4. If the facility fails to demonstrate mercury emissions less than the 14.0 μg/dscm (corrected to seven percent oxygen) average for any 12 consecutive quarter period up until January 3, 2012, the requirements of (a)2iii above shall apply starting January 3, 2012.

5. If the facility demonstrates mercury emissions less than the 14.0 μg/dscm (corrected to seven percent oxygen) average for all rolling 12 consecutive quarter periods up until January 3, 2012 and the facility chooses to continue to comply with this standard after this trial period, the 14.0 μg/dscm limit (corrected to seven percent oxygen) shall apply for every 12 consecutive quarter periods thereafter. Compliance shall be determined using valid stack emission test data from the first quarter after the end of the trial period and using the valid stack emission test data from the 11 quarters immediately preceding the first quarter. Thereafter, the facility shall not revert back to compliance with (a)2iii above.

Amended by R.2004 d.443, effective December 6, 2004 (operative January 3, 2005).
See: 36 N.J.R. 123(a), 36 N.J.R. 5406(a).
Rewrote the section.

7:27–27.5 Hospital/medical/infectious waste (HMIW) incinerators

(a) Each owner or operator of an HMIW incinerator of any size shall operate the incinerator in accordance with (b) below. The owners or operators of co-fired combustors are not subject to the requirements of this section. Any co-fired combustors which are co-fired with municipal solid waste are subject to the mercury emission standards of N.J.A.C. 7:27–27.4 for MSW incinerators.

(b) On and after January 3, 2006, the emissions of mercury from any HMIW incinerator shall not exceed 55.0 μ/dscm corrected to seven percent oxygen.

(c) For any HMIW incinerator existing as of January 3, 2005, compliance with (b) above shall be determined by valid stack emission testing within one year after January 3, 2005 and every five years thereafter.

(d) For any HMIW incinerator constructed, reconstructed, or modified after January 3, 2005, compliance with (b) above shall be determined by valid stack emission testing within 180 calendar days after the start-up of the constructed, reconstructed, or modified incinerator and every five years thereafter.

(e) All stack emission tests shall consist of a minimum of three valid test runs. Compliance with (b) above shall be based on the average of all test runs conducted during stack emission testing. The stack emission testing shall be conducted in accordance with a test protocol approved pursuant to N.J.A.C. 7:27–27.8(a) and (b), except the protocol submittal deadline shall be 90 calendar days prior to the performance of stack emission testing for any HMIW incinerator.

(f) The owner or operator of an HMIW incinerator shall submit to the Department a written plan prior to January 3, 2006, certified pursuant to N.J.A.C. 7:27–1.39, for the purchasing of mercury-free supplies that will be used at the facility and preventing mercury containing waste from being incinerated to the maximum extent feasible. The owner or operator of a HMIW incinerator shall submit to the Department the plan at the following address:

Chief, Bureau of Pre–Construction Permits
Air Quality Permitting Element
Division of Air Quality
Department of Environmental Protection
PO Box 027
Trenton, New Jersey 08625–0027

(g) For supplies for which mercury-free substitutes are not reasonably available, such as fluorescent bulbs, the owner or operator shall send waste from such supplies to an appropriate facility for disposal to prevent the incineration of any such waste in an HMIW incinerator.

New Rule, R.2004 d.443, effective December 6, 2004 (operative January 3, 2005).
See: 36 N.J.R. 123(a), 36 N.J.R. 5406(a).

7:27–27.6 Iron or steel melters

(a) On and after January 3, 2010, each owner or operator of an iron or steel melter of any size shall operate the iron or steel melter in accordance with the provisions specified in either (a)1 or 2 below. Compliance with this standard shall be measured pursuant to (b) below.

1. The emissions of mercury from any iron or steel melter shall not exceed 35.0 mg/ton (milligram of mercury emissions per ton of iron or steel production), based on the annual weighted average of all valid stack emission tests performed for four consecutive quarters weighted for the production each quarter; or

2. The reduction efficiency for control of mercury emissions of the air pollution control apparatus of any iron or steel melter shall be at least 75 percent, based on the annual weighted average of all valid stack emission tests performed for four consecutive quarters weighted for the production each quarter.

(b) On and after January 3, 2006, the owner or operator of an iron or steel melter who is determining compliance with (a)1 above shall conduct stack emission testing every quarter to measure mercury in the gas stream in the stack. On and after January 3, 2006, the owner or operator of an iron or steel melter who is determining compliance with (a)2 above shall conduct stack emission testing every quarter to measure mercury in the gas stream at the inlet of the air pollution control apparatus serving each iron or steel melter, and simultaneously conduct stack emission testing every quarter to measure mercury in the gas stream at the exit of the air pollution control apparatus. There shall be at least

NEW JERSEY STATE LIBRARY

three valid stack emission tests per quarter, and at least 45 days between the stack emission testing performed for a given quarter and the stack emission testing performed for the preceding quarter, unless a shorter period is approved by the Department. The stack emission testing shall be conducted in accordance with a stack emission test protocol approved pursuant to N.J.A.C. 7:27–27.8(a) and (b). Compliance is to be determined by averaging three stack emission test runs per quarter for four consecutive quarters, measuring the net steel production for each quarter, and then calculating annual weighted averages using the quarterly averages and the net steel production.

(c) Notwithstanding the provisions of (b) above, any owner or operator who achieves and maintains compliance with (a) above for eight consecutive quarters for all applicable iron or steel melters located at a facility, may reduce the frequency of stack emission testing from each quarter to stack emission testing performed every fourth quarter after the eighth quarter test in which annual weighted average compliance was determined. However, if the annual stack emission testing fails to demonstrate compliance with (a) above, then the frequency of stack emission testing shall revert to that indicated in (b) above.

(d) The owner or operator of an iron or steel melter shall submit to the Department a written plan prior to January 3, 2006, certified in accordance with N.J.A.C. 7:27–1.39, establishing a mercury in scrap minimization program. The owner or operator shall submit the plan to the Department at the following address:

Chief, Bureau of Pre–Construction Permits
Air Quality Permitting Element
Division of Air Quality
Department of Environmental Protection
PO Box 027
Trenton, New Jersey 08625–0027

(e) Each mercury minimization and source separation plan must include the information specified in the paragraphs below:

1. A materials acquisition program specifying that the iron or steel melter will only purchase mercury free scrap or will purchase scrap only from scrap suppliers that remove accessible mercury switches from the trunks, hoods, and anti-lock braking systems of any automobile bodies contained in the scrap. The owner or operator shall obtain and maintain on site a copy of the procedures used by the scrap supplier for either removing accessible mercury switches, or for purchasing automobile bodies that have had mercury switches removed, as applicable; and

2. Procedures for visual inspection of a representative portion, but not less than 10 percent, of all incoming mercury-free scrap shipments to ensure that the shipments contain only mercury-free scrap, and procedures for visual inspection of a representative portion, but not less than 10 percent, of all other incoming scrap to assist in verifying that mercury has been removed from the scrap.

i. The inspection procedures shall identify the location(s) where inspections are to be performed for each type of shipment. The selected location(s) shall provide a reasonable vantage point, considering worker safety, for visual inspection.

ii. The inspection procedures shall include maintaining records that document each visual inspection and the results of the inspection.

iii. The inspection procedures shall include provisions for rejecting or returning entire or partial scrap shipments from which mercury has not been removed, and limiting purchases from suppliers of mercury-free scrap whose shipments fail to provide mercury-free scrap for more than three inspections in one calendar year.

(f) The owner or operator shall operate at all times according to the mercury minimization and source separation plan to minimize, to the extent practicable, the amount of mercury in the charge material used by the iron or steel melters.

(g) The mercury minimization and source separation plan is subject to Department approval and may be incorporated into a pre-construction or operating permit.

(h) The owner or operator shall maintain a copy of the mercury minimization and source separation plan on site and make it readily available to all plant personnel with materials acquisition or inspection duties.

(i) The owner or operator shall provide a copy of the materials acquisition program described in (e)1 above to each of its scrap suppliers.

New Rule, R.2004 d.443, effective December 6, 2004 (operative January 3, 2005).
See: 36 N.J.R. 123(a), 36 N.J.R. 5406(a).

7:27–27.7 Coal-fired boilers

(a) On and after December 15, 2007, each owner or operator of a coal-fired boiler of any size shall operate the coal-fired boiler in accordance with the provisions specified in either (a)1 or 2 below, except as specified in (d) and (e) below. Compliance with this standard shall be measured pursuant to (b) below.

1. The emissions of mercury from any coal-fired boiler shall not exceed 3.00 mg/MW-hr, based on an annual weighted average of all valid stack emission tests performed for four consecutive quarters weighted by megawatt hours produced each quarter; or

2. The reduction efficiency for control of mercury emissions of the air pollution control apparatus for control of mercury of any coal-fired boiler shall be at least 90 percent, based on the annual weighted average of all valid stack emission tests performed for four consecutive quarters weighted by megawatt hours produced each quarter.

(b) On and after December 15, 2007, the owner or operator of any coal-fired boiler determining compliance with (a)1 above shall conduct stack emission testing every quarter to measure mercury in the gas stream in the stack. On and after December 15, 2007, the owner or operator of a coal-fired boiler determining compliance with (a)2 above shall conduct stack emission testing every quarter to measure mercury in the gas stream at the inlet of the air pollution control apparatus serving each coal-fired boiler, and simultaneously conduct stack emission testing every quarter to measure mercury in the gas stream at the exit of the air pollution control apparatus. There shall be at least three valid stack emission tests per quarter and at least 45 days between the stack emission testing performed for a given quarter and the stack emission testing performed for the preceding quarter, unless a shorter period is approved by the Department. The stack emission testing shall be conducted in accordance with a stack emission test protocol approved pursuant to N.J.A.C. 7:27–27.8(a) and (b). Compliance is to be determined by averaging three stack emission test runs per quarter for four consecutive quarters, measuring the net megawatt hours for each quarter, and then calculating annual weighted averages using the quarterly averages and the net megawatt hours generated. If the steam produced by two or more coal-fired boilers is used to run a common electric generator, the stack emission testing of all of the boilers shall be done simultaneously. The relative contribution to the amount of electricity generated from each of the coal-fired boilers shall be determined during stack emission testing for the purpose of determining compliance with the mercury emission limit in mg/MW-hr. For combined heat and power facilities, the MW-hr shall include useful heat which is not used for electric generation in determining mercury emission per MW-hr.

(c) Notwithstanding the provisions of (b) above, any owner or operator who achieves and maintains compliance with (a) above for eight consecutive quarters for all applicable coal-fired boilers located at a facility, may reduce the frequency of stack emission testing from each quarter to stack emission testing performed every fourth quarter after the eighth quarter test in which annual weighted average compliance was determined. However, if annual stack emission testing fails to demonstrate compliance with (a) above, then the frequency of stack emission testing shall revert to that indicated in (b) above.

(d) The mercury emissions standard specified in (a) above are applicable on and after December 15, 2012, for each owner or operator of a coal fired boiler who has entered into an enforceable agreement with the Department by December 15, 2007, to install and operate air pollution control systems to meet the following standards by December 15, 2012, provided compliance with (a) above is achieved by December 15, 2007 for approximately 50 percent of the total New Jersey coal-fired megawatt capacity of the company:

1. The emissions of nitrogen oxides shall not exceed 0.100 pounds per million BTU for dry bottom utility boilers and 0.130 pounds per million BTU based on 30–day rolling average for wet bottom utility boilers;

2. The emissions of sulfur dioxide shall not exceed 0.150 pounds per million BTU based on 30–day rolling average; and

3. The emissions of particulate matter shall not exceed 0.030 pounds per million BTU based on the average of three test runs USEPA Test Method 5, incorporated herein by reference, available from the USEPA's website at www.epa.gov/ttn/emc/promgate/m–05.pdf.

(e) The December 15, 2007 deadline for compliance with the mercury emissions standards specified in (a) above is not applicable to an owner or operator of any coal-fired boiler who has entered into an enforceable agreement by December 15, 2007, with the Department to shut down the coal-fired boiler by December 15, 2012.

(f) The Department may authorize an owner or operator of any coal-fired boiler to comply with an averaging plan approved by the Department pursuant to this section. An owner or operator in compliance with such an approved averaging plan is not required to have each coal-fired boiler comply with any emission limit set forth in this subchapter that would be applicable in the absence of an approved averaging plan. An owner or operator of two or more coal-fired boilers at the same facility may request the Department to authorize an averaging plan for two or more coal-fired boilers designated by the owner or operator. The owner or operator seeking authorization for averaging shall submit a written application to the Department at the following address:

Chief, Bureau of Pre–Construction Permits
Air Quality Permitting Element
Division of Air Quality
Department of Environmental Protection
401 East State Street
PO Box 027
Trenton, NJ 08625–0027

(g) The person seeking approval under (f) above shall include the following information in the application for averaging:

1. The maximum energy generation rate of each coal-fired boiler in the averaging plan, expressed in MW-hr; average energy generated by each coal-fired boiler in the averaging plan, expressed in MW-hr;

2. The type of coal and any other fuel, if any, combusted in each coal-fired boiler;

3. The proposed method to calculate the weighted average mercury emissions per MW-hr for the coal-fired boilers on a site;

4. A certification of the application, satisfying the requirements of N.J.A.C. 7:27–1.39; and

5. Any other information which the Department requests, which is reasonably necessary to enable it to determine whether the coal-fired boilers designated by the owner or operator will comply with the requirements of this section.

(h) The Department shall approve an averaging plan only if the owner or operator of the coal-fired boilers to be included in the averaging plan enters into an enforceable agreement with the Department (such as the inclusion of conditions in the applicable permits or operating certificates, or both) requiring the annual weighted average of mercury emissions from the coal-fired boilers at a facility to not exceed 3.00 mg/MW-hr, based on the net megawatt generated each quarter and mercury emissions using the results of the valid stack emission tests required at (b) above.

(i) The owner or operator of the coal-fired boilers included in the averaging plan shall maintain the records listed below for five years from the date on which each record was made. The owner or operator shall maintain such records in a permanently bound log book or an electronic method, in a format that enables the Department to readily determine whether the coal-fired boilers included in the averaging plan are in compliance. The owner or operator shall maintain the following records:

1. The identifier for each coal-fired boiler included in the averaging plan specified in (g)1 above;

2. The time period for which the data is being recorded;

3. The date upon which the data was recorded;

4. The amount of coal and/or other fuels, if any, consumed over the subject time period;

5. The actual annual weighted average of mercury (expressed in mg/MW-hr) emitted and the net megawatt generated by each coal-fired boiler in the averaging plan over the subject time period;

6. The weighted average of the amounts listed in (i)5 above for all coal-fired boilers at a facility in the averaging plan; and

7. Any other information required to be maintained as a condition of approval granted pursuant to (f) above.

(j) Within 30 days after the end of each quarter, the owner or operator of a facility with an approved averaging plan shall provide the Department with a report setting forth the information required to be kept under (i)1 through 7 above.

New Rule, R.2004 d.443, effective December 6, 2004 (operative January 3, 2005).
See: 36 N.J.R. 123(a), 36 N.J.R. 5406(a).

7:27–27.8 Stack emission testing, permit applications and continuous emission monitoring

(a) Stack emission testing performed pursuant to this subchapter shall be conducted in accordance with a test protocol approved by the Department. To obtain the approval of the Department of a test protocol, the owner or operator of any source subject to this subchapter shall submit to the Department a proposed test protocol setting forth all test methods, including, but not limited to, sampling and analytical procedures; a description of sampling equipment and the source sampling locations; and provide sample calculations that will be used to determine the concentration of mercury in the gas stream, mercury in milligrams per ton of iron or steel production, and mercury in mg/MW-hr, as appropriate. The owner or operator of a source subject to this subchapter shall submit for review and approval a proposed test protocol each year, no fewer than 90 calendar days prior to conducting its first quarter stack emission testing, to the following address:

Chief
Bureau of Technical Services
Department of Environmental Protection
PO Box 437
Trenton, New Jersey 08625–0437

(b) The Department shall not approve any proposed stack emission test protocol submitted pursuant to (a) above unless the stack emission test method proposed to measure mercury is:

1. The USEPA Reference Method 29 incorporated herein by reference, including all supplements and amendments thereto. This method can be downloaded from the USEPA website: http://www.epa.gov/ttn/emc/methods/method29.html;

2. An equivalent method demonstrated to the satisfaction of the Department to be as conservative and reliable as the USEPA Reference Method 29 for measuring mercury; or

3. A continuous emission monitoring (CEM) approval pursuant to (c) below.

(c) When a Federal performance specification is developed and published in the Federal Register, and a mercury continuous emission monitoring system capable of meeting the Federal specifications is available, an owner or operator of a source regulated by this subchapter may propose and install a mercury continuous emission monitoring system to determine compliance with this subchapter if approved by the Department. The owner or operator must demonstrate that the mercury continuous emission monitoring system that is installed complies with the quality assurance requirements detailed in the Federal specifications. After the Department determines conformance with quality assurance requirements, the owner or operator may thereafter use the CEM to demonstrate compliance with the emission standards of this subchapter in accordance with the conditions of approval for the CEM. Thereafter, quarterly stack testing is not required.

(d) The owner or operator of any source subject to this subchapter that has a reagent based mercury emission control system shall conduct optimization tests for mercury emissions control apparatus to determine the optimized reagent feed rate at which emissions of mercury for those sources are reasonably minimized below the applicable limits, as follows:

1. The optimization tests shall be performed as follows:

i. For iron and steel melters and coal-fired boilers, optimization testing shall be conducted within one year after the compliance date;

ii. For MSW incinerators, optimization testing shall be conducted by February 4, 2006, except if the owner or operator has demonstrated to the Department that it has achieved at least 95 percent control in all tests over the preceding two years;

2. If the owner or operator of any source subject to this subchapter owns or operates more than one identical applicable source at the same facility, the optimization tests may be performed on one source selected in the test protocol, and the results applied to the other identical sources at that facility;

3. Within 60 calendar days of the conclusion of the optimization tests, the owner or operator shall submit to the Department for approval a proposed optimized reagent feed rate which minimizes mercury emissions below the applicable limits, while considering the amount of reagent used; and

4. The owner or operator shall operate each applicable source at or above the optimized reagent feed rate approved by the Department.

(e) Any owner or operator of a source subject to this subchapter who is required to make changes to a current preconstruction permit or to an operating permit in order to operate in conformance with any requirements of this subchapter shall obtain an air pollution control permit for any required preconstruction permit actions, or for any required operating permit actions.

New Rule, R.2004 d.443, effective December 6, 2004 (operative January 3, 2005).
See: 36 N.J.R. 123(a), 36 N.J.R. 5406(a).

7:27-27.9 Reporting and recordkeeping

(a) Unless prior approval is granted by the Department for later submittal, the owner or operator of any source subject to this subchapter shall submit a copy of the report of the results of the stack emission testing, including all test runs, conducted within 60 calendar days after completion of the stack emission testing required for that quarter to the regional air compliance and enforcement office for the county in which the facility is located and the following address:

Chief
Bureau of Technical Services
Department of Environmental Protection
PO Box 437
Trenton, New Jersey 08625-0437

(b) Unless prior approval is granted by the Department for later submittal, the owner or operator of any source subject to the optimization requirements of N.J.A.C. 7:27-27.8(d) shall submit a copy of the report of the results of optimization tests conducted pursuant to this subchapter within 60 calendar days after completion of the required tests, to the following address:

Chief
Bureau of Pre-construction Permits
Department of Environmental Protection
PO Box 27
Trenton, NJ 08625-0027

(c) If compliance is based on annual averages pursuant to N.J.A.C. 7:27-27.4(a)1, 2ii and iii or (c), or annual weighted average pursuant to N.J.A.C. 7:27-27.6 and 27.7, an owner or operator of any source subject to this subchapter shall report, for the preceding year, the annual average or annual weighted average mercury emissions within 60 calendar days after the end of the last quarter of the preceding year. If compliance is based on quarterly averages pursuant to N.J.A.C. 7:27-27.4(a)2i, an owner or operator of a MSW incinerator shall report the quarterly average control efficiency within 60 calendar days after completion of each calendar quarter. An owner or operator of an HMIW incinerator subject to this subchapter shall report mercury emissions test results within 60 calendar days after the end of the stack emission testing. Such reports shall be submitted to the regional air compliance and enforcement office for the county which the facility is located.

(d) Any owner or operator of any source subject to this subchapter that submits to the Department a report of stack emission testing, including all test runs, shall have such report reviewed prior to submission and certified by a licensed professional engineer or an industrial hygienist certified by the American Board of Industrial Hygiene.

(e) Any owner or operator of any source subject to this subchapter shall maintain at the facility a complete record, including all test reports of all stack emission testing, including all test runs, conducted at the facility on equipment subject to this subchapter. The Department may specify in writing that such reports be maintained in a specific format.

(f) Any owner or operator of any source subject to this subchapter who submits to the Department a report of stack emission testing, including all test runs, shall certify that report in accordance with N.J.A.C. 7:27-1.39.

(g) The owner or operator of any source subject to this subchapter shall make any record made pursuant to (e) above available to the Department, or its authorized representatives, for inspection for a period of five years after the date the record is made.

Amended by R.2004 d.443, effective December 6, 2004 (operative January 3, 2005).
See: 36 N.J.R. 123(a), 36 N.J.R. 5406(a).
Rewrote the section.

7:27-27.10 Penalties

Failure to comply with any provision of this subchapter shall subject the owner or operator to civil administrative penalties in accordance with N.J.A.C. 7:27A-3 and applicable civil and criminal penalties including, but not limited to, those set forth at N.J.S.A. 2C-28.3 and N.J.S.A. 26:2C-19.

Amended by R.2004 d.443, effective December 6, 2004 (operative January 3, 2005).
See: 36 N.J.R. 123(a), 36 N.J.R. 5406(a).
Inserted "administrative" preceding "penalties", "civil and" preceding "criminal penalties" and amended the N.J.S.A. reference.

7:27-27.11 Severability

If any portion of this subchapter or the application thereof to any person or circumstance is adjudged invalid or unconstitutional by a court of competent jurisdiction, the remainder of this subchapter and the application thereof to other persons or circumstances shall not be affected thereby, and shall remain in full force and effect.

New Rule, R.2004 d.443, effective December 6, 2004 (operative January 3, 2005).
See: 36 N.J.R. 123(a), 36 N.J.R. 5406(a).

SUBCHAPTER 28. HEAVY-DUTY DIESEL NEW ENGINE STANDARDS AND REQUIREMENTS PROGRAM

7:27-28.1 Definitions

The following words and terms, when used in this subchapter, shall have the following meanings, unless the context clearly indicates otherwise.

"Business" means an occupation, profession or trade; a person or partnership or corporation engaged in commerce, manufacturing, or a service; or a profit-seeking enterprise or concern.

"California Air Resources Board" or "CARB" means the agency or its successor agency established and empowered to regulate sources of air pollution in the State of California, including motor vehicles, pursuant to section 39003, California Health & Safety Code, 1999, as amended or supplemented.

"Certification" means a finding by CARB or the USEPA that a motor vehicle, motor vehicle engine, or air contaminant emission control system has satisfied the criteria for the control of specified air contaminants from motor vehicles, adopted by CARB or the USEPA, respectively, as set out in their respective regulations at Title 13, California Code of Regulations, as amended or supplemented, and 40 CFR Part 86, as amended or supplemented.

"Department" means the New Jersey Department of Environmental Protection.

"Diesel engine" means a compression ignition type of internal combustion engine, without regard to fuel type.

"Engine family" means the basic classification unit comprised of the engine and drive-train configuration selected by a manufacturer and used for the purpose of certification testing.

"Established place of business" means a place actually occupied either continuously or at regular periods for business use.

"Gross vehicle weight rating" or "GVWR" means the value specified by the manufacturer as the maximum design loaded weight of a single vehicle.

"Heavy-duty diesel engine" means a diesel engine that is used to propel a heavy-duty diesel vehicle.

"Heavy-duty diesel vehicle" means a motor vehicle with a GVWR greater than 14,000 pounds that is equipped with a heavy-duty diesel engine.

"Lease" means any commercial transaction recognized under the laws of this State as a means of creating a right to use a good and includes renting. It also includes offering to rent or lease.

"Model year" or "MY" means the manufacturer's annual production period, which includes January 1 of a calendar year or, if the manufacturer has no annual production period, the calendar year. In the case of any vehicle manufactured in two or more stages, the time of manufacture shall be the date of completion of the chassis.

"Motor vehicle" or "vehicle" means every device in, upon, or by which a person or property is or may be transported otherwise than by muscular power, excepting such devices that run only upon rails or tracks and motorized bicycles.

"Motor vehicle engine" means an engine that is used to propel a motor vehicle.

"New complete HDDV" means a newly manufactured, ready-to-operate HDDV, equipped with an HDDE, offered for sale or lease by a manufacturer or dealer, the equitable or