

State of California
AIR RESOURCES BOARD

ERRATA

TITLE 13 and 17. CALIFORNIA AIR RESOURCES BOARD

By notice dated August 28, 2007, and published in the September 7, 2007, California Regulatory Notice Register, Register No. 36-Z, the Air Resources Board (the “Board” or “ARB”) provided Notice of Public Hearing to Consider the Adoption of Proposed Regulations to Reduce Emissions from Diesel Engines on Commercial Harbor Craft Operated within California Waters and 24 Nautical Miles of the California Baseline.

PLEASE BE ADVISED there are errors in the posted regulatory documents regarding several tables wherein when converted to PDF format, “ \geq ” or “ \leq ” symbols were converted to “=” symbol:

The Initial Statement of Reasons, page 8, Table 4 appeared as follows:

Table 4: U.S. EPA Marine Engine Standards Effective Dates and Emission Limits for Category 1 and Category 2 Engines Used in Harbor Craft

Category	Tier Level	Adoption Date	Effective Date	PM (g/bhp-hr)	NOx (g/bhp-hr)
1	1	IMO 1997 U.S. EPA 2003	2000 2004	N/A	7.3 – 12.7 ^B
	2	U.S. EPA 1999	2004-2007	0.15-0.3	5.4-5.6 ^C
	3	U.S. EPA proposed 2007	2009-2114	0.08-0.3	3.5-5.6 ^C
	4 ^A	U.S. EPA proposed 2007	2017	0.03	1.3
2	1	IMO 1997 U.S. EPA 2003	2000 2004	N/A	7.3 – 12.7 ^B
	2	U.S. EPA 1999	2007	0.2	5.8 ^C
	3	U.S. EPA proposed 2007	2013	0.1	4.6 ^C
	4 ^A	U.S. EPA proposed 2007	2016-2017	0.03	1.3

(40 CFR Part 94)

^A Applies only to engines with maximum horsepower rating of 800 hp (600 kW) or more.

^B Standard is a function of engine speed, revolutions per minute (rpm). Standard=12.7 for engines with engine speed = 2000 rpm. Standard=7.3 for engines with engine speed =130 rpm. For engines between 130 and 2000 rpm, standard = $33.57 \times \text{rpm}^{-0.2}$.

^C NOx is NOx + total HC.

The Initial Statement of Reasons, page 8, Table 4 has been corrected as follows:

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Category	Tier Level	Adoption Date	Effective Date	PM (g/bhp-hr)	NOx (g/bhp-hr)
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	2	U.S. EPA 1999	2004-2007	0.15-0.3	5.4-5.6 ^C
	3	U.S. EPA proposed 2007	2009-2114	0.08-0.3	3.5-5.6 ^C
	4 ^A	U.S. EPA proposed 2007	2017	0.03	1.3
2	1	IMO 1997 U.S. EPA 2003	2000 2004	N/A	7.3 – 12.7 ^B
	2	U.S. EPA 1999	2007	0.2	5.8 ^C
	3	U.S. EPA proposed 2007	2013	0.1	4.6 ^C
	4 ^A	U.S. EPA proposed 2007	2016-2017	0.03	1.3

(40 CFR Part 94)

^A Applies only to engines with maximum horsepower rating of 800 hp (600 kW) or more.

^B Standard is a function of engine speed, revolutions per minute (rpm). Standard=12.7 for engines with engine speed \geq 2000 rpm. Standard=7.3 for engines with engine speed \leq 130 rpm. For engines between 130 and 2000 rpm, standard = $33.57 \times \text{rpm}^{-0.2}$.

^C NOx is NOx + total HC.

The Initial Statement of Reasons, page 10, Table 5 appeared as follows:

Table 5: Compliance Dates for Vessels with Homeports outside SCAQMD

Engine Model Year	Total Annual Hours of Operation	Compliance Year
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
1996 - 2000	=1500	12/31/2015
1996 - 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 emission standards by December 31, 2012.]

The Initial Statement of Reasons, page 10, Table 5 has been corrected as follows:

Table 5: Compliance Dates for Vessels with Homeports outside SCAQMD

Engine Model Year	Total Annual Hours of Operation	Compliance Year
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
1996 - 2000	≥1500	12/31/2015
1996 - 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 emission standards by December 31, 2012.]

The Technical Support Document, page II-3, Table II-2 appeared as follows:

Table II-2: U.S. EPA Tier 1 Standards for Marine Diesel Engines Used in Harbor Craft

Category	Horsepower	Engine Speed	Effective Date	PM (g/bhp-hr) ^A	NOx (g/bhp-hr) ^A	NOx + HC (g/bhp-hr) ^A
Small	< 11	-	2000	0.75	-	7.8
	11 to < 25	-	2000	0.60	-	7.1
	25 to < 50	-	1999	0.60	-	7.1
1 and 2	50 to <5000	rpm = 2000	2004	-	7.3	-
		130 = rpm <2000	2004	-	33.57Xrpm ^{0.2}	-
		rpm <130	2004	-	12.7	-

(40 CFR Part 94)

^A Converted standards from 40 CFR 94, which are expressed in grams per kilowatt-hour (g/kW-hr), to grams per brake horsepower-hour (g/bhp-hr), by the following: g/kW-hr X 0.746 = g/bhp-hr

The Technical Support Document, page II-3, Table II-2 has been corrected as follows:

Table II-2: U.S. EPA Tier 1 Standards for Marine Diesel Engines Used in Harbor Craft

Category	Horsepower	Engine Speed	Effective Date	PM (g/bhp-hr) ^A	NOx (g/bhp-hr) ^A	NOx + HC (g/bhp-hr) ^A
Small	< 11	-	2000	0.75	-	7.8
	11 to < 25	-	2000	0.60	-	7.1
	25 to < 50	-	1999	0.60	-	7.1
1 and 2	50 to <5000	rpm ≥ 2000	2004	-	7.3	-
		130 ≤ rpm <2000	2004	-	33.57Xrpm ^{-0.2}	-
		rpm <130	2004	-	12.7	-

(40 CFR Part 94)

^A Converted standards from 40 CFR 94, which are expressed in grams per kilowatt-hour (g/kW-hr), to grams per brake horsepower-hour (g/bhp-hr), by the following: g/kW-hr X 0.746 = g/bhp-hr

The Technical Support Document, page III-8, Table III-3 appeared as follows:

Table III-3: U.S. EPA Marine Engine Standards Effective Dates and Emission Limits for Category 1 and Category 2 Engines Used in Harbor Craft

Category	Tier Level	Adoption Date	Effective Date	PM (g/bhp-hr) ^A	NOx (g/bhp-hr) ^A
1	1	IMO 1997 U.S. EPA 2003	2000 2004	N/A	7.3 – 12.7 ^B
	2	U.S. EPA 1999	2004-2007	0.15-0.3	5.4-5.6 ^E
	3	U.S. EPA proposed 2007 ^C	2009-2114	0.08-0.3	3.5-5.6 ^E
	4 ^D	U.S. EPA proposed 2007 ^C	2017	0.03	1.3
2	1	IMO 1997 U.S. EPA 2003	2000 2004	N/A	7.3 – 12.7 ^B
	2	U.S. EPA 1999	2007	0.2	5.8 ^E
	3	U.S. EPA proposed 2007 ^C	2013	0.1	4.6 ^E
	4 ^D	U.S. EPA proposed 2007 ^C	2016-2017	0.03	1.3

(40 CFR Part 94)

^A Converted standards from 40 CFR 94, which are expressed in g/kW-hr, to g/bhp-hr, by the following: g/kW-hr X 0.746 = g/bhp-hr

^B Standard is a function of engine speed, revolutions per minute (rpm). Standard=12.7 for engines with engine speed = 2000 rpm. Standard=7.3 for engines with engine speed =130 rpm. For engines between 130 and 2000 rpm, standard = 33.57 X rpm^{-0.2}

^C Proposed U.S. EPA marine engine Standard per April 3, 2007, Draft Locomotive and Marine Notice of Proposed Rule Making (NPRM).

^D Applies only to engines with maximum horsepower rating of 800 hp (600 kW) or more.

^E NOx is NOx + total HC

The Technical Support Document, page III-8, Table III-3 has been corrected as follows:

Table III-3: U.S. EPA Marine Engine Standards Effective Dates and Emission Limits for Category 1 and Category 2 Engines Used in Harbor Craft

Category	Tier Level	Adoption Date	Effective Date	PM (g/bhp-hr) ^A	NOx (g/bhp-hr) ^A
1	1	IMO 1997 U.S EPA 2003	2000 2004	N/A	7.3 – 12.7 ^B
	2	U.S. EPA 1999	2004-2007	0.15-0.3	5.4-5.6 ^E
	3	U.S. EPA proposed 2007 ^C	2009-2114	0.08-0.3	3.5-5.6 ^E
	4 ^D	U.S. EPA proposed 2007 ^C	2017	0.03	1.3
2	1	IMO 1997 U.S EPA 2003	2000 2004	N/A	7.3 – 12.7 ^B
	2	U.S. EPA 1999	2007	0.2	5.8 ^E
	3	U.S. EPA proposed 2007 ^C	2013	0.1	4.6 ^E
	4 ^D	U.S. EPA proposed 2007 ^C	2016-2017	0.03	1.3

(40 CFR Part 94)

^A Converted standards from 40 CFR 94, which are expressed in g/kW-hr, to g/bhp-hr, by the following:
g/kW-hr X 0.746 = g/bhp-hr

^B Standard is a function of engine speed, revolutions per minute (rpm). Standard=12.7 for engines with engine speed \geq 2000 rpm. Standard=7.3 for engines with engine speed \leq 130 rpm. For engines between 130 and 2000 rpm, standard = $33.57 \times \text{rpm}^{-0.2}$

^C Proposed U.S. EPA marine engine Standard per April 3, 2007, Draft Locomotive and Marine Notice of Proposed Rule Making (NPRM).

^D Applies only to engines with maximum horsepower rating of 800 hp (600 kW) or more.

^E NOx is NOx + total HC

The Technical Support Document, page V-12, Tables V-2 and V-3 appeared as follows:

Table V-2: Compliance Dates for Vessels with Homeports Outside SCAQMD

Engine Model Year	Total Annual Hours of Operation	Compliance Year
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
1996 – 2000	= 1500	12/31/2015
1996 – 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 emission standards by December 31, 2012.]

Table V-3: Compliance Dates for Vessels with Homeports in SCAQMD

Engine Model Year	Total Annual Hours of Operation	Compliance Year
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	12/31/2014
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 emission standards by December 31, 2010.]

The Technical Support Document, page V-12, Tables V-2 and V-3 have been corrected as follows:

Table V-2: Compliance Dates for Vessels with Homeports Outside SCAQMD

Engine Model Year	Total Annual Hours of Operation	Compliance Year
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
1996 – 2000	≥ 1500	12/31/2015
1996 – 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 emission standards by December 31, 2012.]

Table V-3: Compliance Dates for Vessels with Homeports in SCAQMD

Engine Model Year	Total Annual Hours of Operation	Compliance Year
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	12/31/2014
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 emission standards by December 31, 2010.]

The Technical Support Document, page VIII-25, Table VIII-16 appeared as follows:

Table VIII-16: Carl Moyer Program Project Completion Deadline for In-Use Ferries, Excursion Vessels, Tugboats, and Towboats, Except those with Homeport in the SCAQMD

Engine Model Year	Total Annual Hours of Operation	Proposed Rule Compliance Deadline	Moyer Project Completion Deadline
Pre-1975	=1500	12/31/2009	No funds available
Pre-1975	300-1500	12/31/2010	12/31/2007
1976-1985	= 1500	12/31/2011	12/31/2008
1976-1985	300-1500	12/31/2012	12/31/2009
1986-1995	= 1500	12/31/2013	12/31/2010
1986-1995	300-1500	12/31/2014	12/31/2011
1996-2000	= 1500	12/31/2015	12/31/2012
1996-2000	300-1500	12/31/2016	12/31/2013
2001-2002	= 300	12/31/2017	12/31/2014
2003+	=300	12/31/2018	12/31/2015

The Technical Support Document, page VIII-25, Table VIII-16 has been corrected as follows:

Table VIII-16: Carl Moyer Program Project Completion Deadline for In-Use Ferries, Excursion Vessels, Tugboats, and Towboats, Except those with Homeport in the SCAQMD

Engine Model Year	Total Annual Hours of Operation	Proposed Rule Compliance Deadline	Moyer Project Completion Deadline
Pre-1975	≥1500	12/31/2009	No funds available
Pre-1975	300-1500	12/31/2010	12/31/2007
1976-1985	≥ 1500	12/31/2011	12/31/2008
1976-1985	300-1500	12/31/2012	12/31/2009
1986-1995	≥ 1500	12/31/2013	12/31/2010
1986-1995	300-1500	12/31/2014	12/31/2011
1996-2000	≥ 1500	12/31/2015	12/31/2012
1996-2000	300-1500	12/31/2016	12/31/2013
2001-2002	≥ 300	12/31/2017	12/31/2014
2003+	≥300	12/31/2018	12/31/2015

Appendix A of both the Staff Report and the Technical Support Document, page A-14, Tables 1 and 2 appeared as follows:

Table 1: U.S. EPA Tier 1 Marine Engine Emission Standards

Category	Power (kW) & Displacement (Liters/cylinder)	Engine Speed	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 x rpm ^{-0.2}	-
		rpm <130	2004	-	12.7	-

(40 CFR Part 94)

*converted maximum power rating from 40 CFR 94, which are expressed in g/kW-hr to g/hp-hr by the following: g/kW-hr (0.746) = g/hp-hr.

Table 2: U.S. EPA Tier 2 Marine Engine Emission Standards for NO_x + HC, PM, and CO

Category	Displacement (liters/cylinder)	Date	NO _x +HC (g/bhp-hr)*	PM (g/bhp-hr)*	CO (g/bhp-hr)
1	Disp. < 0.9 and power =50 hp*	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 maximum power rating from 40 CFR 94, which are expressed in g/kW-hr to g/hp-hr by the following: g/kW-hr (0.746) = g/hp-hr or kW (1.34) = hp

Appendix A of both the Staff Report and the Technical Support Document, page A-14, Tables 1 and 2 have been corrected as follows:

Table 1: U.S. EPA Tier 1 Marine Engine Emission Standards

Category	Power (kW) & Displacement (Liters/cylinder)	Engine Speed	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 x rpm ^{-0.2}	-
		rpm <130	2004	-	12.7	-

(40 CFR Part 94)

*converted maximum power rating from 40 CFR 94, which are expressed in g/kW-hr to g/hp-hr by the following: g/kW-hr (0.746) = g/hp-hr.

Table 2: U.S. EPA Tier 2 Marine Engine Emission Standards for NO_x + HC, PM, and CO

Category	Displacement (liters/cylinder)	Date	NO _x +HC (g/bhp-hr)*	PM (g/bhp-hr)*	CO (g/bhp-hr)
1	Disp. < 0.9 and power ≥ 50 hp*	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 maximum power rating from 40 CFR 94, which are expressed in g/kW-hr to g/hp-hr by the following: g/kW-hr (0.746) = g/hp-hr or kW (1.34) = hp

Appendix A of both the Staff Report and the Technical Support Document, page A-25, Table 7 appeared as follows:

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
1996 - 2000	=1500	12/31/2015
1996 - 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)(D) by December 31, 2012.].

Appendix A of both the Staff Report and the Technical Support Document, page A-25, Table 7 has been corrected as follows:

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
1996 - 2000	≥1500	12/31/2015
1996 - 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)(D) by December 31, 2012.]

Appendix A of both the Staff Report and the Technical Support Document, page A-53, Tables 1 and 2 appeared as follows:

Table 1: U.S. EPA Tier 1 Marine Engine Emission Standards

Category	Power (kW) & Displacement (Liters/cylinder)	Engine Speed	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 x rpm ^{-0.2}	-
		rpm <130	2004	-	12.7	-

(40 CFR Part 94)

*converted maximum power rating from 40 CFR 94, which are expressed in g/kW-hr to g/hp-hr by the following: g/kW-hr (0.746) = g/hp-hr.

Table 2: U.S. EPA Tier 2 Marine Engine Emission Standards for NO_x + HC, PM, and CO

Category	Displacement (liters/cylinder)	Date	NO _x +HC (g/bhp-hr)*	PM (g/bhp-hr)*	CO (g/bhp-hr)
1	Disp. < 0.9 and power =50 hp*	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 maximum power rating from 40 CFR 94, which are expressed in g/kW-hr to g/hp-hr by the following: g/kW-hr (0.746) = g/hp-hr or kW (1.34) = hp

Appendix A of both the Staff Report and the Technical Support Document, page A-53, Tables 1 and 2 have been corrected as follows:

Table 1: U.S. EPA Tier 1 Marine Engine Emission Standards

Category	Power (kW) & Displacement (Liters/cylinder)	Engine Speed	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 x rpm ^{-0.2}	-
		rpm <130	2004	-	12.7	-

(40 CFR Part 94)

*converted maximum power rating from 40 CFR 94, which are expressed in g/kW-hr to g/hp-hr by the following: g/kW-hr (0.746) = g/hp-hr.

Table 2: U.S. EPA Tier 2 Marine Engine Emission Standards for NO_x + HC, PM, and CO

Category	Displacement (liters/cylinder)	Date	NO _x +HC (g/bhp-hr)*	PM (g/bhp-hr)*	CO (g/bhp-hr)
1	Disp. < 0.9 and power ≥ 50 hp*	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 maximum power rating from 40 CFR 94, which are expressed in g/kW-hr to g/hp-hr by the following: g/kW-hr (0.746) = g/hp-hr or kW (1.34) = hp

Appendix A of both the Staff Report and the Technical Support Document, page A-64, Table 7 appeared as follows:

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
1996 - 2000	=1500	12/31/2015
1996 - 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)(D) by December 31, 2012.]

Appendix A of both the Staff Report and the Technical Support Document, page A-64, Table 7 has been corrected as follows:

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
1996 - 2000	≥1500	12/31/2015
1996 - 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)(D) by December 31, 2012.]

PLEASE BE ADVISED there are errors in the posted regulatory document regarding emission totals listed in the Technical Support Document, page III-15, Table III-8, “Estimated 2004 Harbor Craft Emissions by District” shows the Ventura County APCD PM and NOx totals as incorrect:

Table III-8: Estimated 2004 Harbor Craft Emissions by District

District	PM (tpd) ^A	NOx (tpd) ^A
Bay Area AQMD	1.2	26.9
South Coast AQMD	0.8	18.7
San Diego County APCD	0.4	9.2
Monterey Bay Unified APCD	0.2	3.6
Ventura County APCD	0.2	3.5
Santa Barbara County APCD	0.1	2.7
North Coast Unified APCD	0.1	2.3
Yolo/Solano AQMD	0.1	1.9
San Luis Obispo County APCD	0.1	1.4
Mendocino County AQMD	0.1	1.3
Northern Sonoma County APCD	0.1	1.2
San Joaquin Valley Unified APCD	<0.1	0.8
El Dorado County APCD	<0.1	0.3
Placer County APCD	<0.1	0.3
Totals	3.3^B	73.2^B

^A Emissions in tons per day (tpd)

^B Numbers may not add up due to rounding

The Technical Support Document, page III-15, Table III-8 has been corrected as follows:

Table III-8: Estimated 2004 Harbor Craft Emissions by District

District	PM (tpd) ^A	NOx (tpd) ^A
Bay Area AQMD	1.2	26.9
South Coast AQMD	0.8	18.7
San Diego County APCD	0.4	9.2
Monterey Bay Unified APCD	0.2	3.6
Ventura County APCD	0.1	2.5
Santa Barbara County APCD	0.1	2.7
North Coast Unified APCD	0.1	2.3
Yolo/Solano AQMD	0.1	1.9
San Luis Obispo County APCD	0.1	1.4
Mendocino County AQMD	0.1	1.3
Northern Sonoma County APCD	0.1	1.2
San Joaquin Valley Unified APCD	<0.1	0.8
El Dorado County APCD	<0.1	0.3
Placer County APCD	<0.1	0.3
Totals	3.3^B	73.2^B

^A Emissions in tons per day (tpd)

B. Numbers may not add up due to rounding

PLEASE BE ADVISED there is an error in the posted regulatory document regarding emission totals listed in the Technical Support Document, Appendix B, page B-30, Table III-3, “NOx, PM Emissions By Air District and Air Basin in 2004” the table lists the NOx emissions incorrectly as “Tons/year”:

Table III-3 NOx, PM Emissions By Air District and Air Basin in 2004

Air Districts	Number of Vessels	NOx Tons/year	NOx in OCS	PM Tons/day	PM in OCS
Bay Area AQMD (BA)	1,468	26.9	10.2	1.2	0.5
El Dorado County APCD (ED)	9	0.3	0.0	0.0	0.0
Mendocino County AQMD (MEN)	169	1.3	1.1	0.1	0.0
Monterey Bay Unified APCD (MBU)	379	3.6	2.7	0.2	0.1
North Coast Unified APCD (NCU)	299	2.3	1.9	0.1	0.1
Northern Sonoma County APCD (NS)	145	1.2	1.0	0.1	0.0
Placer County APCD (PLA)	9	0.3	0.0	0.0	0.0
San Diego County APCD (SD)	307	9.2	5.5	0.4	0.2
San Joaquin Valley Unified APCD (SJU)	43	0.8	0.0	0.0	0.0
San Luis Obispo County APCD (SLO)	145	1.4	1.1	0.1	0.1
Santa Barbara County APCD (SB)	193	2.7	2.0	0.1	0.1
South Coast AQMD (SC)	745	18.7	11.7	0.8	0.5
Ventura County APCD (VEN)	194	2.5	1.8	0.1	0.1
Yolo/Solano AQMD (YS)	81	1.9	0.0	0.1	0.0
Total	4,185	73.2	38.9	3.3	1.8

The Technical Support Document, Appendix B, page B-30, Table III-3 has been corrected as follows:

Table III-3 NOx, PM Emissions By Air District and Air Basin in 2004

Air Districts	Number of Vessels	NOx Tons/day	NOx in OCS	PM Tons/day	PM in OCS
Bay Area AQMD (BA)	1,468	26.9	10.2	1.2	0.5
El Dorado County APCD (ED)	9	0.3	0.0	0.0	0.0
Mendocino County AQMD (MEN)	169	1.3	1.1	0.1	0.0
Monterey Bay Unified APCD (MBU)	379	3.6	2.7	0.2	0.1
North Coast Unified APCD (NCU)	299	2.3	1.9	0.1	0.1
Northern Sonoma County APCD (NS)	145	1.2	1.0	0.1	0.0
Placer County APCD (PLA)	9	0.3	0.0	0.0	0.0
San Diego County APCD (SD)	307	9.2	5.5	0.4	0.2
San Joaquin Valley Unified APCD (SJU)	43	0.8	0.0	0.0	0.0
San Luis Obispo County APCD (SLO)	145	1.4	1.1	0.1	0.1
Santa Barbara County APCD (SB)	193	2.7	2.0	0.1	0.1
South Coast AQMD (SC)	745	18.7	11.7	0.8	0.5
Ventura County APCD (VEN)	194	2.5	1.8	0.1	0.1
Yolo/Solano AQMD (YS)	81	1.9	0.0	0.1	0.0
Total	4,185	73.2	38.9	3.3	1.8

The complete text of the notice, the Initial Statement of Reasons and the Technical Support Document are available on the ARB Internet site for this rulemaking at www.arb.ca.gov/regact/2007/chc07/chc07.htm.

Any questions regarding these corrections should be directed to Alexa Malik, Manager, Board Administration & Regulatory Coordination Unit at (916) 322-6070 or Amy Whiting, Regulations Coordinator at (916) 322-6533.

If you have a disability-related accommodation need, please go to <http://www.arb.ca.gov/html/ada/ada.htm> for assistance or contact the ADA Coordinator at (916) 323-4916. If you are a person who needs assistance in a language other than English, please contact the Bilingual Coordinator at (916) 324-5049. TTY/TDD/Speech-to-Speech users may dial 7-1-1 for the California Relay Service.

CALIFORNIA AIR RESOURCES BOARD

/S/

Tom Cackette
Acting Executive Officer

Date: September 25, 2007

The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption. For a list of simple ways you can reduce demand and cut your energy costs see our Website at www.arb.ca.gov