or federal regulations and requirements. A person subject to such other State or federal regulations and requirements is solely responsible for ensuring the vessel complies with those regulations and requirements. All other portions of this section shall apply unless otherwise specified:

(1) The requirements of this section do not apply to harbor craft voyages that are comprised of continuous and expeditious navigation through any of the Regulated California Waters for the purpose of traversing such bodies of water without entering California internal or estuarine waters or calling at a port, roadstead, or terminal facility. "Continuous and expeditious navigation" includes stopping and anchoring only to the extent such stopping and anchoring are required by the U.S. Coast Guard; rendered necessary by force majeure or distress; or made for the purpose of rendering assistance to persons, ships, or aircraft in danger or distress. This exemption does not apply to the passage of a harbor craft that engages in any of the prejudicial activities specified in United Nations Convention on the Law of the Seas (UNCLOS) 1982, Article 19, subpart 2. Further, notwithstanding any U.S. Coast Guard mandated stops or stops due to force majeure or the rendering of assistance, this exemption does not apply to a vessel that was otherwise scheduled or intended to enter California internal or estuarine waters or call at a port, roadstead or terminal facility;

(2) Except as provided in Paragraph (3) below, a temporary replacement vessel is exempt only from the requirements set forth in subsection (e)(6) and only upon written approval by the ARB's Executive Officer (E.O.). All other provisions in this section shall apply to a temporary replacement vessel subject to this paragraph. An owner or operator, who has or will have a vessel taken out of service, may apply in writing to the E.O. to operate a temporary replacement vessel pursuant to the following:

(A) The E.O. shall approve or disapprove such a request within 15 days of receipt. The E.O. shall not unreasonably withhold approval of the request to operate the temporary replacement vessel;

(B) If the approval is granted, the temporary replacement vessel's operating time will be specified in the approval by the E.O., along with any other terms, conditions, or requirements the E.O. deems necessary, but in no case shall the approved operating time in Regulated California Waters for a specific temporary replacement vessel exceed one year total for any single vessel that is temporarily replaced; and

(C) No temporary replacement vessel exemptions shall be approved for a vessel that is taken out of service more than 12 months in any 24-month period or if the E.O. cannot determine the length of time a vessel has been taken out of service within any 24-month period;

(3) A temporary replacement vessel used to replace a vessel that has its homeport in the South Coast Air Quality Management District (SCAQMD) is exempt only from the compliance dates set forth in Table 8 of subsection (e)(6) and only upon written approval from the E.O. All other provisions in this section, including but not limited to, the compliance dates specified in Table 7 of subsection (e)(6), shall apply to a temporary replacement vessel subject to this paragraph. An owner or operator, who has or will have a vessel taken out of service, may apply in writing to the E.O. to operate a temporary replacement vessel pursuant to the following:

(A) The E.O. shall approve or disapprove such a request within 15 days of receipt. The E.O. shall not unreasonably withhold approval of the request to operate the temporary replacement vessel;

(B) If the approval is granted, the temporary replacement vessel's operating time will be specified in the approval by the E.O., along with any other terms, conditions, or requirements the E.O. deems necessary, but in no case shall the approved operating time in Regulated California Waters for a specific temporary replacement vessel exceed one year total for any single vessel that is temporarily replaced; and

(C) No temporary replacement vessel exemptions shall be approved for a vessel that is taken out of service more than 12 months in any 24-month period or if the E.O. cannot determine the length of time a vessel has been taken out of service within any 24-month period;

(4) A temporary emergency rescue/recovery vessel is exempt from this section in its entirety;

(5) A recreational vessel is exempt from this section in its entirety;

(6) An ocean-going vessel, except for ocean-going tugboats and towboats as provided in subsection (b)(4), is exempt from this section in its entirety;

(7) The following engines are exempt from this section in its entirety:

(A) Notwithstanding section (b)(2), a vessel engine, including an engine on a barge, which is registered with ARB's Portable Engine Registration Program (PERP) (sections 2450 through 2465, title 13, CCR) before January 1, 2009;

(B) A vessel engine that is registered with PERP on or after January 1, 2009 and is not permanently affixed to the vessel (i.e., the engine, its fueling system, and its exhaust system are not welded or otherwise physically connected to the vessel or other vessel system, which permits the engine to be easily removed for use in a land-based application without modifications); and

(C) A vessel engine that is registered and permitted under local air district regulations before January 1, 2009;

(8) A registered historic vessel is exempt only from subsection (e)(6);

(9) A U.S. Coast Guard vessel is exempt from this section in its entirety;

(10) A military tactical support vessel is exempt from this section in its entirety;

(11) An engine rated less than 50 horsepower (hp) is exempt only from subsection (e)(6);

(12) An engine or vessel that is operated less than 300 hours per calendar year is exempt only from the requirements of subsection (e)(6); and

(13) Near-Retirement Vessels. A harbor craft is exempt from the requirements of subsection (e)(6)(C) and (e)(6)(D) if all of the following criteria have been met:

(A) the vessel is scheduled to be taken out of service and retired permanently;

(B) the vessel is actually taken out of service and retired on or before the retirement date scheduled under (A) above; and

(C) the vessel has an engine with a compliance date, as set forth in subsection (e)(6)(D), that is within one year of the vessel's scheduled retirement date under (A) above.

Operation of a vessel subject to this provision after the scheduled retirement date or the engine's compliance date, whichever occurs later, is a separate violation of this section for each and every engine and each and every day of operation during which an engine on the vessel does not meet the requirements of subsection (e)(6)(C) or other parts of this section.

(d) Definitions.

For purposes of this section, the definitions of Health and Safety Code (H&S) sections 39010 through 39060 shall apply except as otherwise specified in this section:

(1) "Air District" means one of the local air pollution control districts (APCDs) or air quality management districts (AQMDs) established under H&S section 40000 et seq.

(2) "Alternative Diesel Fuel" means any fuel used in a diesel engine that is not commonly or commercially known, sold, or represented by the supplier as diesel fuel No. 1-D or No. 2-D, pursuant to the specifications in American Society for Testing and Materials (ASTM) D975-81, "Standard Specification for Diesel Fuel Oils," as modified in May 1982, which is incorporated herein by reference, and does not require engine or fuel system modifications for the engine to operate, although minor modifications (e.g., recalibration of the engine fuel control) may enhance performance. Examples of alternative diesel fuels include, but are not limited to, biodiesel and biodiesel blends not meeting the definition of CARB diesel fuel; Fischer-Tropsch fuels; emulsions of water in diesel fuel; and fuels with a fuel additive, unless:

(A) the additive is supplied to the engine fuel by an on-board dosing mechanism, or

(B) the additive is directly mixed into the base fuel inside the fuel tank of the engine, or

(C) the additive and base fuel are not mixed until engine fueling commences, and no more additive plus base fuel combination is mixed than required for a single fueling of a single engine.

(3) "Alternative Fuel" means natural gas, propane, ethanol, methanol, gasoline, hydrogen, electricity, or other technologies that do not meet the definition of CARB diesel or alternative diesel fuel. "Alternative fuel" also means any mixture that only contains these fuels.

(4) "Annual Hours of Operation" means the total number of hours, rounded to the nearest whole hour, a vessel engine is used for all commercial purposes in Regulated California Waters in the calendar year (January 1 to December 31) immediately prior to the engine's applicable compliance date set forth in subsection (e)(6)(D). For example, if a vessel is used for commercial fishing and commercial non-fishing purposes, the total number of hours combined for both uses shall be the total annual hours of operation for that vessel.

(5) "Auxiliary Engine" means an engine designed primarily to provide power for uses other than propulsion.

(6) "Averaging" means an exchange of excess reduced regulated emissions among engines on vessels in the same owner's or operator's fleet.

(7) "Baseline" means the emissions level of a diesel engine using CARB diesel fuel as configured upon initial marine installation.

(8) "Barge" means a vessel having a flat-bottomed rectangular hull with sloping ends and built with or without a propulsion engine.

(9) "California Air Resources Board (CARB) Diesel Fuel" means any diesel fuel that meets the specifications of vehicular diesel fuel, as defined in title 13 CCR, sections 2281, 2282, 2284, 2299, and title 17 CCR section 93116.

(10) "California Baseline" means the mean lower low water line along the California coast, as shown on the following National Oceanic and Atmospheric Administration (NOAA) Nautical Charts as authored by the NOAA Office of Coast Survey, which are incorporated herein by reference:

(A) Chart 18600, Trinidad Head to Cape Blanco (January 2002);

(B) Chart 18620, Point Arena to Trinidad Head (June 2002);

(C) Chart 18640, San Francisco to Point Arena (August 2005);

(D) Chart 18680, Point Sur to San Francisco (June 2005);

(E) Chart 18700, Point Conception to Point Sur (July 2003);

(F) Chart 18720, Point Dume to Purisima Point (January 2005); and

(G) Chart 18740, San Diego to Santa Rosa Island (April 2005).

(11) "CARB" means the California Air Resources Board. CARB may also be referred to as "ARB."

(12) "Carbon Monoxide (CO)" is a colorless, odorless gas resulting from the incomplete combustion of hydrocarbon fuels.

(13) "Category 1 engine" means any marine engine with a displacement of less than 5.0 liters per cylinder and with a maximum horsepower (hp) rating of 50 hp or greater.

(14) "Category 2 engine" means any marine engine with a displacement of 5.0 to less than 30 liters per cylinder.

(15) "Category 3 engine" means any marine engine with a displacement of greater than 30 liters per cylinder.

(16) "Certified engine" means an engine that is certified by U.S. EPA as meeting the requirements of title 40, Code of Federal Regulations (CFR), Part 94.

(17) "Coast Guard Vessel" means any vessel or boat owned or operated by the U.S. Coast Guard, including, but not limited to, U.S. Coast Guard cutters and patrol boats that are used for law enforcement, defense operations, marine science, search and rescue missions, training missions, coastal surveillance, servicing aids to navigation, and marine environmental response.

(18) "Compliance Date" means the date by which time a vessel engine must meet the requirements set forth in subsection (e)(6)(C). The "compliance date" for a vessel engine is set forth in either Table 7 or Table 8 in subsection (e)(6)(D), whichever is applicable.

(19) "Crew and Supply Vessel" means a self-propelled vessel used for carrying personnel and/or supplies to and from off-shore and in-harbor locations (including, but not limited to, off-shore work platforms, construction sites, and other vessels).

(20) "Date of Acquisition" means, for a vessel or engine subject to this regulation, the date of purchase as defined by the date shown on the front of the cashed check, the date of the financial transaction, or the date on the vessel or engine purchasing agreement, whichever is earliest of the three dates.

(21) "Diesel Engine" means an internal combustion, compression-ignition (CI) engine, or pilot ignition engine with operating characteristics significantly similar to the theoretical diesel combustion cycle. The regulation of power by controlling fuel supply in lieu of a throttle is indicative of a compression ignition engine.

(22) "Diesel Fuel" means any fuel that is commonly or commercially known, sold, or represented by the supplier as diesel fuel, including any mixture of primarily liquid hydrocarbons (HC) - organic compounds consisting exclusively of the elements carbon and hydrogen - that is sold or represented by the supplier as suitable for use in an internal combustion, compression-ignition engine.

(23) "Diesel-Fueled" means a diesel engine fueled in whole or part by diesel fuel.

(24) "Diesel Oxidation Catalyst (DOC)" means an emission control technology that employs a catalyst to promote oxidation processes in diesel exhaust gases, usually designed to reduce emissions of the organic fraction of diesel particulates, gas-phase HC, and CO.

(25) "Diesel Particulate Filter (DPF)" means an emission control technology that reduces diesel PM emissions in engine exhaust gases by trapping the particles in a flow filter substrate and periodically removes the collected particles by either physical action or by oxidizing (burning off) the particles in a process called regeneration.

(26) "Diesel Particulate Matter (Diesel PM)" means the particles found in the exhaust of diesel engines, which may agglomerate and adsorb other species to form structures of complex physical and chemical properties.

(27) "Direct Control" means owning, operating, having a contract, lease, or other arrangement to operate a harbor craft.

(28) "Emission Control Strategy" means any device, system, or strategy employed to reduce emissions from an engine, including, but not limited to, diesel oxidation catalysts, selective catalytic reduction systems, diesel particulate filters, alternative diesel fuels, water emulsified fuels, and any combination of the above.

(29) "Estuarine Waters" means an arm of the sea or ocean that extends inland to meet the mouth of a river.

(30) "Excursion Vessel" means a self-propelled vessel that transports passengers for purposes including, but not limited to, dinner cruises; harbor, lake, or river tours; scuba diving expeditions; and whale watching tours. "Excursion Vessel" does not include crew and supply vessels, ferries, and recreational vessels.

(31) "Executive Officer" means the Executive Officer (E.O.) of the California Air Resources Board or his/her designee.

(32) "Ferry" means a harbor craft having provisions only for deck passengers or vehicles, operating on a short run, on a frequent schedule between two points over the most direct water route, and offering a public service of a type normally attributed to a bridge or tunnel.

(33) "Fishing Vessel" means a self-propelled vessel that is either:

(A) a commercial vessel dedicated to the search for, and collection of, fish for the purpose of sale at market or directly to a purchaser(s), or

(B) a charter vessel used for hire by the general public and dedicated to the search for and collection of, fish for the purpose of general consumption.

(34) "Fleet" means the total number of harbor craft owned, rented, or leased by an owner or operator in an air district or distinct locale within Regulated California Waters or the statewide population of a specific vessel type.

(35) "Fuel Additive" means any substance designed to be added to fuel or fuel systems or other engine-related engine systems such that it is present in-cylinder during combustion.

(36) "Harbor Craft" (also called "Commercial Harbor Craft") means any private, commercial, government, or military marine vessel including, but not limited to, passenger ferries, excursion vessels, tugboats, ocean-going tugboats, towboats, push-boats, crew and supply vessels, work boats, pilot vessels, supply boats, fishing vessels, research vessels, U.S. Coast Guard vessels, hovercraft, emergency response harbor craft, and barge vessels that do not otherwise meet the definition of ocean-going vessels or recreational vessels.

(37) "Homeport" means the port in which a vessel is registered or permanently based.

(38) "In-Use Harbor Craft" means a harbor craft that is not a new harbor craft.

(39) "In-Use Marine Engine" means a marine engine that is not a new marine engine.

(40) "Lease" means a contract by which the owner (lessor) of a property, such as a vessel or engine, grants the right to use or occupy the property to another person (lessee) for a specified term and for a specified rent.

(41) "Level" means, unless the context requires otherwise, one of three categories of ARB-verified diesel emission control strategies as set forth in title 13, CCR, section 2700 et seq.: Level 1 means the strategy reduces engine diesel PM emissions by between 25 and 49 percent; Level 2 means the strategy reduces engine diesel PM emissions by between 50 and 84 percent; and Level 3 means the strategy reduces engine diesel PM emissions by 85 percent or greater, or reduces engine diesel PM emissions to less than or equal to 0.01 grams per brake horsepower-hour (g/bhp-hr).

(42) "Low-Use" means the operation of any compression-ignition engine associated with a harbor craft vessel for less than 300 total annual hours of operation in Regulated California Waters, based on the immediately preceding calendar year.

(43) "Military Tactical Support" means a vessel that meets military specifications, is owned by the U.S. Department of Defense, the U.S. Coast Guard, the U.S. Military services or its allies, and is used in combat, combat support, combat services support, tactical or relief operations or training for such operations.

(44) "Model Year" means the diesel engine manufacturer's annual production period, which includes January 1st of a calendar year, or if the manufacturer has no annual production period, the calendar year.

(45) "Multipurpose Harbor Craft" means a harbor craft that serves as a ferry, excursion vessel, tugboat, or towboat but is also used as a work, crew and supply, pilot, fishing, supply, or other vessel.

(46) "New Harbor Craft" means a harbor craft for which both of the following criteria are true:

(A) it is built, or its keel is laid, on or after January 1, 2009, and

(B) the equitable or legal title to the harbor craft has never been transferred to an ultimate purchaser.

Where the equitable or legal title to the harbor craft is not transferred to an ultimate purchaser prior to the harbor craft being placed into service, the harbor craft ceases to be new when it is placed into service. A harbor craft is placed into service when it is used for its functional purposes.

(47) "New Marine Engine" means a marine engine for which both of the following criteria are true:

(A) it is manufactured or imported on or after January 1, 2009, and

(B) the equitable or legal title to the engine has never been transferred to an ultimate purchaser.

Where the equitable or legal title to the engine is not transferred to an ultimate purchaser prior to the engine being placed into service, the engine ceases to be new when it is placed into service. An engine is placed into service when it is used for its functional purposes.

(48) "Nitrogen Oxides or Oxides of Nitrogen (NOx)" means compounds of nitric oxide (NO), nitrogen dioxide (NO)" means compounds of nitric oxide (NO), nitrogen dioxide ($NO_2$), and other oxides of nitrogen, which are typically created during combustion processes and are major contributors to smog formation and acid deposition.

(49) "Non-Methane Hydrocarbons (NMHC)" means the sum of all hydrocarbon (HC) air pollutants except methane.

(50) "Ocean-going Vessel" means a commercial, government, or military vessel meeting any one of the following criteria:

(A) a vessel greater than or equal to 400 feet in length overall (LOA) as defined in 50 CFR § 679.2, as adopted June 19, 1996;

(B) a vessel greater than or equal to 10,000 gross tons (GT ITC) per the convention measurement (international system) as defined in 46 CFR 69.51-.61, as adopted September 12, 1989; or

(C) a vessel propelled by a marine compression-ignition engine with a per-cylinder displacement of greater than or equal to 30 liters.

(51) "Operate" means steering or otherwise running the vessel or its functions while the vessel is underway, moored, anchored, or at dock.

(52) "Own" means having all the incidents of ownership, including the legal title, whether or not that person lends, rents, or pledges the vessel; having or being entitled to the possession of a vessel as the purchaser under a conditional sale contract; or being the mortgagor of a vessel.

(53) "Particulate Matter (PM)" means any airborne finely divided material, except uncombined water, which exists as a liquid or solid at standard conditions (e.g., dust, smoke, mist fumes, or smog).

(54) "Person" includes all of the following:

(A) any person, firm, association, organization, partnership, business trust, corporation, limited liability company, or company;

(B) any state or local governmental agency or public district, or any officer or employee thereof; and

(C) the United States or its agencies, to the extent permitted by federal law.

(55) "Pilot Vessel" means a vessel designed for, but not limited to, the transfer and transport of maritime pilots to and from ocean-going vessels while such vessels are underway.

(56) "Port" means any facility used for water-borne commerce. "Port" includes, but is not limited to, facilities also known as "marine terminals" and "roadsteads."

(57) "Portable CI Engine" means a compression-ignition (CI) engine designed and capable of being carried or moved from one location to another. Indicators of portability include, but are not limited to, wheels, skids, carrying handles, dolly, trailer, or platform. Portable engines are not self-propelled.

(58) "Portable Engine Registration Program (PERP)" means the statewide program designed to promote the use of clean portable engines in California, as provided for in title 13, CCR, sections 2450 through 2465. Once registered in the program, engines and equipment units can operate throughout the State without being required to obtain individual permits from each air pollution control or air quality management district in which they operate.

(59) "Pre-Tier 1 Engine" means an engine that was built before the effective date of U.S. EPA's Tier 1 marine engine emission standards (Tier 1 standards), as set forth in 40 CFR 94.

(60) "Propulsion Engine" means an engine that provides power to move a vessel through the water or directs the movement of a vessel.

(61) "Purchase Date" means the date shown on the front of the cashed check; the date of the financial transaction; or the date on the engine or harbor craft purchase, rental, or lease agreement, whichever is earliest.

(62) "Push Boat" means any self-propelled vessel engaged in or intending to engage in the service of pulling, pushing, or hauling along side barges or other vessels, or any combination of pulling, pushing, or hauling along side barges or other vessels. "Push boats" is interchangeable with "towboats."

(63) "Recreational Vessel" means a vessel that is intended by the vessel manufacturer to be operated primarily for pleasure or leased, rented, or chartered to another for the latter's pleasure, excluding the following vessels: (1) vessels of less than 100 gross tons that carry more than 6 passengers, (2) vessels of 100 gross tons or more that carry one or more passengers, and (3) vessels used solely for competition.

(64) "Registered Historic Vessel" means a vessel listed in the National Register of Historic Places pursuant to the National Historic Preservation Act of 1966 (16 U.S.C. 470).

(65) "Regulated California Waters" means all of the following:

(A) all California internal waters;

(B) all California estuarine waters;

(C) all California ports, roadsteads, and terminal facilities (collectively "ports");

(D) all waters within 3 nautical miles of the California baseline, starting at the California-Oregon border and ending at the California-Mexico border at the Pacific Ocean, inclusive;

(E) all waters within 12 nautical miles of the California baseline, starting at the California-Oregon border and ending at the California-Mexico border at the Pacific Ocean, inclusive;

(F) all waters within 24 nautical miles of the California baseline, starting at the California-Oregon border to 34.43 degrees North, 121.12 degrees West; inclusive; and

(G) all waters within the area, not including any islands, between the California baseline and a line starting at 34.43 degrees North, 121.12 degrees West; thence to 33.50 degrees North, 118.58 degrees West; thence to 32.65 degrees North, 117.81 degrees West; and ending at the California-Mexico border at the Pacific Ocean, inclusive.

(66) "Rent" means payment for the use of harbor craft or diesel engine for a specified term.

(67) "Retirement" means the act of taking an engine or harbor craft out of service (i.e., to "retire") so that it subsequently never again operates in any of the Regulated California Waters. "Retirement"

does not include an engine or harbor craft that is sold for use outside California then subsequently operated in any of the Regulated California Waters.

(68) "SCAQMD" means the South Coast Air Quality Management District, as defined in Health and Safety Code section 40410 et seq. and described in section 60104, title 17, California Code of Regulations, and shall include all waters subject to the jurisdiction of the SCAQMD.

(69) "Supply Vessel" means a self-propelled vessel used for carrying supplies to and from off-shore and in-harbor locations including, but not limited to, off-shore work platforms, construction sites, and other vessels.

(70) "Take Out of Service" means the act of dry-docking, mooring, anchoring, or otherwise tying up a harbor craft at dock to conduct maintenance, repairs, replacements, or upgrades such that the vessel cannot be operated in Regulated California Waters while such acts are conducted on the vessel.

(71) "Tank Barge" means a non-self-propelled vessel constructed or adapted primarily to carry, or that carries, oil or hazardous material in bulk as cargo or cargo residue.

(72) "Tank Vessel" or "Tanker" means a self-propelled vessel constructed or adapted primarily to carry, or that carries, oil or hazardous material in bulk as cargo or cargo residue.

(73) "Temporary emergency rescue/recovery vessel" means a self-propelled vessel whose homeport is not within California and is brought into California for the immediate use of emergency rescue or recovery and returns to its homeport outside of California at the conclusion of its emergency rescue/recovery mission.

(74) "Temporary replacement vessel" means a self-propelled vessel that is brought into service to temporarily replace a California vessel that has been temporarily taken out of service. For purposes of this section, "temporary replacement vessel" includes only the following:

(A) vessels that are used in the SCAQMD but have a homeport in California outside of the SCAQMD; and

(B) vessels that are used anywhere in California, including the SCAQMD, but have a homeport outside of California.

(75) "Tier 1 Marine Engine Emission Standards (Tier 1 standards)" means the U.S. EPA marine engine Tier 1 emission standards, as promulgated by U.S. EPA and set forth in "Control of Emissions of Air Pollution from New Marine Compression-Ignition Engines at or Above 37 kW" (64 Federal Register (FR) 73299-73373, December 29, 1999)(40 CFR Part 94), both of which are incorporated herein by reference. The standards from 40 CFR Part 94 are summarized in Table 1.

Table 1: U.S. EPA Tier 1 Marine Engine Emission Standards

| *Category* | *Power (kilowatt (kW)) & Displacement (liters/cylinder (l/cyl))* | *Engine Speed (Revolutions per minute (rpm))* | *Tier 1 Model Year* | *PM (g/bhp–hr)* | *$NO_x$+HC (g/bhp–hr)** | *CO (g/bhp–hr)* |
|---|---|---|---|---|---|---|
| 1, 2, 3, including Recreational | ≥ 37 kW & ≥ 2.5 l/cyl | rpm ≥ 2000 | 2004 | – | 7.3 | – |
| | | 130 ≤ rpm <2000 | 2004 | – | $33.57 \times rpm^{-0.2}$ | – |
| | | rpm <130 | 2004 | – | 12.7 | – |

(40 CFR Part 94)
*converted emission standards from 40 CFR 94, which are expressed in grams per kilowatt-hour (g/kW–hr) to g/bp–hr by the following: g/kW–hr * (0.746) = g/bp–hr.

(76) "Tier 2 Marine Engine Emission Standards (Tier 2 standards)" means the U.S. EPA marine engine Tier 2 emission standards, as promulgated by U.S. EPA and set forth in "Control of Emissions of Air

Pollution from New Marine Compression-Ignition Engines at or Above 37 kW" (64 FR 73299-73373, December 29, 1999)(40 CFR Part 94), both of which are incorporated herein by reference.

Table 2: U.S. EPA Tier 2 Marine Engine Emission Standards for

NOx+HC, PM, and CO

| *Category* | *Displacement (Disp.) (liters/cylinder)* | *Date* | *$NO_x$+HC (g/bhp–hr)** | *PM (g/bhp–hr)** | *CO (g/bhp–hr)** |
|---|---|---|---|---|---|
| 1 | Disp.<0.9 and power ≥50hp* | 2005 | 5.6 | 0.30 | 3.7 |
| | 0.9 ≤ Disp. < 1.2 | 2004 | 5.4 | 0.22 | 3.7 |
| | 1.2 ≤ Disp. < 2.5 | 2004 | 5.4 | 0.15 | 3.7 |
| | 2.5 ≤ Disp. < 5.0 | 2007 | 5.4 | 0.15 | 3.7 |
| 2 | 5.0 ≤ Disp. < 15 | 2007 | 5.8 | 0.20 | 3.7 |
| | 15 ≤ Disp. < 20 (power < 4424 hp*) | 2007 | 6.5 | 0.37 | 3.7 |
| | 15 ≤ Disp. < 20 (power ≥ 4424 hp*) | 2007 | 7.3 | 0.37 | 3.7 |
| | 20 ≤ Disp. < 25 | 2007 | 7.3 | 0.37 | 3.7 |
| | 25 ≤ Disp. < 30 | 2007 | 8.2 | 0.37 | 3.7 |

(40 CFR Part 94)
*converted emission standards and maximum power rating from 40 CFR 94, which are expressed in g/kW–hr and kW to g/hp–hr and hp, respectively, by the following: g/kW–hr (0.746) = g/hp–hr or kW (1.34) = hp

(77) "Tier 3 Marine Engine Emission Standards (Tier 3 standards)" means the U.S. EPA marine engine Tier 3 emission standards, as promulgated by U.S. EPA and set forth in "Final Rule: Control of Emissions of Air Pollution from Locomotive and Marine Compression-Ignition Engines Less Than 30 Liters Per Cylinder" (73 FR 25245 et seq., May 6, 2008) (40 CFR Part 1042), both of which are incorporated herein by reference. The standards from 40 CFR Part 1042 are summarized in Table 3, Table 4, and Table 5. [Note: No Tier 3 standards apply for commercial Category 1 engines at or above 3700 kW. See "Tier 4 Marine Engine Emission Standards" for the standards that apply to these engines.]

Table 3: U.S. EPA Tier 3 Standards for Marine Diesel

Category 1 Commercial Standard Power Density Engines

below 3700 kW

| *Rated kW* | *L/Cylinder* | *PM g/bhp–hr*[e] | *NOx + HC*[d] *g/bhp– hr*[e] | *Model Year* |
|---|---|---|---|---|
| 19 to < 75 kW | <0.9[a] | 0.22<br>0.22[b] | 5.6<br>3.5[b] | 2009<br>2014 |
| 75 to <3700 kW | <0.9 | 0.10 | 4.0 | 2012 |
| | 0.9 – <1.2 | 0.09 | 4.0 | 2013 |
| | 1.2 – <2.5 | 0.08[c] | 4.2 | 2014 |
| | 2.5 – <3.5 | 0.08[c] | 4.2 | 2013 |
| | 3.5 – < 7.0 | 0.08[c] | 4.3 | 2012 |

(a) < 75 kW engines at or above 0.9 L/cylinder are subject to the corresponding 75–3700 kW standards.
(b) Option: 0.15 g/bhp–hr PM / 4.3 g/bhp–hr NOx+HC in 2014.
(c) This standard level drops to 0.07 g/bhp–hr in 2018 for <600 kW engines
(d) Tier 3 NOx+HC standards do not apply to 2000–3700 kW engines.
(e) Converted emission standards from 40 CFR part 1042, which are expressed in g/kW–hr to g/hp–hr by the following: g/kW–hr (0.746) = g/hp–hr.

Table 4: U.S. EPA Tier 3 Standards for Marine Diesel

Category 1 Recreational and Commercial High Power Density

Engines below 3700 kW

| *Rated kW* | *L/Cylinder* | *PM g/bhp–hr*[c] | *NOx + HC g/bhp– hr*[c] | *Model Year* |
|---|---|---|---|---|
| 19 to < 75 kW | <0.9[a] | 0.22<br>0.22[b] | 5.6<br>3.5[b] | 2009<br>2014 |
| 75 to <3700 kW | <0.9 | 0.11 | 4.3 | 2012 |
| | 0.9 – <1.2 | 0.10 | 4.3 | 2013 |
| | 1.2 – <2.5 | 0.09 | 4.3 | 2014 |
| | 2.5 – <3.5 | 0.09 | 4.3 | 2013 |
| | 3.5 – < 7.0 | 0.08 | 4.3 | 2012 |

(a) < 75 kW engines at or above 0.9 L/cylinder are subject to the corresponding 75–3700 kW standards.
(b) Option: 0.15 g/bhp–hr PM / 4.3 g/bhp–hr NOx+HC in 2014.
(c) Converted emission standards from 40 CFR part 1042, which are expressed in g/kW–hr to g/bhp–hr by the following: g/kW–hr (0.746) = g/bhp–hr.

Table 5: U.S. EPA Tier 3 Standards for

Marine Diesel Category 2 Engines below 3700 kW[a,b]

| *L/Cylinder* | *Rated kW* | *PM g/bhp–hr*[c] | *NOx+HC g/bhp–hr*[c] | *Model Year* |
|---|---|---|---|---|
| 7 – <15 | <2000 | 0.10 | 4.6 | 2013 |
| | ≥2000 | 0.10 | 5.8 | 2013 |
| 15 – <20[a] | <2000 | 0.25 | 5.2 | 2014 |
| 20 – <25[a] | <2000 | 0.20 | 7.3 | 2014 |
| 25 – <30[a] | <2000 | 0.20 | 8.2 | 2014 |

(a) No Tier 3 standards apply for Category 2 engines with per–cylinder displacement above 15.0 liters if maximum engine power is at or above 2000 kW. See "Tier 4 Marine Engine Emission Standards" for the standards that apply for these engines.
(b) For Category 2 engines at or above 1400 kW, optional Tier 3 and Tier 4 standards are available with some manufacturer restrictions, PM/NOx+HC at 0.10 / 5.8 g/bhp–hr in 2012, with Tier 4 standards in 2015.
(c) Converted emission standards from 40 CFR part 1042, which are expressed in g/kW–hr to g/bhp–hr by the following: g/kW–hr * (0.746) = g/bhp–hr.

(78) "Tier 4 Marine Engine Emission Standards (Tier 4 standards)" means the U.S. EPA marine engine Tier 4 emission standards, as promulgated by U.S. EPA and set forth in "Final Rule: Control of Emissions of Air Pollution from Locomotive and Marine Compression-Ignition Engines Less Than 30 Liters Per Cylinder" (73 FR 25245 et seq., May 6, 2008) (40 CFR Part 1042), both of which are incorporated herein by reference. Table 6 summarizes the Tier 4 standards from 40 CFR Part 1042.

Table 6: U.S. EPA Tier 4 Standards for Marine Diesel

Category 1 and Category 2 Engines above 600 kW

| *Rated kW* | *L/Cylinder* | *PM g/bhp–hr*[a] | *NOx g/bhp–hr*[a] | *HC g/bhp–hr*[a] | *Model Year* |
|---|---|---|---|---|---|
| | <15.0 | 0.09 | 1.3 | 0.14 | 2014[b] |
| | 15.0 to | | | | |
| At or above 3700 kW | <30.0 | 0.19 | 1.3 | 0.14 | 2014[b] |
| | all | 00.4 | 1.3 | 0.14 | 2016[b] |
| 2000 to <3700kW | all | 0.03[d] | 1.3 | 0.14 | 2014[b,c,d] |
| 1400 to <2000 kW | all | 0.03 | 1.3 | 0.14 | 2014[b,c] |
| 600 to <1400 kW | all | 0.03 | 1.3 | 0.14 | 2017 |

(a) Converted emission standards from 40 CFR part 1042, which are expressed in g/kW–hr to g/bhp–hr by the following: g/KW–hr (0.746) = g/bhp–hr
(b) Optional compliance start dates may be used within these model years; see 40 CFR part 1042.
(c) For Category 2 engines at or above 1400 kW, optional Tier 3 and Tier 4 standards are available with some manufacturer restrictions, PM / NOx+HC at 0.10 / 5.8 g/bhp–hr in 2012, with Tier 4 standards in 2015.
(d) The Tier 3 PM standards continue to apply for Category 1 and Category 2 engines with per–cylinder displacements below 15.0 liters in model years 2014 and 2015 only. For Category 2 engines with per–cylinder displacement at or above 15.0 liters, the PM standard is 0.25 g/bhp–hr for engines at or above 2000 kW and below 3300 kW, and 0.20 g/bhp–hr for engines at or above 3300 kW and below 3700 kW, in model years 2014 and 2015 only.

(79) "Total Hydrocarbons (THC)" or "Hydrocarbons (HC)" means the total mass of open chain and cyclic hydrocarbon molecules.

(80) "Towboat" means any self-propelled vessel engaged in or intending to engage in the service of pulling, pushing, or hauling along side barges or other vessels, or any combination of pulling, pushing, or hauling along side barges or other vessels.

(81) "Tugboat" means any self-propelled vessel engaged in, or intending to engage in, the service of pulling, pushing, maneuvering, berthing, or hauling along side other vessels, or any combination of pulling, pushing, maneuvering, berthing or hauling along side such vessels in harbors, over the open seas, or through rivers and canals. Tugboats generally can be divided into three groups: harbor or short-haul tugboats, ocean-going or long-haul tugboats, and barge tugboats. "Tugboat" is interchangeable with "towboat" and "push boat" when the vessel is used in conjunction with barges.

(82) "Verification Procedure, Warranty and In-Use Compliance Requirements for In-Use Strategies to Control Emissions from Diesel Engines (Verification Procedure)" means the ARB regulatory procedure codified in title 13, CCR, commencing with section 2700, which is incorporated herein by reference, that engine manufacturers, sellers, owners, or operators may use to verify the reductions of diesel PM or NOx from in-use diesel engines through the use of a particular diesel emission control strategy.

(83) "Verified Diesel Emission Control Strategy (VDECS)" means an emission control strategy, designed primarily for the reduction of diesel PM emissions, which has been verified pursuant to the "Verification Procedure for In-Use Strategies to Control Emissions from Diesel Engines" in title 13, CCR, commencing with section 2700. VDECS can be verified to achieve Level 1 diesel PM reductions (25-49 percent), Level 2 diesel PM reductions (50-84 percent), or Level 3 diesel PM reductions (85 percent or greater). VDECS may also be verified to achieve NOx reductions.

(84) "Vessel" or "Marine Vessel" means any tugboat, tanker, freighter, passenger ship, barge, or other boat, ship, or watercraft, except those used primarily for recreation.

(85) "Work Boat" means a self-propelled vessel that is used to perform duties such as fire/rescue, law enforcement, hydrographic surveys, spill/response, research, training, and construction (including drilling).

(e) Fuel Use and Engine Emission Requirements.

[Note: The plain English narrative in this overview is intended as a convenient guide for the reader and in no way adds, deletes, modifies, or otherwise affects the legal requirements and substantive provisions specified in subsection (e) or any other part of this section. Subsection (e) sets forth the various fuel and emission requirements for harbor craft subject to this regulation, and can be broken down as follows:

• Subsection (e)(1) specifies low sulfur fuel use requirements that apply to all harbor craft, new and in-use.

• Subsection (e)(2) specifies the requirement for installing hour-meters on all harbor craft, new and in-use.

• Subsection (e)(3) establishes requirements that apply to transactions involving new engines to be installed on in-use vessels, including a limited 6- month "sell-through" provision for non-complying engines.

• Subsection (e)(4) sets forth requirements that apply to newly acquired new harbor craft, including ferries.

• Subsection (e)(5) sets forth requirements that apply only to newly acquired new ferries, above and beyond those established in subsection (e)(4). These provisions include requirements for applying Best Available Control Technology (BACT) to new ferries and their engines.

• Subsection (e)(6) is the key provision of this regulation, as it achieves emission reductions by requiring the eventual replacement or cleanup of engines in the fleet of in-use ferries, excursion vessels, tugboats, towboats, push boats, and multipurpose harbor craft. This subsection requires that owners and operators eventually replace or otherwise bring into compliance with the specified engine standards all of their pre-Tier 1 and Tier 1-certified engines in their in-use vessels by the dates shown in the specified compliance schedules. The compliance dates are designed to clean up the fleet's oldest and dirtiest engines first, while giving more time for relatively newer, Tier 1 engines to be upgraded or replaced. Vessels with their homeport in the SCAQMD have an accelerated compliance schedule to reflect that district's greater need for expedited emission reductions. The compliance schedules are grouped by vessel type, location of the vessel's homeport, the engine's model year, and the engine's annual hours of operation.

• Subsection (e)(6)(E) provides for a limited set of circumstances under which the E.O. may grant short extensions to the compliance dates if warranted.]

(1) All Harbor Craft - Low Sulfur Fuel Use Requirement.

Beginning January 1, 2009, a person subject to this section may only fuel a diesel engine on a harbor craft with one of the following:

(A) CARB diesel fuel; or

(B) an alternative diesel fuel as defined in subsection (d)(2); or

(C) any alternative diesel fuel that does not meet subsection (e)(1)(B) above but is certified by CARB as meeting the requirements of the Verification Procedure; or

(D) CARB diesel fuel used with fuel additives that meet the requirements of the Verification Procedure; or

(E) any combination of subsection (e)(1)(A) through (D) above.

(2) All Harbor Craft - Installation and Use of Non-Resettable Hour Meters.

Beginning January 1, 2009, a person subject to this section may not operate a harbor craft without an installed and properly operating, non-resettable hour meter, which accurately measures the number of hours an engine operates. The hour meter must be installed on each diesel engine on the vessel in a manner that allows reasonable personnel access to the hour meter without impediment.

(3) All In-Use Harbor Craft - Requirements for Newly Acquired Engines.

Beginning January 1, 2009, a person subject to this section may not sell, purchase, offer for sale, lease, rent, import, or otherwise acquire a new or in-use diesel engine for an in-use harbor craft, which is intended to operate or actually operates in any of the Regulated California Waters, unless that engine on the date of acquisition:

(A) is certified to meet the Tier 2 or Tier 3 standards in effect on that date for a new engine of the same power rating and displacement. The newly acquired engine is not required to meet the Tier 4 standards unless it is replacing an engine on the in-use vessel that was certified as meeting Tier 4 standards; or

(B) is newly acquired within the allowable 6 month "sell-through" period, as set forth in this paragraph. For purposes of this paragraph only, the allowable sell-through period runs through 6 months after the date the Tier 2, Tier 3, or Tier 4 standards have come into effect for a new engine of the same power rating and displacement as the engine being replaced on the in-use vessel. Engines that are subsequently sold, supplied, offered for sale, or otherwise newly acquired after the 6 month sell-through period are subject to the requirements specified in paragraph (A) of this subsection, even if the engine was previously newly acquired within the 6 month sell-through period.

(4) All New Harbor Craft (Including All New Ferries) - Requirements for Newly Acquired Vessels.

Beginning January 1, 2009, a person subject to this section may not sell, purchase, offer for sale, lease, rent, import, or otherwise acquire a new harbor craft for use in any of the Regulated California Waters unless each of the diesel engines on the vessel meets the applicable Tier 2, Tier 3, or Tier 4 standards in effect on the date of vessel acquisition. The person must also meet the additional requirements set forth in subsection (e)(5) below for diesel propulsion engines in newly acquired new ferries.

(5) Selected New Ferries Only - Additional Requirements for All Newly Acquired Propulsion Engines.

(A) Beginning January 1, 2009, a person subject to this section may not sell, purchase, offer for sale, import, or otherwise acquire a new ferry with the capacity to transport 75 or more passengers for use in any of the Regulated California Waters unless each propulsion diesel engine on the vessel:

1. meets either the Tier 2 or Tier 3 standards that are in effect on the date of vessel acquisition; and

2. will be operated only in conjunction with the use of Best Available Control Technology (BACT), as determined and pre-approved by the E.O. pursuant to this provision.

(B) In lieu of installing or using BACT pursuant to paragraph (A)2 above, the person may comply with paragraph (A)2 by installing on the new ferry a propulsion engine(s) that is certified to the Tier 4 standards, if a Tier 4- certified engine is available at the time that the new ferry is delivered. If no Tier 4-certified engines are available at the time of ferry delivery, the person must meet the provisions of paragraphs (A)1 and (A)2.

(C) For purposes of this section, "BACT" is the diesel emission control strategy (DECS), whether verified or unverified pursuant to 13 CCR section 2700 et seq., that is determined by the E.O. as meeting all of the following criteria:

1. it provides or is expected to continuously provide the greatest reduction feasible of NOx or diesel PM when used with the ferry's propulsion diesel engine;

2. the use of BACT does not result in an increase of 10 percent or more of any air pollutant, including NOx and diesel PM, relative to the engine's emissions of that air pollutant without the use of BACT; and

3. either the DECS manufacturer or an authorized dealer of the DECS determines or otherwise agrees with the E.O. that use of the DECS on or with the new ferry's propulsion engine(s) would not invalidate or otherwise adversely affect the propulsion engine's original warranty.

For purposes of this section, DECS may include, but is not be limited to, exhaust treatment controls and the use of alternative fuels or fuel additives.

(D) The E.O. shall determine the appropriate level of BACT and specify such BACT in an Executive Order granting such approval. Applications to comply with the requirements of paragraph (A)2 by using BACT must follow the application and review procedure set forth below:

1. Application Process.

For all new ferries for which the keel is laid on or after January 1, 2009, the application for BACT approval must be submitted in writing to the E.O. for evaluation before the keel is laid. The BACT application must contain, at a minimum, the following information:

a. the applicant company's name, address, and contact information;

b. information specific to the harbor craft and engine(s) on which BACT will be used, including the vessel name and identification number(s); engine make, model, and serial numbers; and all other information that uniquely identify the engine;

c. certification documentation, engineering calculations, emissions test data, or other information that establishes the diesel PM and NOx emissions of the engine in combination with the proposed BACT. Emissions and emission reduction estimates must include both diesel PM and NOemissions of the engine in combination with the proposed BACT. Emissions and emission reduction estimates must include both diesel PM and NOx emissions and be expressed in grams per brake horsepower-hour (g/bhp-hr) unless otherwise specified by the E.O. Information submitted pursuant to this provision will be used as follows:

i. The E.O. shall use the information to compare the emissions resulting from the proposed use of BACT with the emissions quantified in BACT determinations previously approved by the E.O.;

ii. If there are no previous BACT determinations available for comparison, the E.O. shall use ARB staff's best engineering judgment to determine if the proposed BACT provides the greatest feasible reduction of diesel PM or NOx; and

iii. The E.O. may require the applicant to submit additional emissions data for other air pollutants if the E.O. believes that the proposed use of BACT may increase any air pollutant by 10 percent or more relative to the engine emissions without the proposed BACT; and

d. the proposed recordkeeping, reporting, monitoring, and testing procedures that the applicant plans to use to demonstrate continued effectiveness of the BACT.

2. E.O. Review and Final Decision-Making Process.

a. Within 15 days after receiving a BACT application, the E.O. shall notify the applicant whether the application is deemed sufficiently complete to proceed with further evaluation. If the application is deemed incomplete, the notification must identify the application's deficiencies. The E.O. shall have an additional 15-day period for reviewing each set of documents or information submitted in response to an incomplete determination. Nothing in this subsection prohibits the E.O. from requesting additional information from the applicant, during any part of the BACT application process, which the E.O. determines is necessary to evaluate the application.

b. Within 30 days of deeming an application complete, the E.O. shall take final action to either approve or deny a BACT application, and the E.O. shall notify the applicant accordingly. If the application is denied or modified, the E.O. shall state the reasons for the denial or modification in the notification. The E.O. shall specify all terms, conditions, and requirements the E.O. believes are necessary for the ferry engine and BACT to operate properly and reduce emissions of air pollutants consistent with this section. The reporting and recordkeeping requirements specific to the use of BACT must include, at a minimum:

i. hours of operation for the engine and BACT and fuel usage;

ii. usage of any alternative fuels, additives, agents, flow rates, and emission test results;

iii. maintenance procedures for the engine(s) and its BACT; and

iv. any other measurements or recordings specified by the E.O.

The E.O. shall make the approval/disapproval notification to the applicant and identification of the approved/disapproved BACT available to the public on ARB's internet site.

3. Post-Approval Vessel, Engine, and BACT Operation.

A person subject to this provision must maintain operating records and other information in the manner and form specified by the E.O. in the BACT approval. The person must submit to ARB upon request all records and reports created pursuant to this provision, which must be maintained and retained for ARB inspection a minimum of three years after the records or reports were created.

(6) In-Use Engines and Vessels - Schedules for Meeting Tier 2 or Tier 3 Standards.

(A) For Pre-Tier 1 and Tier-1 Certified Engines on Ferries, Excursion Vessels, Tugboats, Towboats, Push Boats, and Multipurpose Harbor Craft Only.

1. Applicability.

This subsection (e)(6) applies to any person who owns, operates, sells, purchases, offers for sale, leases, rents, imports, or otherwise acquires an in-use ferry, excursion vessel, tugboat, towboat, push boat, or multipurpose harbor craft with a pre-Tier 1 or Tier-1 certified engine for use in any of the Regulated California Waters. This subsection applies to all such engines on all such vessels.

2. General Requirement.

After January 1, 2009, a person subject to this provision may not own, operate, sell, purchase, offer for sale, lease, rent, import, or otherwise acquire an in-use engine, or a vessel with an in-use engine, unless that engine complies with at least one of the compliance methods set forth in subsection (e)(6)(C) by the applicable compliance date. The compliance methods set forth in subsection (e)(6)(C) involve either replacement of the in-use engine with a cleaner engine or demonstrating that the in-use engine already meets specified standards, as set forth below.

For purposes of this subsection, "applicable compliance date" is either the compliance date, as set forth in subsection (e)(6)(D) for the in-use engine, or the compliance date from subsection (e)(6)(D) for the in-use engine, as extended pursuant to subsection (e)(6)(E), whichever applies and occurs later.

(B) [Reserved for Future Use]

(C) Compliance Methods.

1. Method C1 - Replacement of the in-use engine with a U.S. EPA certified Tier 2 engine or one with a higher certification level (e.g., Tier 3-certified).

A person may comply under this method by replacing the in-use engine with a Tier 2- or Tier 3-certified engine, as set forth in this paragraph. The replacement engine must meet the U.S. EPA Tier 2 or Tier 3 standards that would apply to a new engine, of the same size and configuration as the in-use engine, at the time of the applicable compliance date set forth in subsection (e)(6)(D).

[Note: For example, if the applicable compliance date is January 1, 2010, and the Tier 2 standards would be in effect at that time for a new engine of the same size and configuration as the in-use engine, the replacement would need to meet Tier 2 standards. However, if the applicable compliance date is instead January 1, 2013, and the Tier 3 standards would be in effect for a new engine of the same size and configuration as the in-use engine, the replacement engine would need to meet Tier 3 standards.]

Once the in-use engine has been replaced with an engine that is U.S. EPA-certified to meet Tier 2 or Tier 3 standards, as set forth above, the engine is deemed to be in compliance with this subsection (e)(6) and no further replacements of this engine are required under this subsection. Tier 3- certified engines may be used as the replacement engine to comply with this paragraph, even if Tier 4-certified engines become available by the applicable compliance date;

2. Method C2 - Demonstrate to the E.O.'s written satisfaction that the in-use engine already meets the Tier 2 standards that apply or would apply to new engines on the date the Tier 2 standards became effective.

a. A person may comply under this method by demonstrating to the E.O.'s written satisfaction that:

i. the in-use engine already meets the Tier 2 standards,

ii. which apply to new engines of the same power rating and displacement as the in-use engine.

b. This compliance method is available only if the person makes the required demonstration before the date Tier 3 standards become effective for new engines of the same size and configuration as the in-use engine. The person may rebuild the in-use engine to a cleaner standard or implement a diesel emission control strategy to aid in meeting these standards. [Note: For example, if the Tier 3 standards would have become effective on January 1, 2015 for a new engine of the same size and configuration as the in-use engine, the person would need to provide the Tier 2-compliance demonstration to the E.O.'s written satisfaction by January 1, 2015.]

c. For purposes of the demonstration, the person may, upon approval by the E.O., rely on any source of reliable and credible information, including but not limited to, any of the following:

i. the results from using the test method specified in section (j) or an alternative method approved by the E.O.;

ii. the in-use engine manufacturer's certification test data or other emissions test data for that in-use engine;

iii. emissions test data derived from another in-use engine that is configured and used in a substantially similar way to the in-use engine;

iv. emissions test data used to meet the regulatory requirements of ARB's Verification Procedure for the non-verified emission control strategy implemented; or

v. emissions test data used to meet the requirements for U.S. EPA certification for systems providing remanufacture to a cleaner standard.

The E.O. may, in his/her sole discretion and based on good engineering judgment, exclude any information he/she determines is not reliable or credible.

3. Method C3 - Demonstrate to the E.O.'s written satisfaction that the in-use engine already meets the Tier 2 or Tier 3 standards in effect or would be in effect for new engines at the time of the applicable compliance date.

a. A person may comply under this method by demonstrating to the E.O.'s written satisfaction that:

i. the in-use engine already meets the Tier 2 or Tier 3 standards,

ii. which apply to new engines of the same power rating and displacement as the in-use engine,

iii. at the time of the applicable compliance date for the in-use engine.

b. To comply with this method, the person may demonstrate that the in-use engine meets the Tier 3 standards, even if Tier 4 standards come into effect by the applicable compliance date. The person may rebuild the in-use engine to a cleaner standard or implement a diesel emission control strategy to aid in meeting these standards.

c. For purposes of the demonstration, the person may, upon E.O. approval, rely on any source of reliable and credible information, including but not limited to, any of the following:

i. the results from using the test method specified in section (j) or an alternative method approved by the E.O.;

ii. the in-use engine manufacturer's certification test data or other emissions test data for that in-use engine;

iii. emissions test data derived from another in-use engine that is configured and used in a substantially similar way to the in-use engine;

iv. emissions test data used to meet the regulatory requirements of ARB's Verification Procedure for the non-verified emission control strategy implemented; or

v. emissions test data used to meet the requirements for U.S. EPA certification for systems providing remanufacture to a cleaner standard.

The E.O. may, in his/her sole discretion and based on good engineering judgment, exclude any information he/she determines is not reliable or credible.

4. Method C4 - Demonstrate to the E.O's written satisfaction that the in-use engine has not and will not operate 300 or more hours per calendar year.

A person may comply under this method by demonstrating to the E.O.'s written satisfaction that the engine is a low-use engine. This compliance method requires the person to provide records to the E.O. of the engine's total annual hours of operation for the calendar year immediately preceding the demonstration. The person must also provide documentation sufficient for the E.O. to project future annual hours of operation for the engine. The person will be deemed in compliance with this method only if such records and documentation demonstrate to the E.O.'s written satisfaction that the in-use engine has not and will not operate 300 or more hours per calendar year.

(D) Compliance Dates.

Table 7 and Table 8 below set forth the compliance dates by which a person must meet the requirements of subsection (e)(6)(A). Table 7 applies only to vessels with a homeport outside of the SCAQMD; Table 8 applies only to vessels with a homeport within the SCAQMD. The compliance dates are set forth by engine model year and total annual hours of operation (for all uses) of the vessel in Regulated California Waters. For Table 7, Method D1, D2, or D3 below may be used for determining the actual or effective engine model year. For Table 8, only Method D1 or D3 may be used for determining the actual or effective engine model year.

1. Method D1 - the engine's actual model year of manufacture.

A person may determine an engine's compliance date under this method by using the engine's actual model year of manufacture, as documented by the sales contract, invoice, purchase order, or other legitimate proof of purchase for the engine. The actual model year of manufacture may also be shown on a label permanently affixed to the engine by the manufacturer. In the event of a conflict between the proof of purchase and the permanent label, the date of manufacture shown on the permanent label controls.

2. Method D2 - the engine's effective model year based on the "Engine's Model Year + 5" method.

A person may determine an engine's compliance date under this method by calculating the engine's effective model year as the actual model year, using Method D1 above, and adding to that number 5 more years. To use this method, the person must use a diesel emissions control strategy (DECS) with the engine, as set forth below:

a. Relative to the emissions without the use of the DECS, the engine with the DECS must be demonstrated to the E.O.'s written satisfaction as emitting at least 25 percent less diesel PM or NOx, and neither of those pollutants are increased by more than 10 percent. This requirement is met automatically if the DECS is a verified DECS (VDECS);

b. If the DECS is not a VDECS, the person must demonstrate compliance with this paragraph by submitting to the E.O. emissions data that demonstrate the non-verified emission control technology achieves a diesel PM or NOx emission reduction of 25 percent or better, using the test methods specified in subsection (j). Upon approval of the E.O., the person may submit data derived from the use of other test methods to demonstrate to the E.O.'s written satisfaction the required 25 percent minimum emission reductions, such as:

i. marine engine certification test data for the harbor craft propulsion or auxiliary engine, or engine manufacturer emissions test data;

ii. emissions test data derived from another engine that is configured and used in a substantially similar way to the in-use engine on which the emission control strategy is to be used; or

iii. emissions test data used to meet the regulatory requirements of the ARB Verification Procedure for the non-verified emission control strategy implemented.

The E.O. may, in his/her sole discretion and based on good engineering judgment, exclude any data derived from the test methods under paragraph b above that he/she determines are not reliable or credible.

A person's use of a DECS or VDECS, which meets the requirements of this provision, extends the engine's compliance date to the compliance date for a similar engine that is five model years newer (i.e., the actual model year for the engine with the emissions control strategy + 5).

[Note: For example, the owner of a 1995 model year engine on a tugboat, which has a homeport outside of SCAQMD and operates in Regulated California Waters for 750 hours in 2013, would normally be required to meet a December 31, 2014 compliance date, as set forth in Table 7. However, if a DECS that meets the requirements of this provision is implemented with this engine prior to the 2014 nominal compliance date, the engine's actual compliance date would be extended to the compliance date for a 2000 model year engine (i.e., the effective model year = the 1995 model year + 5). Accordingly, in that scenario, the engine's effective model year would extend the compliance date to December 31, 2016];

3. Method D3 - the engine's effective model year based on the "Engine's Tier 1 Rebuild Model Year" method.

A person may determine an engine's compliance date by demonstrating, to the E.O.'s written satisfaction, that the engine is an existing pre-2004 model year engine that was rebuilt to conform with U.S. EPA Tier 1 standards prior to January 1, 2008. If the E.O. is thus satisfied, the effective model year of the Tier 1 rebuilt engine, for purposes of determining the compliance date in Table 7 or Table 8, is the actual year in which the Tier 1 rebuild occurred.

Table 7: Compliance Dates for Vessels with Homeports

Outside SCAQMD

| *Engine Model Year* | *Total Annual Hours of Operation* | *Compliance Date* |
|---|---|---|
| 1975 and earlier | ≥ 1500 | 12/31/2009 |
| 1975 and earlier | ≥300 and <1500 | 12/31/2010 |
| 1976–1985 | ≥ 1500 | 12/31/2011 |
| 1976–1985 | ≥ 300 and <1500 | 12/31/2012 |
| 1986–1995 | ≥1500 | 12/31/2013 |
| 1986–1995 | ≥ 300 and < 1500 | 12/31/2014 |
| Ferries Only 1996–1999 | ≥ 300 | 12/31/2014 |
| Vessels Other Than Ferries 1996–1999 | ≥ 1500 | 12/31/2015 |
| Vessels Other Than Ferries 1996–1999 | ≥ 300 and <1500 | 12/31/2016 |
| 2000 | ≥ 1500 | 12/31/2015 |
| 2000 | ≥ 300 and <1500 | 12/31/2016 |
| 2001–2002 | ≥ 300 | 12/31/2017 |
| 2003 | ≥ 300 | 12/31/2018 |
| 2004 | ≥ 300 | 12/31/2019 |
| 2005 | ≥ 300 | 12/31/2020 |
| 2006 | ≥ 300 | 12/31/2021 |
| 2007 | ≥ 300 | 12/31/2022 |

[Note: For example, if a 1982–model year diesel engine on a tugboat operating in Regulated California Waters is used for 750 hours in 2011, the owner or operator must bring the engine into compliance with the requirements of subsection (e)(6)(C) by December 31, 2012.].

Table 8: Compliance Dates for Vessels with Homeport in SCAQMD

| *Engine Model Year* | *Total Annual Hours of Operation* | *Compliance Date* |
|---|---|---|
| 1979 and earlier | ≥ 300 | 12/31/2009 |
| 1980–1985 | ≥ 300 | 12/31/2010 |
| 1986–1990 | ≥ 300 | 12/31/2011 |
| 1991–1995 | ≥ 300 | 12/31/2012 |
| 1996–2000 | ≥ 300 | 12/31/2013 |
| 2001 | ≥ 300 | 13/31/2014 |
| 2002 | ≥ 300 | 12/31/2015 |
| 2003 | ≥ 300 | 12/31/2016 |
| 2004 | ≥ 300 | 12/31/2017 |
| 2005 | ≥ 300 | 12/31/2018 |
| 2006 | ≥ 300 | 12/31/2019 |
| 2007 | ≥ 300 | 12/31/2020 |

[Note: For example, if a 1982–model year diesel engine on a tugboat operating in Regulated California Waters is used for 300 or more hours in 2009, the owner or operator must bring the engine into compliance with the requirements of subsection (e)(6)(C) by December 31, 2010.].

(E) Compliance Extensions.

Pursuant to this subsection (e)(6)(E), a person subject to the requirements of subsection (e)(6)(C) may request in writing to the E.O. an extension to a compliance date set forth in subsection (e)(6)(D) (i.e., extension to the "nominal" compliance date). The E.O. may grant the person an extension to the nominal compliance date for any one of the reasons set forth below. A person granted such an extension is deemed to be in compliance with the requirements of subsection (e)(6)(C) during the extension period, but only upon written authorization from the E.O. made pursuant to this provision and only until the end of the extension period. During the extension, the person must meet all other requirements of this section. Immediately upon the end of the extension period, the person must meet all the applicable requirements of this section, including but not limited to, subsection (e)(6)(C).

Except as provided in paragraph (e)(6)(E)3 below, the E.O. may not combine compliance extensions granted pursuant to this provision with any other compliance date extensions, including those set forth in this provision and in subsection (e)(6)(D)2 and (D)3. And except as provided in paragraphs (e)(6)(E)2 and (e)(6)(E)3 below, under no circumstances may the E.O. grant more than one compliance extension for any individual engine, set of engines, or harbor craft.

1. Change in Annual Hours of Operation.

The E.O. may grant a one-time, maximum one year extension to the nominal compliance date set forth in subsection (e)(6)(D), provided the person demonstrates to the E.O.'s written satisfaction that the all of the following have occurred:

a. The person reasonably determined the vessel engine's nominal compliance date based on the engine's hours of operation two years before the nominal compliance date; and

b. In the year immediately prior to the nominal compliance date, the engine's annual hours of operation increased significantly from the prior year such that the engine's nominal compliance date would have been accelerated from one compliance date to an earlier compliance date.

[Note: For example, suppose an operator has a 1982-model year engine on a tugboat, which has a homeport outside of SCAQMD and operates for 750 hours in Regulated California Waters in 2010. If it is reasonable for the operator to assume the annual hours of operation in 2011 will be similar to 2010, the operator would project from Table 7 that the engine's compliance date is December 31, 2012, and would plan his operations accordingly. However, if the vessel engine's operation increased substantially to 1600 hours in 2011, the engine normally would then have its compliance date accelerated to December 31, 2011, according to Table 7. The one-year extension would, therefore,

extend the engine's actual compliance date back to what it would have been without the change in hours of operation (i.e., back to December 31, 2012).].

2. No Suitable Engine Replacement for Harbor Craft.

The E.O. may grant to a person a one year extension, which can be renewed annually, only if the person demonstrates to the E.O.'s written satisfaction that there is no suitable Tier 2-certified or Tier 3-certified replacement engine available anywhere that can be used in the person's specific vessel, and the person cannot otherwise meet the requirements of subsection (e)(6)(C).

The E.O., in his/her sole discretion, may use any information available to the E.O. to rebut the person's demonstration. For purposes of this paragraph, the E.O. may deem an engine as suitable to replace an existing engine if the replacement engine is similar in horsepower to the existing engine, the replacement engine can fit within the vessel's engine compartment, and installation of the replacement engine would not cause the vessel to violate U.S. Coast Guard or other applicable safety regulations. The E.O. may not consider the cost of the replacement engine, by itself or including installation and downtime costs, in determining its suitability as a replacement.

The application for and issuance of an initial extension and subsequent extensions pursuant to this paragraph are subject to the following requirements:

a. For an initial extension and all subsequent annual extensions to be granted pursuant to this paragraph, the E.O. shall follow the same procedures for applying, determining completeness, allowing public review and considering public comments, taking final action, and publishing E.O. decisions that are set forth in subsection (f) for Alternative Control of Emissions (ACE) applications;

b. The E.O. shall consider all information submitted by the public, including but not limited to, information related to the availability of replacement engines suitable for the person's vessel;

c. Except for the engine(s) for which the extension is sought, the person must demonstrate that all other engines subject to the person's direct control meet the requirements of subsection (e)(6);

d. The person must submit the application for an extension so that it is received by the E.O. no later than 6 months before the nominal compliance date of the engine for which the extension is requested;

e. The person must identify in the application each engine for which the extension is requested;

f. For each engine identified in paragraph 2 above, the person must provide in the application a detailed description of the reasons and factors that serve as the basis for the claim that no suitable replacement engine is available. This description must include, at a minimum, detailed engineering diagrams, calculations, and citations to applicable U.S. Coast Guard regulations that support the person's claim that there are no suitable replacement engines available.

g. After the initial extension, the E.O. may grant additional one year extensions, provided the following requirements are met:

i. All procedures specified in paragraph (e)(6)(E)2.a and (e)(6)(E)2.b above are followed;

ii. The application for an additional extension demonstrates the engines identified in paragraph (e)(6)(E)2.c remain in compliance with this section;

iii. The application is received by the E.O. no sooner than 6 months but no later than 2 months before the expiration of the previous extension;

iv. The application identifies the engine(s) for which the additional extension is requested;

v. For each engine identified in paragraph (e)(6)(E)2.g.iv above, the person must provide in the application a detailed description of the reasons and factors that serve as the basis for the claim that suitable replacement engines remain unavailable. This description must include, at a minimum,

detailed engineering diagrams, calculations, and citations to applicable U.S. Coast Guard regulations that support the person's claim that there are still no suitable replacement engines available.

3. Equipment Manufacturer Delays or Installation Difficulties.

Upon written request, the E.O. may grant to a person a 6-month extension to the nominal compliance date set forth in subsection (e)(6)(D), provided all the following criteria are met:

a. the person ordered the new replacement engine or other equipment necessary to comply with the requirements of subsection (e)(6)(C) prior to the nominal compliance date set forth in subsection (e)(6)(D);

b. the purchase order identified in paragraph a above was placed with the manufacturer no later than 6 months before the engine's nominal compliance date;

c. the new engine or equipment has not been received or installed since it was ordered due to manufacturing delays or excessive difficulties encountered by the engine or equipment installer; and

d. the applicant for the extension provides documentation to the E.O.'s satisfaction that demonstrates the criteria in subparts a. through c. above have been met. The E.O. may, in his/her sole discretion, use any information available to rebut any of the documentation submitted pursuant to subparts a through c above.

4. Multiple Engines on Multiple Vessels Within Same Fleet and With Same Compliance Dates.

This provision applies only to fleets of 2 or more vessels that are owned by the same person. Upon written request, the E.O. may grant to the person an extension to the nominal compliance date(s) for engines on vessels within such fleets, as set forth below;

a. For each set of engines on two or more vessels with compliance dates of 2009 or 2010 (a "set" means 2 or more engines), the E.O. may grant a one-time extension of the compliance date to December 31, 2013, provided the E.O. receives and approves a compliance schedule from the person that meets the requirements set forth below:

i. The compliance schedule is received by the E.O. no later than December 31, 2009;

ii. For each year, up to and including 2013, that the extension will be in effect, the compliance schedule must identify, at a minimum, the engines on specified vessels in the fleet that will meet the requirements of subsection (e)(6)(C) within any given year;

iii. The compliance schedule must show that all engines with compliance dates of 2009 or 2010 on the specified vessels in the fleet will be in compliance with subsection (e)(6)(C) by December 31, 2013. [Note: For example, an approvable plan may show that 25% of these engines on the specified vessels in a fleet will be in compliance in 2010, 50% in 2011, 75% in 2012, and 100% by December 31, 2013.]; and

iv. The compliance schedule must include all other information the E.O. deems necessary and appropriate for implementing this provision.

b. For each set of engines on two or more vessels with a compliance date of 2011 or later (a "set" means 2 or more engines), the E.O. may grant to a person a one-time, maximum one-year extension of the nominal compliance date. To receive an extension under this provision, the person must submit a written request to the E.O. that meets the following requirements:

i. The request must be received by the E.O. no later than December 31st of the year immediately preceding the nominal compliance date for the set of engines; and

ii. The request identifies the engines in each set of engines and the vessels in the person's fleet that are subject to the requested extension.

For all engines within a person's fleet that have not been granted an extension pursuant to paragraphs a or b above, the compliance dates for such engines remain as set forth in subsection (e)(6)(D).

(F) Special Provisions Applicable to the Use of a Diesel Emission Control Strategy (DECS), including Verified Diesel Emission Control Strategies (VDECS).

The following requirements apply to any person's use of a DECS pursuant to subsections (e)(5) or (e)(6) and are in addition to any other applicable requirements:

1. Once the DECS is installed or otherwise employed on a person's vessel, the person must continue to operate and maintain the DECS, in accordance with the manufacturer's directions, to achieve the original level of emission reductions that the DECS was designed and intended to achieve;

2. In the event a DECS fails, breaks down, or is otherwise damaged (collectively referred to hereinafter as "fail" or "failure"), the vessel owner or operator must, within 90 days of the DECS failure, do at least one of the following:

a. repair the DECS to good working order;

b. replace the failed DECS with another working DECS, if it cannot be repaired; or

c. employ another method that meets the requirements of subsection (e)(6)(C) and other applicable provisions of this section, if the DECS cannot be repaired.

3. The determination in subpart 2.b and 2.c above of whether a DECS cannot be repaired may only be made by either the DECS manufacturer or an authorized dealer.

4. For each replacement DECS installed under subpart 2.b above, the person must provide to the E.O. the same documentation for the replacement DECS that was required for the DECS that failed, and the person must obtain the same E.O. approvals that were required with the failed DECS.

(f) Alternative Control of Emissions (ACE).

(1) Requirements.

(A) The purpose of this subsection is to allow a person ( "person" or "applicant") the option of complying with the requirements of this subsection in lieu of the requirements of subsection (e). As set forth in this subsection, a person may be deemed in compliance with subsection (e) by implementing an alternative emission control strategy(ies) (AECS) approved by the E.O. In no case may the E.O. approve an AECS that results in or has the potential to result in any increase of diesel PM and NOx emissions or any increase in emissions greater than 10 percent for any other pollutant, relative to the emissions of diesel PM, NOx, and other pollutants that would have occurred under compliance with subsection (e).

(B) An applicant wishing to participate in an ACE may include one or more harbor craft in the ACE, but the applicant may only include harbor craft that the person owns or operates under the person's direct control.

(C) No harbor craft may be included in more than one ACE plan.

(D) Harbor craft included in an ACE must continue to be included in and operated pursuant to the approved ACE for the duration of the ACE.

(E) AECS may include, but are not limited to, any combination of the following:

1. engine modifications;

2. exhaust treatment control;

3. engine repower;

4. use of alternative fuels or fuel additives;

5. shore-side power;

6. fleet averaging; and

7. any other measures that sufficiently reduce emissions.

(F) A person complying under this provision must obtain E.O. approval of an ACE application that demonstrates compliance with this subsection and contains, at a minimum, the following information:

1. the company name, address, and contact information;

2. the harbor craft and engine(s) subject to the ACE, including the vessel name and identification number(s), engine make, model, and serial numbers, and other information that uniquely identify the engine;

3. documentation, calculations, emissions test data, or other information that establishes the diesel PM and NOx reductions, expressed in pounds, are equal to or greater than the emission reductions that would have been achieved upon compliance with subsection (e), including but not limited to the requirements specified in subsection (e)(6)(C) and (e)(6)(D); and

4. the proposed recordkeeping, reporting, monitoring, and testing procedures that the applicant will use to demonstrate continued compliance with the ACE.

(G) For each ACE, the emission reduction calculations demonstrating equivalence with the requirements of subsection (e) may include only those diesel PM and NOx emissions from harbor craft with its homeport within a single specified California air district, or another defined geographic area approved by the E.O.

(H) A person subject to an approved ACE must maintain operating records in the manner and form as specified by the E.O as an element of any approved ACE. Required records must include, at a minimum:

1. all the reporting and recordkeeping requirements specified in subsections (g) and (h);

2. maintenance procedures; and

3. emissions test results.

A person subject to an approved ACE must retain records and reports on each vessel or at an office at the vessel's homeport for the lifetime of each engine and must submit these records and reports to the E.O. in the manner specified in the approved ACE or upon request by the E.O.

(I) Emission reductions included in an ACE may not include reductions that are otherwise required by any local, State, or federal rule, regulation, or statute, or that are achieved or estimated from equipment not located in the region to which the ACE applies.

(J) A person subject to an approved ACE may not operate any harbor craft under the ACE unless the person has first been notified in writing by the E.O. of the ACE's approval. Prior to such approval, the applicant must comply with the provisions of this section, including the requirements in subsection (e)(6)(C) and (e)(6)(D).

(2) Application Process.

(A) Applications for an ACE must be submitted in writing to the Executive Officer for evaluation.

(B) The E.O. shall establish an internet site ( "ACE internet site") in which all documents pertaining to an ACE application shall be made available for public review. The E.O. shall also provide a copy of all such documents to each person who has requested copies of the documents; these persons shall be treated as interested parties. The E.O. shall provide two separate public comment periods during the ACE application process, as specified in subsection (f)(2)(D) and (f)(2)(E).

(C) Completeness Determination.

Within 15 days after receiving an ACE application, the E.O. shall notify an applicant whether the application is deemed sufficiently complete to proceed with further evaluation. If the application is deemed incomplete, the notification shall identify the application's deficiencies. The E.O. shall have an additional 15-day period for reviewing each set of documents or information submitted in response to an incomplete determination. Nothing in this subsection prohibits the E.O. from requesting additional information from the applicant, during any part of the ACE application process, which the E.O. determines is necessary to evaluate the application.

(D) Notice of Completeness and 30-Day First Public Comment Period.

After an ACE application has been deemed complete, the E.O. shall provide a 30- day public comment period to receive comments on any element of the ACE application and whether the E.O. should approve or disapprove the ACE application based on the contents and merits of the application. The E.O. shall notify all interested parties of the following:

1. the applicant(s);

2. the start and end dates for the 30-day first comment period; and

3. the address of the ACE internet site where the application is posted.

The E.O. shall also make this notification available for public review on the ACE internet site.

(E) Proposed Action and 15-Day Second Public Comment Period.

Within 30 days after the first public comment period ends, the E.O. shall notify the applicant and all interested parties of ARB's proposed approval or disapproval. This notification shall propose to approve the application as submitted, disapprove the application, or approve the ACE application with modifications as deemed necessary by the E.O. The notification shall identify the start and end dates for the 15-day second public comment period.

During the second public comment period, any person may comment on the E.O.'s proposed approval or disapproval of the ACE application and any element of the application. The E.O. shall also make this notification available for public review on the ACE internet site.

(F) Final Action.

Within 15 days after the second public comment period ends, the E.O. shall take final action to either approve or deny an ACE application and shall notify the applicant accordingly. If the application is denied or modified, the E.O. shall state the reasons for the denial or modification in the notification. The notification to the applicant and approved ACE plan, if applicable, shall be made available to the public on the ACE internet site. In addition, the E.O. shall consider and address all comments received during the first and second public comment periods, and provide responses to each comment on the ACE internet site.

(G) Renewal of an Approved ACE.

An applicant may apply for renewal of an approved ACE by forwarding the E.O. updated information for all elements of the approved ACE for review and re-approval. The applicant must submit the

renewal application so that the E.O. receives the application no later than 30 days prior to the end of the ACE compliance period.

(H) Notification to the E.O. of Changes to an Approved ACE.

A person with an approved ACE must notify the E.O. in writing within 30 days upon learning of any information that would alter the emissions estimates submitted during any part of the ACE application process. If the E.O. has reason to believe that an approved ACE has been granted to a person that no longer meets the criteria for an ACE, the E.O. may, pursuant to subsection (f)(3) below, modify or revoke the ACE as necessary to assure that the applicant and subject vessel(s) meet the emission reduction requirements in this section.

(3) Revocation or Modification of Approved ACEs.

With 30 days of notice of violation to the ACE holder, the E.O. may revoke or modify, as needed, an approved ACE if any of the following apply:

(A) there have been multiple violations of the ACE provisions or the requirements of the approved ACE plan;

(B) the E.O. has reason to believe that an approved ACE has been granted that no longer meets the criteria or requirements for an ACE; or

(C) the person can no longer comply with the requirements of the approved ACE in its current form.

Public notification of a revocation or modification of an approved ACE shall be made available on the ACE internet site.

(g) Recordkeeping Requirements.

Beginning January 1, 2009, the owner or operator of a harbor craft must maintain the records specified in this subsection on the vessel or at the vessel's homeport for the life of each engine subject to this section. The owner or operator must provide such records for inspection to an agent or employee of ARB upon request for all harbor craft subject to this section. Records may be provided as a hard copy, electronic, or any alternative reporting strategy approved by the E.O. Records provided by the person under this provision must include, at a minimum, the following:

(1) Owner or Operator Contact Information:

(A) Company name;

(B) Contact name, phone and fax number, address, e-mail address;

(C) Address where vessel is registered; and

(D) Reporting year.

(2) Vessel information:

(A) Harbor craft name;

(B) Specify vessel use(s) (ferry, excursion vessel, tugboat, ocean-going tugboat, towboat, push boat, work boat, commercial fishing vessel, charter fishing vessel, crew and supply vessel, pilot vessel, or other if none of the preceding apply);

(C) Vessel homeport;

(D) Vessel build year;

(E) U.S. Coast Guard documentation number;

(F) California Fish and Game license number;

(G) International Maritime Organization (IMO) number;

(H) Call Sign number; and

(I) Maritime Mobile Service identity number.

(3) Engine Information (for each diesel engine on the vessel):

(A) Current hour meter reading;

(B) Make of engine;

(C) Model of engine;

(D) Engine family (if applicable);

(E) Engine serial number;

(F) Year of manufacture of engine (if unable to determine, provide its approximate age);

(G) Rated brake horsepower;

(H) Total engine displacement; and

(I) Number of cylinders.

(4) Operational Information:

(A) Describe the general use of engine (propulsion or auxiliary engine);

(B) Total annual hours of operation, based upon readings of the non-resettable hour meters for previous calendar year per engine (for engines without an hour meter before 2009, provide an estimate);

(C) Estimated annual fuel usage per engine; and

(D) Estimated percent operating time as a function of distance from shore at the distances below:

1. 0-3 nautical miles; and

2. >3-24 nautical miles; and

3. >24 nautical miles from shore.

(5) Control Equipment (if applicable):

(A) Type of diesel emission control strategy;

(B) Manufacturer of installed diesel emission control strategy;

(C) Model of installed diesel emission control strategy;

(D) Level of control - air pollutants controlled and percent reductions;

(E) Emission control serial number; and

(F) Date control equipment installed.

(6) Maintenance records for each installed engine and diesel emission control strategy:

(A) Hour meter reading at last top end rebuild (i.e., less than full rebuild);

(B) Hour meter reading at last full engine rebuild; and

(C) Number of times full engine rebuild completed.

(7) The retirement date for each near-retirement vessel for which an owner or operator is claiming an exemption pursuant to subsection (c)(13).

(8) For each engine for which the model year is determined using the "Engine's Model Year + 5" method pursuant to subsection (e)(6)(D)2:

(A) the name and contact information (representative, address, and phone number) for the manufacturer of the emission control strategy;

(B) the name and type of emission control strategy;

(C) the installation date of the emission control strategy; and,

(D) if a VDECS is not being used for this purpose, the test plan, and the data demonstrating the emission reductions achieved due to the emission control strategy.

(9) For each engine for which an owner or operator is claiming an extension pursuant to subsection (e)(6)(E)3, the purchase order or signed contract between the owner or operator and seller of the new engine or equipment that has been purchased to comply with subsection (e)(6)(C) and (e)(6)(D).

(10) For each engine an owner or operator claims to have replaced, written documentation that the engine has been dismantled or destroyed.

(11) Records for each engine must be retained by the owner or operator for the entire engine life.

(12) All records specific to an E.O. approved ACE plan.

(13) All records specific to a BACT approved by the E.O. pursuant to subsection (e)(5).

(h) Initial and Compliance Plan Reporting Requirements.

(1) Initial Reporting of California Harbor Craft Fleet. By February 28, 2009, a person subject to this section must submit the information specified in subsections (g)(1) through (g)(6) for all harbor craft vessels in his/her California fleet. For purposes of this paragraph, "California fleet" means the total population of harbor craft under the person's direct control as of January 1, 2009.

(2) Compliance Plan. By February 28 of the year vessel engine compliance is required, a person subject to the requirements of subsection (e)(6)(C) and (e)(6)(D) must submit a Compliance Plan to the E.O. that describes in detail the engine replacements, rebuilds, upgrades, use of DECS, and any other measures the person plans to use to meet the requirements of subsection (e)(6)(C) and (e)(6)(D) for each of the person's engines and harbor craft. The person may revise the Compliance Plan, as needed, but the person must notify the E.O. within 10 business days of any changes to the Compliance Plan after the initial Compliance Plan is submitted. The Compliance Plan is for the E.O.'s informational and planning use only, and the substantive contents of the plan are not binding on either the E.O. or the person who submitted the Compliance Plan. The E.O.'s receipt and acceptance of a submitted Compliance Plan shall not constitute or be interpreted as evidence of compliance with the requirements of subsection (e)(6)(C) or (e)(6)(D).

(3) Demonstration of Compliance. By no later than the applicable compliance date specified in subsection (e)(6)(D), a person subject to the requirements of subsection (e) must provide the following information to the E.O.:

(A) All information specified in subsections (g)(1) through (g)(6), and

(B) The implementation date and the emission control strategy implemented for each engine in accordance with the requirements of subsection (e)(6)(D) and (e)(6)(C), respectively, for purposes of demonstrating compliance.

(4) Reporting for Change of Annual Hours of Operation, Vessel Category/Use, Transfers of Vessels, or a Change of Ownership of Vessel or Engine.

(A) A person subject to this section must submit to the E.O. the information specified in subsection (g)(1) through (g)(6) within 30 days of a significant change of annual hours of operation (i.e., enough to change the engine's compliance date), vessel category/use, purchase, lease, rental, or change of ownership of the vessel or engine. In the case of a purchase, lease, rental, or change in ownership, the party in control or possession of the engine or vessel after the transaction is responsible for meeting the requirements of this paragraph;

(B) Within 90 days of a significant change of annual hours of operation, vessel category/use, purchase, lease, rental, or change of ownership, or by the earliest applicable compliance date specified in subsection (e)(6)(D), whichever is later, a person subject to subsection (e)(6) shall submit a new Compliance Plan with the updated information pursuant to the Compliance Plan requirements specified in paragraph 2 above.

(i) Violations.

(1) A person who is subject to this section and commits a violation of any provision, standard, criteria, or requirement in this section is subject to the penalties, injunctive relief, and other remedies specified in H&S section 42400 et seq.; H&S section 42402 et seq.; other applicable sections in the Health and Safety Code; and other applicable provisions as provided under California law for each violation. Nothing in this section shall be construed to limit or otherwise affect any applicable penalties or other remedies available under federal law.

(2) Any failure to meet any provision, standard, criteria, or requirement in this section, including but not limited to the applicable emission limits; recordkeeping requirements; and ACE provision, including the requirements of any approved ACE plans, shall constitute a single, separate violation of this section for each hour that a person operates a vessel within the Regulated California Waters until such provision, standard, criteria, or requirement has been met.

(3) A person who is subject to this section is liable for meeting the requirements of this section, notwithstanding any contractual arrangement that person may have with any third-parties.

(j) Methods to Demonstrate Compliance with Engine and Fuel Standards.

(1) Diesel PM, NOx, NO, CO, HC, NMHC, and CO, NO, CO, HC, NMHC, and $CO_2$ testing must be done in accordance with the applicable method specified in the following procedures: International Organization for Standardization (ISO) 8178-2: 1996(E) ( "ISO 8178 Part 2"); (2) ISO 8178-4: 1996(E) ( "ISO 8178 Part 4"); and applicable methods and procedures specified in 40 CFR Part 94 (as amended in 2007), all of which are incorporated herein by reference.

(2) The E.O. may approve in writing any alternative test method not specified in paragraph (1) above that the method's proponent has demonstrated to the E.O.'s satisfaction provides equivalent or better results to the methods in paragraph (1).

(k) Right of Entry.

An agent or employee of the ARB has the right of entry to board any harbor craft for the purpose of inspecting propulsion and auxiliary engines, emission control strategies, fuel systems, and fuel storage; collecting fuel sample(s) not to exceed one liter per fuel tank; and acquiring and inspecting records required pursuant to this section.

(l) Severability.

If any subsection, paragraph, subparagraph, sentence, clause, phrase, or portion of this regulation is, for any reason, held invalid, unconstitutional, or unenforceable by any court of competent jurisdiction, such portion shall be deemed as a separate, distinct, and independent provision, and such holding shall not affect the validity of the remaining portions of the regulation.

(m) Submittal of Documents.

(1) All documents required under this regulation must be submitted to the Executive Officer as follows:

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CALIFORNIA AIR RESOURCES BOARD
STATIONARY SOURCE DIVISION
EMISSIONS ASSESSMENT BRANCH
CONTROL STRATEGIES SECTION, HARBOR CRAFT
P.O. BOX 2815
SACRAMENTO, CA 95812-2815
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(2) Electronic submittals of information associated with compliance with this section may be approved by the E.O. upon request, provided such electronic submittals use digital signatures that meet the requirements specified in Government Code section 16.5. The E.O. may request the submittal of a hard copy of any electronic submittal.

**➡§ 93119. Airborne Toxic Control Measure Limiting Onboard Incineration on Cruise Ships and Oceangoing Ships.**

(a) Purpose.

The purpose of this control measure is to reduce emissions of toxic air contaminants from the use of incinerators aboard cruise ships and oceangoing ships. Specifically, this regulation prohibits cruise ships and oceangoing ships from conducting onboard incineration while operating within three miles of the California coast. This control measure is expected to reduce exposure to toxic air contaminants for residents living near ports and along the California coast.

(b) Applicability.

This section applies to any person who owns or operates a cruise ship, as defined in subsection (c)(2), including foreign flagged cruise ships. This section also applies to any person who owns or operates an oceangoing ship as defined in subsection (c)(5), including foreign flagged oceangoing ships.

(c )Definitions. For the purposes of this section, the following definitions apply:

(1) "Calling on California ports or places" means bound for or leaving a port or terminal located in California.

(2) "Cruise ship" means a commercial vessel which has berths or overnight accommodations for passengers and which has the capacity to carry 250 or more passengers for hire, calling on California ports or places. Cruise ship does not include an oceangoing ship, noncommercial vessels, warships, vessels operated by nonprofit entities as determined by the Internal Revenue Service, and vessels operated by the State of California, the United States, or a foreign government.

(3) "Executive Officer of the Air Resources Board" means the executive officer of the California Air Resources Board or his or her delegate.

(4) "Incinerator" means any device used to conduct onboard incineration.

(5) "Oceangoing Ship" means a private, commercial, government, or military vessel of 300 gross registered tons or more calling on California ports or places. An oceangoing ship does not include a cruise ship.

(6) "Onboard incineration" means the combustion or burning of any materials or wastes for the purpose of volume reduction, destruction, sanitation, or sterilization, aboard a cruise ship or oceangoing ship. Onboard incineration does not include incinerators which are only burning fuels including, but not limited to, natural gas, gas oil, marine gas oil, marine diesel fuel, fuel oil, or residual fuel oil for the specific purpose of maintaining a minimum temperature in the incinerator to minimize thermal cycling.

(7) "Owner or Operator" means a person who owns or operates a cruise ship or oceangoing ship.

(8) "Person" shall have the same meaning as defined in Health and Safety Code section 39047.

(9) "Within three miles of the California coast" means between the California coast and the Three Nautical Mile Line as shown on the following National Oceanic and Atmospheric Administration (NOAA) Nautical Charts as authored by the NOAA Office of Coast Survey, which are incorporated herein by reference:

(A) Chart 18600, Trinidad Head to Cape Blanco (January 2002);

(B) Chart 18620, Point Arena to Trinidad Head (June 2002);

(C) Chart 18640, San Francisco to Point Arena (August 2005);

(D) Chart 18680, Point Sur to San Francisco (June 2005);

(E) Chart 18700, Point Conception to Point Sur (July 2003);

(F) Chart 18720, Point Dume to Purisima Point (August 2008); and

(G) Chart 18740, San Diego to Santa Rosa Island (March 2007).

(d) Requirements.

(1) Notwithstanding sections 93104 and 93113 of title 17, California Code of Regulations, no cruise ship or oceangoing ship owner or operator, agent, representative, or employee shall conduct onboard incineration within three miles of the California coast, except when required to be operated under the direction or supervision of the United States Coast Guard.

(2) Recordkeeping and Reporting Requirements.

(A) Recordkeeping Requirements.

1. Owners or operators of cruise ships or oceangoing ships subject to the requirements of this section shall record the following information while the incinerator is operating within three miles of the California coast:

a. The date and time of start and stop of incineration (in local time);

b. The position of the ship in latitude and longitude for each start and stop time of incineration;

c. The estimated amount incinerated in cubic meters ($m^3$);

d. The name or signature of officer in charge of the operation; and

e. When operation of the incinerator is required by the United States Coast Guard, the name, unit, and phone number of United States Coast Guard personnel who directed that the incinerator be operated.

2. Records shall be maintained in English and shall be kept and maintained onboard the respective cruise ship or oceangoing ship for two years.

3. During an onboard inspection, records shall be made available to Air Resources Board personnel, or their delegates.

(B) Reporting Requirements

1. Owners or operators of cruise ships and oceangoing ships that are subject to this section, shall, upon written request by the Executive Officer of the Air Resources Board, provide copies of the records as specified in subsection (d)(2)(A) within 30 calendar days of the request.

2. During an onboard inspection, owners or operators of cruise ships and oceangoing ships, that are subject to this section, except those owned or operated by a military agency, shall provide ARB personnel or their delegates the following written incineration records as required by the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978, and as implemented by the United States Coast Guard regulations title 33, Code of Federal Regulations, section 151.55, for all incineration occurring within 24 nautical miles of the California coast.

a. The date and time of incineration (start and stop) (in local time);

b. The position of the ship in latitude and longitude for each start and stop time of incineration;

c. The estimated amount incinerated in cubic meters ($m^3$); and); and

d. The signature of officer in charge of the operation.

3. Owners or operators of cruise ships and oceangoing ships, that are subject to this section, except those owned or operated by a military agency shall, upon written request by the Executive Officer of the Air Resources Board provide copies of the records as specified in subsection (d)(2)(B)2a-d within 30 calendar days of the request.

(e) Updates to NOAA Charts.

The Executive Officer shall publish in the California Regulatory Notice Register, send an electronic notice out to all subscribers of the oceangoing ship incineration list serve, post to the oceangoing ship incineration website located at http://www.arb.ca.gov/ports/shipincin/shipincin.htm, and notify potentially affected cruise ship owners or operators, regarding revisions to subsection (c)(9) with regard to Nautical Charts updated by NOAA, at least 30 days before the updates take effect in the following situations:

(1) The Executive Officer may revise subsection (c)(9) when there is a change in the chart number or name; or

(2) The Executive Officer may revise subsection (c)(9) when NOAA revises the Three Nautical Mile Line, as shown on the respective charts.

(f) Severability.

Each part of this section shall be deemed severable, and in the event that any part of this section is held to be invalid, the remainder of this section shall continue in full force and effect.

### ➡§ 93120. Airborne Toxic Control Measure to Reduce Formaldehyde Emissions from Composite Wood Products.

(a) The Airborne Toxic Control Measure to Reduce Formaldehyde Emissions from Composite Wood Products is contained in sections 93120 through 93120.12.

(b) Purpose. The purpose of this airborne toxic control measure is to reduce formaldehyde emissions from composite wood products, and finished goods that contain composite wood products, that are sold, offered for sale, supplied, used, or manufactured for sale in California. The composite wood products covered by this regulation are hardwood plywood, particleboard, and medium density fiberboard.

(c) Applicability. This airborne toxic control measure applies to:

(1) Manufacturers of hardwood plywood, particleboard, and medium density fiberboard that manufacture, sell, offer for sale, or supply these products for use in California;

(2) Distributors of hardwood plywood, particleboard, medium density fiberboard, and finished goods that contain composite wood products, that sell, offer for sale, or supply these products or goods for use in California;

(3) Importers of hardwood plywood, particleboard, and medium density fiberboard, and finished goods that contain composite wood products, that sell, offer for sale, or supply these products or goods for use in California;

(4) Fabricators that use hardwood plywood, particleboard, and medium density fiberboard to make other goods that are sold, offered for sale, or supplied for use in California;

(5) Retailers of hardwood plywood, particleboard, medium density fiberboard, and finished goods that contain composite wood products, that sell, offer for sale, or supply these products or goods for use in California; and

(6) Third party certifiers as defined in title 17, California Code of Regulations, section 93120.1.

(d) This airborne toxic control measure does not apply to hardwood plywood, particleboard, medium density fiberboard, and finished goods that contain composite wood products that are manufactured, distributed, fabricated, imported, sold, offered for sale, or supplied for shipment and use outside of California.

### ➡§ 93120.1 Definitions.

(a) For the purposes of this Airborne Toxic Control Measure, the following definitions shall apply:

(1) "ANSI" means the American National Standards Institute.

(2) "ARB" means the California Air Resources Board.

(3) "ASTM" means the American Society for Testing and Materials.

(4) "Batch" means the amount of composite wood product manufactured during a shift (8 or 12 hours, plus or minus one hour of production).

(5) "Combination core" means a platform for making hardwood plywood that consists of a combination of layers of veneer and particleboard or medium density fiberboard.

(6) "Component part" means a fabricated part that contains one or more composite wood products and is used in the assembly of finished goods.

(7) "Composite core" means a platform for making hardwood plywood or laminated products that consists of particleboard and/or medium density fiberboard, or combination core.

(8) "Composite wood products" means hardwood plywood, particleboard, and medium density fiberboard. "Composite wood products" does not include hardboard, structural plywood as specified in the "Voluntary Product Standard - Structural Plywood" (PS 1-07), structural panels as specified in the "Voluntary Product Standard - Performance Standard for Wood-Based Structural-Use Panels" (PS 2-04), structural composite lumber as specified in "Standard Specification for Evaluation of Structural Composite Lumber Products" (ASTM D 5456-06), oriented strand board, glued laminated timber as specified in "Structural Glued Laminated Timber" (ANSI A190.1-2002), prefabricated wood I-joists as specified in "Standard Specification for Establishing and Monitoring Structural Capacities of Prefabricated Wood I-Joists" (ASTM D 5055-05), finger-jointed lumber, or "composite wood products" used inside of new vehicles as defined in section 430 of the California Vehicle Code (excluding recreational vehicles), rail cars, boats, aerospace craft, or aircraft.

(9) "Distributor" means any person to whom a composite wood product or finished good is sold or supplied for the purposes of resale or distribution in commerce, except that manufacturers and retailers are not "distributors."

(10) "Door" means a finished good used to close off a room, closet, or entrance. A "door" moves on hinges, slides or rotates, and consists of a movable panel or combination of panels, and may include component parts.

(11) "Executive Officer" means the "Executive Officer" of the California Air Resources Board, or his or her delegate.

(12) "Fabricator" means any person that uses composite wood products to make finished goods. "Fabricator" includes producers of laminated products.

(13) "Facility" means any site where composite wood products or finished goods are manufactured, tested, used, supplied or offered for sale, or sold in California. "Facility" includes, but is not limited to, manufacturing plants, testing laboratories, distribution centers, fabricator shops, warehouses, and retail stores.

(14) "Fiber" means the slender threadlike elements of wood or similar cellulosic material, which can be separated by chemical and/or mechanical means, such as pulping, and can be formed into panels.

(15) "Finished goods" means any good or product, other than a panel, containing hardwood plywood, particleboard, or medium density fiberboard. Component parts are not "finished goods," although they are used in the assembly of finished goods. "Finished goods" do not include used goods such as antiques or second-hand furniture. For the purposes of this subsection, a "used good" means a "finished good" that has previously been sold or supplied to the ultimate purchaser. "Ultimate purchaser" means the first person who in good faith purchases or acquires a "finished good" for purposes other than resale.

(16) "Formaldehyde" means a colorless gas at room temperature that at elevated concentrations has a strong, pungent odor and can be irritating to the eyes, nose, and lungs (i.e., CAS No. 50-00-0).

(17) "Hardboard" means a composite panel composed of cellulosic fibers, made by dry or wet forming and hot pressing of a fiber mat with or without resins, that complies with one of the following ANSI

standards: "Basic Hardboard" (ANSI A135.4-2004), "Prefinished Hardboard Paneling" (ANSI A135.5-2004), or "Hardboard Siding" (ANSI A135.6-2006).

(18) "Hardwood" means the wood of a deciduous broad-leafed tree. Examples of "hardwoods" include, but are not limited to, aspen, birch, and oak.

(19) "Hardwood plywood" (HWPW) means a panel composed of an assembly of (A) hardwood layers or plies of veneer or (B) veneers in combination with a platform consisting of lumber core, composite core, a special core material, or special back material, joined with an adhesive. The face veneer may be composed of a hardwood or decorative softwood species (ANSI/HPVA HP-1-2004). "Hardwood plywood" includes wall paneling, industrial panels, and "hardwood plywood" panels used in making flooring. "Hardwood plywood" does not include laminated products, military specified plywood, or curved plywood.

(20) "Hardwood plywood - composite core" (HWPW-CC) means hardwood plywood with a composite core.

(21) "Hardwood plywood - veneer core" (HWPW-VC) means hardwood plywood with a core made of a sheet or sheets of veneer.

(22) "HPVA" means the Hardwood Plywood and Veneer Association.

(23) "Importer" means the person or entity as defined in the regulations of the Bureau of Customs and Border Protection, 19 Code of Federal Regulations, section 101.1.

(24) "Laminate" means a veneer or other material affixed as a decorative surface to a platform.

(25) "Laminated product" means a finished good or component part of a finished good made by a fabricator in which a laminate or laminates are affixed to a platform. If the platform consists of a composite wood product, the platform must comply with the applicable emission standards.

(26) "Lot" means the volume of a product type produced either: (A) from the beginning of a production run until the first quality control test; or (B) between one quality control test and the next one; or (C) from the last quality control test to the end of a production run.

(27) "Manufacturer" means any person who manufactures or produces a composite wood product.

(28) "Medium density fiberboard" (MDF) means a panel composed of cellulosic fibers (usually wood) made by dry forming and pressing of a resinated fiber mat (ANSI A208.2-2002).

(29) "No-added formaldehyde based resins" means resins formulated with no added formaldehyde as part of the resin cross linking structure for making hardwood plywood, particleboard, or medium density fiberboard. "No-added formaldehyde based resins" include, but are not limited to, resins made from soy, polyvinyl acetate, or methylene diisocyanate.

(30) "Panel" means any particleboard, medium density fiberboard, or hardwood plywood board produced for sale, supply, or distribution by a composite wood product manufacturer.

(31) "Particle" means a distinct fraction of wood or other cellulosic material produced mechanically and used along with resin to make particleboard. "Particles" are larger in size than fibers.

(32) "Particleboard" means a panel composed of cellulosic material (usually wood) in the form of discrete particles (as distinguished from fibers, flakes, or strands) that are pressed together with resin (ANSI A208.1-1999).

(33) "Person" shall have the same meaning as defined in Health and Safety Code section 39047.

(34) "Platform" means the veneer core, composite core, combination core, lumber core, or special core material used in the manufacture of hardwood plywood or laminated products.

(35) "Plywood" means a panel product consisting of layers of wood veneers in combination with a platform, pressed together with resin. "Plywood" includes panel products made by either hot or cold pressing (with resin) veneers to a platform.

(36) "Product type" means a type of composite wood product that differs from another based on composition, thickness, number of plies (if hardwood plywood), and resin to distinguish one composite wood product from another made by the same manufacturer.

(37) "Recreational vehicle" has the same meaning as defined in section 18010 of the California Health and Safety Code.

(38) "Retailer" means any person or entity that sells, offers for sale, or supplies directly to consumers composite wood products or finished goods that contain composite wood products.

(39) "Softwood" means wood produced from needle and/or cone bearing trees (ANSI/HPVA HP-1-2004).

(40) "Thin MDF" means medium density fiberboard that has a maximum thickness of eight millimeters.

(41) "Third party certifier" means an organization or entity approved by the Executive Officer that: (A) verifies the accuracy of the emission test procedures and facilities used by manufacturers to conduct formaldehyde emission tests, (B) monitors manufacturer quality assurance programs, and (C) provides independent audits and inspections.

(42) "Ultra-low-emitting formaldehyde (ULEF) resins" means resins formulated such that average formaldehyde emissions are consistently below the Phase 2 emission standards in section 93120.2, as provided in section 93120.3(d).

(43) "Veneer" means thin sheets of wood peeled or sliced from logs for use in the manufacture of wood products such as plywood, laminated veneer lumber, laminated products, or other products.

(44) "Veneer core" means a core material for making plywood that consists of veneer.

(45) "Window" means a finished good consisting of a frame in which are set panes of glass, for the admission of air or light, or both, into an opening in the wall of a building. The frame includes jambs, stiles, sashes, and rails, and excludes sills, window headers and window seats.

## ➡§ 93120.2. Formaldehyde Emission Standards for Hardwood Plywood (HWPW), Particleboard (PB), and Medium Density Fiberboard (MDF).

(a) Emission Standards. The formaldehyde emission standards in Table 1 apply to hardwood plywood (HWPW), particleboard (PB), and medium density fiberboard (MDF) sold, supplied, offered for sale, or manufactured for sale in California.

Except as provided in section 93120.2(b), Exemptions, and the "sell-through" provisions of section 93120.12, Appendix 1, no person shall sell, supply, offer for sale, or manufacture for sale in California any composite wood product which, at the time of sale or manufacture, does not comply with the emission standards in Table 1 on or after the effective dates specified in Table 1.

Table 1

Phase 1 and Phase 2 Formaldehyde Emission Standards for Hardwood Plywood (HWPW), Particleboard (PB), and Medium Density Fiberboard (MDF)[1]

| | --- Phase 1 (P1) and Phase 2 (P2) Emission Standards (ppm) --- | | | | |
|---|---|---|---|---|---|
| *Effective Date* | *HWPW-VC* | *HWPW-CC* | *PB* | *MDF* | *Thin MDF* |
| 1-1-2009 | P1: 0.08 | — | P1: 0.18 | P1: 0.21 | P1: 0.21 |
| 7-1-2009 | — | P1: 0.08 | — | — | |
| 1-1-2010 | P2: 0.05 | — | — | — | — |
| 1-1-2011 | — | — | P2: 0.09 | P2: 0.11 | — |
| 1-1-2012 | — | — | — | — | P2: 0.13 |
| 7-1-2012 | — | P2: 0.05 | — | — | |

(1) Based on the primary test method [ASTM E 1333-96(2002)] in parts per million (ppm). HWPW-VC = veneer core; HWPW-CC = composite core.

A product "does not comply with the emission standards in Table 1" if:

(1) The composite wood product was produced by a manufacturer without either: (A) a current third party certification program that complies with section 93120.3(b), (B) a current ARB approval to use no-added formaldehyde based resins as provided in section 93120.3(c), or (C) a current ARB approval to use a ULEF resin as provided in section 93120.3(d); or

(2) Records of testing conducted by the manufacturer or the third party certifier show that a particular composite wood product sold, supplied, or offered for sale in California exceeded the applicable emission standard specified in Table 1, based on: (A) the compliance testing procedure for hardwood plywood, particleboard, and medium density fiberboard specified in section 93120.9(a) or (B) the quality control testing method specified in 93120.9(d) (subject to permitted retesting, disposition or treatment); or

(3) A composite wood product produced by a manufacturer is tested at any time after it is manufactured, using either the compliance test method specified in section 93120.9(a) or the enforcement test method specified in section 93120.9(b), and is found to exceed the applicable emission standard specified in Table 1; or

(4) A finished good contains any composite wood product which does not comply with the emission standards in Table 1, based on the criteria set forth in paragraphs (1), (2), or (3) above; or

(5) A finished good is found to contain any composite wood product that does not comply with the applicable emission standards in Table 1 using the enforcement test method for finished goods specified in section 93120.9(c).

(b) Exemptions.

(1) The emission standards in section 93120.2(a) do not apply to composite wood products or finished goods containing these materials that are manufactured, sold, offered for sale, or supplied for shipment and use outside of California.

(2) The emission standards in section 93120.2(a) do not apply to hardwood plywood and particleboard materials manufactured, sold, supplied for installation, or installed in manufactured homes subject to the United States Department of Housing and Urban Development regulations (24 Code of Federal Regulations, section 3280.308).

(3) To qualify for an exemption specified in section 93120.2(b)(1) or 93120.2(b)(2), the person claiming the exemption must maintain adequate documentation to demonstrate that the criteria of the exemption are met.

**➡§ 93120.3. Requirements for Manufacturers of Hardwood Plywood (HWPW), Particleboard (PB), and Medium Density Fiberboard (MDF).**

(a) Emission Standards. All manufacturers of HWPW, PB, and MDF must comply with the requirements of section 93120.2(a). Except as provided in the "sell-through" provisions in Appendix 1 of section 93120.12, all HWPW, PB, and MDF sold, supplied, or offered for sale on or after the effective dates specified in section 93120.2(a) must comply with the emission standards specified in section 93120.2(a).

(b) Third Party Certification. For manufacturers of HWPW, PB, and MDF using resins that contain formaldehyde, compliance with the emission standards specified in section 93120.2(a) must be verified by using a third party certifier approved by ARB under section 93120.4. These manufacturers must also comply with the quality assurance requirements specified in Appendix 2 of section 93120.12.

(c) Special Provisions for Manufacturers of HWPW, PB, and MDF with No-Added Formaldehyde Based Resins.

(1) Upon written approval of the Executive Officer, manufacturers of HWPW, PB, and MDF who plan to use no-added formaldehyde based resins are not required to comply with section 93120.3(b). To apply for ARB approval, manufacturers must submit the following information to the Executive Officer: (A) a statement indicating which product types will be manufactured using no-added formaldehyde based resins for sale in California; (B) the chemical formulation of the candidate no-added formaldehyde based resins, including base resins, catalysts, and other additives as used in manufacturing; (C) the name of the ARB approved third party certifier; and (D) data on the emissions performance of the candidate no-added formaldehyde based resins. These data must be obtained by working with an ARB approved third party certifier and must include three months of routine quality control testing data, the correlation of the routine quality control testing data to primary or secondary method testing data, and the results of one primary or secondary method test, as required in Appendix 2 of section 93120.12. Ninety percent of the three months of routine quality control testing data and the results of the one primary or secondary method test must be shown to be no higher than 0.04 ppm. In addition, all data must be shown to be no higher than 0.05 ppm for HWPW and 0.06 ppm for PB, MDF, and thin MDF.

(2) Within 45 days after receiving an application from a manufacturer, the Executive Officer shall inform the applicant, in writing, either that the application is complete and accepted for filing, or that the application is deficient and shall identify the specific information required to make the application complete.

(3) Within 30 days of receiving additional information provided in response to a determination by the Executive Officer that an application is deficient, the Executive Officer shall inform the applicant, in writing, either that the new information is sufficient to make the application complete and that the application is accepted for filing, or that the application is deficient and shall identify the specific information required to make the application complete.

(4) Within 90 days after an application has been deemed complete, the Executive Officer shall act to approve or disapprove the application. The Executive Officer shall issue an Executive Order approving the application if the evidence submitted by the applicant is sufficient to demonstrate that the applicant has met the requirements of section 93120.3(c)(1). The approval shall have a duration of two years, and the manufacturer may apply for re-approval as provided in this section. An application for re-approval must include results of at least one primary or secondary method test for each product type based on a panel or set of panels randomly selected and tested by an ARB approved third party certifier, and the chemical formulation of the no-added formaldehyde based resins.

(5) The Executive Officer may, in the course of processing the application, request the applicant to clarify, amplify, correct, or otherwise supplement the information required for the application. The applicant and the Executive Officer may mutually agree to longer time periods for determining whether an application is complete, or for approving or disapproving an application.

(6) If the manufacturer decides to change to formaldehyde based resins, ARB must be notified in advance and the manufacturer must comply with the requirements of section 93120.3(b) for that product type.

(d) Special Provisions for Manufacturers of HWPW, PB and MDF with Ultra-Low-Emitting Formaldehyde (ULEF) Resins.

(1) Upon written approval of the Executive Officer, manufacturers of HWPW, PB, and MDF who plan to use ultra-low-emitting formaldehyde (ULEF) resins may test their products less frequently than otherwise required. The testing frequency for manufacturers using ULEF resins is specified in Appendix 2 of section 93120.12. To apply for ARB approval, manufacturers must submit the following information to the Executive Officer: (A) a statement indicating which product types will be manufactured with ULEF resins for sale in California; (B) the chemical formulation of the candidate ULEF resins, including base resins, scavenger resins, scavenger additives, catalysts, and other additives as used in manufacturing; (C) the name of the ARB approved third party certifier; and (D) data on the emissions performance of the candidate ULEF resins to demonstrate that panels manufactured with these resins can consistently achieve the following: (1.) for HWPW, the Phase 2 emission standards specified in section 93120.2(a); or (2.) for PB and MDF, the emission values in Table 2. These data must be obtained by working with an ARB approved third party certifier and must include six months of routine quality control testing data, the correlation of the routine quality control testing data to primary or secondary method testing data, and the results of two quarterly primary or secondary method tests, as required by Appendix 2 of section 93120.12. For HWPW, in order to qualify for approval to test any product type less frequently, the results of the six months of routine quality control testing data and the two quarterly primary or secondary method tests must all be shown to be no higher than the Phase 2 emission standards. For PB and MDF, in order to qualify for approval to test any product type less frequently, ninety percent of the six months of routine quality control testing data and the results of the two quarterly primary or secondary method tests must be shown to be no higher than the ULEF-target value listed in Table 2, and all data must be shown to be no higher than the ULEF-cap value listed in Table 2.

Table 2

Ultra-Low-Emitting Formaldehyde (ULEF) Resin Emission Target and Cap Values (in ppm) for Particleboard (PB) and Medium Density Fiberboard (MDF)[1]

| | PB | MDF | Thin MDF |
|---|---|---|---|
| ULEF-target | 0.05 | 0.06 | 0.08 |
| ULEF-cap | 0.08 | 0.09 | 0.11 |

(1) Concentrations must be based on correlations with the primary or secondary test method in parts per million (ppm). Concentrations must be based on correlations with the primary or secondary test method in parts per million (ppm).

(2) Upon written approval of the Executive Officer, manufacturers of HWPW, PB, MDF, and thin MDF may qualify their product types for an exemption from third party certification. To qualify for an exemption from third party certification for a product type, ninety percent of six months of routine quality control testing data and the results of two quarterly primary or secondary method tests must be shown to be no higher than a ULEF-target value of 0.04 ppm. All data must be shown to be no

higher than a ULEF-cap value of 0.05 ppm for HWPW and 0.06 ppm for PB, MDF, and thin MDF. All other requirements of section 93120.3(d)(1) apply. Manufacturers who have been exempted from third party certification do not need to comply with the requirements of Appendix 2 of section 93120.12.

(3) Within 45 days after receiving an application from a manufacturer, the Executive Officer shall inform the applicant, in writing, either that the application is complete and accepted for filing, or that the application is deficient and shall identify the specific information required to make the application complete.

(4) Within 30 days of receiving additional information provided in response to a determination by the Executive Officer that an application is deficient, the Executive Officer shall inform the applicant, in writing, either that the new information is sufficient to make the application complete and that the application is accepted for filing, or that the application is deficient and shall identify the specific information required to make the application complete.

(5) Within 90 days after an application has been deemed complete, the Executive Officer shall act to approve or disapprove the application. The Executive Officer shall issue an Executive Order approving the application if the evidence submitted by the applicant is sufficient to demonstrate that the applicant has met the requirements specified in section 93120.3(d)(1) or (d)(2). The approval shall have a duration of two years, and the manufacturer may apply for re-approval as provided in this section. An application for re-approval must include the results of at least two primary or secondary method tests for each product type based on panels randomly selected and tested by an ARB approved third party certifier, and the chemical formulation of the ULEF resins.

(6) The Executive Officer may, in the course of processing the application, request the applicant to clarify, amplify, correct, or otherwise supplement the information required for the application. The applicant and the Executive Officer may mutually agree to longer time periods for determining whether an application is complete, or for approving or disapproving an application.

(7) If the manufacturer decides to change resin systems, ARB must be notified in advance and the manufacturer must comply with the requirements of section 93120.3(b) for that product type.

(e) Product Labeling Requirements. Each panel or bundle of composite wood products must be clearly labeled to indicate compliance with the emission standards specified in section 93120.2(a). The label shall include, at a minimum, all of the following information:

(1) Manufacturer name;

(2) Product lot number or batch produced;

(3) A marking to denote that the composite wood product complies with the applicable Phase 1 or 2 emission standards specified in section 93120.2(a) or was made using ULEF resins or no-added formaldehyde based resins; and

(4) The ARB assigned number of the approved third party certifier. This requirement does not apply to manufacturers using no-added formaldehyde based resins that have obtained ARB approval as provided in section 93120.3(c) or products manufactured using ULEF resins as provided in section 93120.3(d)(2).

(f) Statement of compliance. For each composite wood product, the manufacturer must include on the bill of lading or invoice: (1) the ARB assigned number of the approved third party certifier, if applicable; and (2) a statement that the composite wood products comply with the applicable Phase 1 or Phase 2 emission standard specified in section 93120.2(a) and, if applicable, were made using ULEF resins or no-added formaldehyde based resins.

(g) Recordkeeping Requirements for Manufacturers of Hardwood Plywood (HWPW), Particleboard (PB), and Medium Density Fiberboard (MDF).

(1) Beginning January 1, 2009 for manufacturers of HWPW-VC, PB, MDF, and thin MDF and July 1, 2009 for manufacturers of HWPW-CC, manufacturers must keep records of their quality assurance emissions test data for each product as provided in Appendix 2 of section 93120.12. Manufacturers using no-added formaldehyde based resins that have obtained ARB approval under section 93120.3(c) must keep documentation to demonstrate ARB approval to use no-added formaldehyde based resins. Manufacturers that have obtained ARB approval under section 93120.3(d) to use ULEF resins must keep documentation to demonstrate that ARB approval has been obtained. Records must be kept in either electronic or hard copy form for a period of two years.

(2) For every composite wood product produced for sale in California, manufacturers must maintain records at their production facilities for a period of two years, including:

(A) Tracking information to allow each composite wood product produced to be traced to a specific lot number or batch produced;

(B) Product information (including description of the composite wood product, date of manufacture, and lot/batch number);

(C) Purchaser information (including purchaser's name, contact person, address, phone number, purchase order or invoice number, and amount purchased), if applicable;

(D) Product transporter information (including delivery company name, contact person, address, phone number, and shipping invoice number), if applicable;

(E) Identification of the ARB approved third party certifier (including company name, contact person, phone number, mailing and email address); this subsection (E) does not apply to products manufactured with no-added formaldehyde based resins as specified under section 93120.3(c)(1) or products manufactured with ULEF resins as specified under section 93120.3(d)(2); and

(F) Manufacturers of HWPW, PB, and MDF using no-added formaldehyde based resins or ULEF resins must maintain records on an ongoing basis for each composite wood product produced, including:

1. The ARB approval letter as specified in section 93120.3(c) or (d);

2. Amount of resin use reported by volume and weight;

3. Production volume reported as square feet per product type;

4. Resin trade name, resin manufacturer contact information, and resin supplier contact information;

5. Changes in press time by more than 20 percent for any product type; and

6. Changes in the formulation of the no-added formaldehyde based resins or ULEF resins.

(3) Records must be kept on the disposition of non-complying lots or batches of composite wood products. These records shall include: product type and amount of composite wood products affected, lot or batch numbers, measures taken to mitigate the non-complying composite wood products, results of retesting, and final disposition of the lots or batches of composite wood products.

(4) All records required by this section shall be made available to ARB or local air district personnel upon request.

(h) Facility inspections. Each manufacturing plant may be inspected by third party certifiers as provided in Appendices 2 and 3 of section 93120.12. In addition, manufacturers may also be inspected by ARB or local air district personnel. In the course of an inspection, ARB or local air district personnel may request to audit records or secure samples for testing. Composite wood products secured during

an inspection are subject to testing using the enforcement test method specified in section 93120.9(b), to determine compliance with the applicable emission standards.

**➡§ 93120.4. Third Party Certifiers.**

(a) All third party certifiers must be approved in writing by the ARB Executive Officer as provided in subsection (b). The Executive Officer will issue a number to each approved third party certifier.

(b) ARB Approval of Third Party Certifiers.

(1) Applications to become an ARB-approved third party certifier must be submitted in writing to the Executive Officer and must contain the following:

(A) Evidence of actual field experience in the verification of laboratories and wood products, to demonstrate how applicants will be able to competently perform the requirements of Appendix 3;

(B) Evidence of the ability to properly train and supervise inspectors;

(C) Evidence of a current "product certification agency" accreditation issued by a signatory to the International Laboratory Accreditation Cooperation Mutual Recognition Arrangement (ILAC, 2000); and

(D) List of the composite wood products that the applicant is applying to verify and evidence that the applicant is qualified to verify these products.

(2) Within 45 days of receiving an application to become an ARB-approved third party certifier, the Executive Officer shall inform the applicant, in writing, either that the application is complete and accepted for filing, or that the application is deficient and shall identify the specific information required to make the application complete.

(3) Within 30 days of receiving additional information provided in response to a determination by the Executive Officer that an application is deficient, the Executive Officer shall inform the applicant, in writing, either that the new information is sufficient to make the application complete and that the application is accepted for filing, or that the application is deficient and shall identify the specific information required to make the application complete.

(4) Within 90 days after an application has been deemed complete, the Executive Officer shall act to approve or disapprove the application. The Executive Officer shall issue an Executive Order approving the application if the evidence submitted by the applicant is sufficient to demonstrate that the applicant can competently perform the tasks described in subsection (c). The Executive Order shall have a duration of two years. Within 120 days of the expiration date of the Executive Order, a third party certifier may apply for re-approval by submitting an updated application to the Executive Officer to demonstrate the continued ability to comply with section 93120.4(b)(1).

(5) The Executive Officer may, in the course of processing the application, request the applicant to clarify, amplify, correct, or otherwise supplement the information required for the application. The applicant and the Executive Officer may mutually agree to longer time periods for determining whether an application is complete, or for approving or disapproving an application.

(c) Requirements for Third Party Certifiers. Requirements for ARB approved third party certifiers are contained in section 93120.12, Appendix 3.

(d) Modification or Revocation of an Executive Order Approving a Third Party Certifier. The Executive Officer may review and, for good cause, modify or revoke an Executive Order approving a third party certifier. The Executive Officer shall not modify or revoke an Executive Order without affording the

third party certifier the opportunity for a hearing in accordance with the procedures specified in Article 2 (commencing with section 60055.1) of Subchapter 1.25 of Chapter 1 of Division 3 of Title 17, California Code of Regulations.

**➡§ 93120.5. Requirements for Distributors of Hardwood Plywood (HWPW), Particleboard (PB), Medium Density Fiberboard (MDF), and Finished Goods Containing Those Materials.**

(a) Emission Standards. Except as provided in the "sell-through" provisions of section 93120.12, Appendix 1, all distributors must comply with the requirements of section 93120.2(a) for all composite wood products and finished goods containing these materials that are sold, supplied, offered for sale, or purchased for sale in California.

(b) Additional Requirements to Help Ensure that Complying Composite Wood Products and Finished Goods are Purchased. Distributors must take reasonable prudent precautions to ensure that the composite wood products and composite wood products contained in finished goods that they purchase comply with the emission standards specified in section 93120.2(a). "Reasonable prudent precautions" include, at a minimum, instructing each supplier that the composite wood products and finished goods they supply to a distributor must comply with the applicable emission standards, and obtaining written documentation from each supplier that this is so.

In addition, distributors must keep records showing the date of purchase and the supplier of the composite wood products and finished goods, and document the precautions taken to ensure that the composite wood products and composite wood products contained in finished goods comply with applicable emission standards. These records must be kept in electronic or hard copy form for a minimum of two years and provided to ARB or local air district personnel upon request. This section does not affect the liability of any person for any violation of section 93120.2(a).

(c) Product Labeling Requirements for Composite Wood Products and Finished Goods.

(1) Composite Wood Products. If the composite wood products procured by a distributor are not modified by the distributor, no additional labeling is required. If the composite wood products are modified, distributors are subject to the labeling requirements specified for fabricators in section 93120.7(d).

(2) Finished goods containing HWPW, PB, or MDF. If the finished goods purchased by a distributor are not modified by the distributor, no additional labeling is required. If the finished goods are modified, the distributor must label the modified goods as specified for fabricators in section 93120.7(d).

(d) Statement of compliance. For each composite wood product or finished good made with these materials, the distributor must state on the bill of lading or invoice, that the composite wood products or composite wood products contained in finished goods comply with the applicable Phase 1 or Phase 2 emission standard specified in section 93120.2(a).

(e) Facility inspections. Distributors may be inspected by ARB or local air district personnel. In the course of an inspection, ARB or local air district personnel may request to audit records or secure samples for testing. Composite wood products or finished goods secured during an inspection are subject to testing, using the applicable enforcement test method specified in section 93120.9, to determine compliance with the applicable emission standards.

**➡§ 93120.6. Requirements for Importers of Hardwood Plywood (HWPW), Particleboard (PB), Medium Density Fiberboard (MDF), and Finished Goods Containing Those Materials.**

(a) Emission Standards. Except as provided in the "sell-through" provisions of section 93120.12, Appendix 1, all importers must comply with the requirements of section 93120.2(a) for all composite wood products and finished goods containing these materials that are sold, supplied, offered for sale, or purchased for sale in California.

(b) Additional Requirements to Help Ensure that Complying Composite Wood Products and Finished Goods are Purchased. Importers must take reasonable prudent precautions to ensure that the composite wood products and composite wood products contained in finished goods that they purchase comply with the emission standards specified in section 93120.2(a). "Reasonable prudent precautions" include, at a minimum, instructing each supplier that the goods they supply to an importer must comply with the applicable emission standards, and obtaining written documentation from each supplier that this is so.

In addition, importers must keep records showing the date of purchase and the supplier of the composite wood products and finished goods, and document the precautions taken to ensure that the composite wood products and composite wood products contained in finished goods comply with applicable emission standards. These records must be kept in electronic or hard copy form for a minimum of two years and provided to ARB or local air district personnel upon request. This section does not affect the liability of any person for any violation of section 93120.2(a).

(c) Product Labeling Requirements for Composite Wood Products and Finished Goods.

(1) Composite Wood Products. If the composite wood products procured by an importer are not modified by the importer, no additional labeling is required. If the composite wood products are modified, importers are subject to the labeling requirements specified for fabricators in section 93120.7(d).

(2) Finished goods containing HWPW, PB, or MDF. If the finished goods purchased by an importer are not modified by the importer, no additional labeling is required. If the finished goods are modified, the importer must label the modified goods as specified for fabricators in section 93120.7(d).

(d) Statement of compliance. For each composite wood product or finished good made with these materials, the importer must state on the bill of lading or invoice, that the composite wood products or composite wood products contained in finished goods comply with the applicable Phase 1 or Phase 2 emission standard specified in section 93120.2(a).

(e) Facility inspections. Importers may be inspected by ARB or local air district personnel. In the course of an inspection, ARB or local air district personnel may request to audit records or secure samples for testing. Composite wood products or finished goods secured during an inspection are subject to testing, using the applicable enforcement test method specified in section 93120.9, to determine compliance with the applicable emission standards.

**➡§ 93120.7. Requirements for Fabricators That Use Hardwood Plywood (HWPW), Particleboard (PB), Medium Density Fiberboard (MDF), and Finished Goods Containing Those Materials.**

(a) Emission Standards.

(1) Except as provided in the "sell-through" provisions of section 93120.12, Appendix 1, all fabricators must comply with the requirements of section 93120.2(a) for all composite wood products and finished goods containing these materials that are sold, supplied, offered for sale, or purchased for sale in California.

(2) Fabricators that produce laminated products, and do not manufacture composite wood products, do not need to comply with the manufacturer requirements regarding third party certification in section 93120.3(b).

(3) If the platform used by a fabricator to produce a laminated product consists of a composite wood product, the platform must comply with the applicable emission standards specified in section 93120.2(a).

(4) Fabricators manufacturing composite wood products exclusively for use by the fabricator in making finished goods must comply with all requirements of section 93120.3, except the product labeling requirements contained in section 93120.3(e).

(b) Exemptions.

(1) Windows that contain composite wood products are exempt from the requirements of this section if the window product contains less than five percent by volume of HWPW, PB, or MDF combined in relation to the total volume of the finished window product.

(2) Exterior doors and garage doors that contain composite wood products are exempt from the requirements of this section if either: (A) the doors are made from composite wood products manufactured with no-added formaldehyde based resins or ULEF resins; or (B) the doors contain less than three percent by volume of HWPW, PB, or MDF combined in relation to the total volume of the finished exterior door or garage door.

(3) Local government agencies and school districts do not need to comply with recordkeeping or product labeling requirements of section 93120.7 unless finished goods are being sold, offered for sale, or manufactured for sale in California.

(c) Additional Requirements to Help Ensure that Complying Composite Wood Products and Finished Goods are Purchased. Fabricators must take reasonable prudent precautions to ensure that the composite wood products and composite wood products contained in finished goods that they purchase are in compliance with the applicable emission standards specified in section 93120.2(a), and are labeled as complying with the applicable Phase 1 or Phase 2 standards in section 93120.2(a). "Reasonable prudent precautions" include, at a minimum, instructing each supplier that the goods they supply to the fabricator must comply with the applicable emission standards, and obtaining written documentation from each supplier that this is so.

In addition, fabricators must keep records showing the date of purchase and the supplier of the composite wood products and finished goods, and document the precautions taken to ensure that the composite wood products and composite wood products contained in finished goods comply with applicable emission standards. These records must be kept in electronic or hard copy form for a minimum of two years and provided to ARB or local air district personnel upon request. This section does not affect the liability of any person for any violation of section 93120.2(a).

(d) Product Labeling Requirements. Fabricators must:

(1) Label their finished goods containing HWPW, PB, or MDF destined for sale or supply in California. The label shall be applied as a stamp, tag, sticker, or bar code on every finished good produced, or on every box containing finished goods. The label shall include, at a minimum, the fabricator's name, the date the finished good was produced and a marking to denote that the product was made with HWPW, PB, or MDF that complies with the applicable Phase 1 or Phase 2 emission standards in section 93120.2(a). Finished goods shall be labeled as having been made with no-added formaldehyde based resins or ULEF resins if this is so for all HWPW, PB, or MDF used in fabricating the finished goods.

(2) Designate their goods as being made with HWPW, PB, or MDF that complies with the applicable emission standards specified in section 93120.2(a) on the bill of lading or invoice provided to distributors, importers, other fabricators, or retailers.

(e) Facility inspections. Fabricators are subject to periodic inspection by ARB or local air district personnel. In the course of an inspection, ARB or local air district personnel may request to audit records or secure samples for testing. Composite wood products or finished goods secured during an inspection are subject to testing, using the applicable enforcement test method specified in section 93120.9, to determine compliance with the applicable emission standards.

**➡§ 93120.8. Requirements for Retailers That Sell, Supply, or Offer for Sale Hardwood Plywood (HWPW), Particleboard (PB), Medium Density Fiberboard (MDF), and Finished Goods Containing Those Materials.**

(a) Emission Standards. Except as provided in the "sell-through" provisions of section 93120.12, Appendix 1, all retailers must comply with the requirements of section 93120.2(a) for all composite wood products and finished goods containing these materials that are sold, supplied, offered for sale, or purchased for sale in California.

(b) Additional Requirements to Help Ensure that Complying Composite Wood Products and Finished Goods are Purchased. Retailers must take reasonable prudent precautions to ensure that the composite wood products and composite wood products contained in finished goods that they purchase comply with the emission standards specified in section 93120.2(a). "Reasonable prudent precautions" include, at a minimum, instructing each supplier that the goods they supply to the retailer must comply with the applicable emission standards, and obtaining written documentation from each supplier that this is so.

In addition, retailers must keep records showing the date of purchase and the supplier of the composite wood products and finished goods, and document the precautions taken to ensure that the composite wood products and composite wood products contained in finished goods comply with applicable emission standards. These records must be kept in electronic or hard copy form for a minimum of two years and provided to ARB or local air district personnel upon request. This section does not affect the liability of any person for any violation of section 93120.2(a).

(c) Facility inspections. Retailers may be inspected by ARB or local air district personnel. In the course of an inspection, ARB or local air district personnel may request to audit records or secure samples for testing. Composite wood products or finished goods secured during an inspection are subject to testing, using the applicable enforcement test method specified in section 93120.9, to determine compliance with the applicable emission standards.

**➡§ 93120.9. Test Methods.**

(a) Compliance Test Methods for HWPW, PB, and MDF. Compliance with the emission standards for HWPW, PB, and MDF in section 93120.2(a) and, if applicable, section 93120.3(c) or (d) shall be demonstrated by conducting product emissions tests, verified by third party certification as specified in section 93120.4 and conducted using one of the following:

(1) The primary method, defined as ASTM E 1333-96(2002) (large chamber test method).

(2) A secondary method, defined as specified in ASTM D 6007-02, with the additional conditions specified below:

(A) The secondary method shall be operated using the testing conditions and loading rates specified in ASTM D 6007-02, and the conditioning time used to establish equivalence in section 93120.9(a)(2)(B). In addition, when testing panels the secondary method shall be operated by testing nine specimens representing evenly distributed portions of an entire panel. The nine specimens shall be tested in groups of three specimens, resulting in three test results, which shall be averaged to represent one data point for the panel.

(B) Equivalence between the secondary method and the primary method must be established, at least once each year, by the third party certifier for each testing laboratory used by the third party certifier. Minimum requirements for an equivalence demonstration shall include at least ten comparison sample sets, which compare the results of the primary and secondary methods. The following parameters must be met in the comparison:

1. For the primary method, each comparison sample shall consist of the result of simultaneously testing an appropriate number of panels (factoring in the loading rate) from the same batch of panels tested by the secondary method.

2. For the secondary method, each comparison sample shall consist of testing nine specimens representing evenly distributed portions of an entire panel. The nine specimens shall be tested in groups of three specimens (factoring in the loading rate), resulting in three test results, which shall be averaged to represent one data point for the panel, and matched to their respective primary method comparison sample result.

3. The ten comparison sample sets shall consist of testing a minimum of five sample sets in each of at least two of the following ranges of formaldehyde concentrations, as measured by the primary method:

a. Lower range: less than 0.07 ppm

b. Intermediate range: 0.07 to less than 0.15 ppm

c. Upper range: 0.15 to 0.25 ppm

4. The average and standard deviation of the difference of all comparison sets shall be calculated as follows. For each of the two ranges used for testing, the following computations shall be performed:

a. Denote the number of sets in the given range by $n$.

b. Compute the difference between the primary and secondary method value. Denote the difference for the $i^{th}$ set by $D_i$, where $i$ ranges from 1 to $n$.

c. Compute the average, $\overline{X}$, and standard deviation, $S$, of the differences according to the following formulas:

$$\overline{X} = \sum_{i=1}^{n} D_i / n$$

$$S = \sqrt{\sum_{i=1}^{n} (D_i - \overline{X})^2 / (n-1)}$$

5. The secondary method shall be considered equivalent to the primary method if the following condition is met for both tested ranges:

$$|\bar{X}| + 0.88S \leq C$$

where $C$ is equal to:

0.026 for the lower range;
0.038 for the intermediate range; and
0.052 for the upper range.

6. Equivalence must be established between the primary and secondary method to represent the range in emissions based on the emission standards specified in section 93120.2(a) for composite wood products that a third party certifier is approved to verify under section 93120.4 and, if applicable, the range in emissions for no-added formaldehyde based resins or ULEF resins.

(3) An alternate secondary test procedure may also be used as specified in sections 93120.9(a)(3)(A) through 93120.9(a)(3)(C).

(A) Chamber test methods other than ASTM E 1333-96(2002) (large chamber test method) may be used if they are demonstrated, following the minimum requirements specified in section 93120.9(a)(2)(B), to provide equivalent results to those obtained using ASTM E 1333-96(2002). All alternative secondary test methods must be approved in writing by the Executive Officer prior to use as specified below.

(B) An application to use an alternative secondary test method must be submitted to the ARB in writing, and must include, at a minimum, the following information and data:

1. A complete description of the test method used to quantify product emissions, including all procedures used, precision and reproducibility, and the criteria used to demonstrate the validity of the test method.

2. Results collected using the alternate secondary test method and corresponding equivalent emissions.

(C) Within 45 days of receipt of an application, the Executive Officer shall notify the applicant in writing that the application is complete, or if additional information or testing is required to complete the application. If the Executive Officer finds that an application complies with the requirements of this section, then he or she may issue an Executive Order certifying that the alternate secondary test procedure provides equivalent results to ASTM E 1333-96 (2002), and authorize its use for compliance testing.

(b) Enforcement Test Method for HWPW, PB, and MDF Samples. Emission testing of samples of HWPW, PB, and MDF shall be conducted by ARB or local air district personnel using a secondary method, a large chamber [ASTM E 1333-96(2002)], or an alternate secondary test procedure as specified in section 93120.9(a). Sample handling procedures shall be followed as specified in the applicable ASTM method or alternate secondary test procedures.

(c) Enforcement Test Method for Finished Goods Containing HWPW, PB, and MDF. Emission testing of

samples of HWPW, PB, and MDF contained in finished goods shall be conducted by ARB or local air district personnel using a secondary method, or an alternate secondary test procedure as specified in section 93120.9(a). Sample handling procedures shall be followed that are consistent with those specified in ASTM D 6007-02 or alternate secondary test procedures.

(d) Quality Control Test Method. A test method correlated to either the primary or secondary methods for performing routine quality control tests as required by section 93120.3. A correlation must be established between the quality control test method and the primary, secondary, or alternate secondary test method. The correlation must be based on a minimum sample size of five data pairs.

### ➡§ 93120.10. Incorporation by Reference.

The following documents are incorporated by reference in this airborne toxic control measure:

(a) ANSI A135.4-2004. American National Standard - Basic Hardboard, 2004.

(b) ANSI A135.5-2004. American National Standard - Prefinished Hardboard Paneling, 2004.

(c) ANSI A135.6-2006. American National Standard - Hardboard Siding, 2006.

(d) ANSI A190.1-2002. American National Standard - Structural Glued Laminated Timber, 2002.

(e) ANSI A208.1-1999. American National Standard - Particleboard, 1999.

(f) ANSI A208.2-2002. American National Standard - Medium Density Fiberboard, 2002.

(g) ANSI/HPVA HP-1-2004. American National Standard for Hardwood and Decorative Plywood, 2004.

(h) ASTM D 5055-05. Standard Specification for Establishing and Monitoring Structural Capacities of Prefabricated Wood I-Joists, 2005.

(i) ASTM D 5456-06. Standard Specification for Evaluation of Structural Composite Lumber Products, 2006.

(j) ASTM D 5582-00. Standard Test Method for Determining Formaldehyde Levels from Wood Products Using a Desiccator, 2000.

(k) ASTM D 6007-02. Standard Test Method for Determining Formaldehyde Concentration in Air from Wood Products Using a Small Scale Chamber, 2002.

(l) ASTM E 1333-96(2002). Standard Test Method for Determining Formaldehyde Concentrations in Air and Emission Rates from Wood Products Using a Large Chamber, 2002.

(m) ILAC. International Laboratory Accreditation Cooperation Mutual Recognition Arrangement, 2000.

(n) PS 1-07. Voluntary Product Standard - Structural Plywood. National Institute of Standards and Technology, 2007.

(o) PS 2-04. Voluntary Product Standard - Performance Standard for Wood-Based Structural-Use Panels. National Institute of Standards and Technology, 2004.

### ➡§ 93120.11. Severability.

Each part of this airborne toxic control measure (ATCM) shall be deemed severable, and in the event that any part of this ATCM is held to be invalid, the remainder of this ATCM shall continue in full force and effect.

### ➡§ 93120.12. Appendices.

This section contains Appendices 1-3 to the Airborne Toxic Control Measure to Reduce Formaldehyde Emissions from Composite Wood Products.