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**ENVIRONMENTAL PROTECTION  
ENVIRONMENTAL REGULATION  
DIVISION OF AIR QUALITY  
AIR QUALITY PERMITTING ELEMENT  
Air Pollution Control**

Control and Prohibition of Mercury Emissions

Proposed Amendments: N.J.A.C. 7:27-27.7, 7:27A-3.10

Authorized By: Bradley M. Campbell, Commissioner, Department of Environmental Protection.

Authority: N.J.S.A. 13:1B-3(e), 13:1D-9 and 26:2C-1 et seq., in particular 26:2C-8 and 26:2C-9.2

Calendar Reference: See Summary below for exception to calendar requirement

DEP Docket Number: 06-05-03/502

Proposal Number: \_\_\_\_\_

A **public hearing** concerning this proposal will be held on September 30, 2005, at 1:00 PM at:

New Jersey Department of Environmental Protection  
401 E. State Street  
Hearing Room, First Floor, East Wing  
Trenton, New Jersey

Submit written comments, identified by the DEP Docket Number given above, by close of business on September 30, 2005 to:

Alice A. Previte, Esq.  
Attn: DEP Docket No. 06-05-03/502  
Office of Legal Affairs  
New Jersey Department of Environmental Protection  
PO Box 402  
Trenton, N.J. 08625-0402

The Department of Environmental Protection (Department) requests that commenters submit comments on disk or CD as well as on paper. Submittal of a disk or CD is not a requirement. The Department prefers Microsoft Word 6.0 or above. Macintosh™ formats should not be used. Each comment should be identified by the applicable N.J.A.C. citation, with the commenter's name and affiliation following the comment.

Pursuant to N.J.S.A. 26:2C-8, these proposed amendments will be operative 60 days after adoption by the Commissioner.

The agency proposal follows:

### **Summary**

Since the Department has provided a 60-day comment period on this proposal, the proposal is excepted from the rulemaking calendar requirement pursuant to N.J.A.C. 1:30-3.3(a)5.

The Department is proposing amendments to recently adopted rules at N.J.A.C. 7:27-27, Control and Prohibition of Mercury Emissions (36 N.J.R. 5406(a), December 6, 2004).

The recently adopted rules established new requirements for the coal-fired boilers in the State and for certain other sources of mercury emissions to the air. With respect to coal-fired boilers, the rules established two alternative standards for compliance. A boiler would be in compliance if its mercury emissions did not exceed 3 milligrams per megawatt hour (mg/MWhr), or if the boiler achieved 90 percent reduction in mercury emissions as measured between the entrance and at the exit of the air pollution control apparatus.

The rules established a compliance deadline of December 15, 2007. However, that deadline could be extended to December 15, 2012, for up to half of a company's New Jersey coal-fired capacity. The extension would be available if the company has entered into an enforceable agreement with the Department, under which at least half of the company's New Jersey coal-fired capacity would meet specified emission limits for nitrogen oxides (NO<sub>x</sub>), sulfur dioxide (SO<sub>2</sub>), and particulate matter (PM), by December 15, 2012, provided that the remainder of the company's New Jersey coal-fired capacity would meet the regulatory limits for mercury set forth at N.J.A.C. 7:27-27.7(a) by December 15, 2007. Comments on the recently adopted rules asserted that it was possible for a facility to apply the available air pollution control technology and still fail to meet the mercury emission standards in the rules because of unit-specific circumstances yet to be determined. Those commenters suggested that if this were to happen, the Department should establish an alternative emission limit or grant a waiver from the emission standards in the rule.

The Department does not share the commenters' skepticism about the ability of a coal-fired boiler to comply with the rules using currently available air pollution control technology. As discussed in the proposal and the response to comments for the recently adopted rules, technology that is commercially available today is sufficient to enable compliance with the standards in the rules. Accordingly, the Department did not add provisions for a waiver or alternative emission limit to the rules. In responding to comments on the rules, however, the Department acknowledged the possibility that despite the use of best efforts to timely install and operate air pollution controls sufficient to comply with the rules, some additional time for adjustment, optimization, and alternative reagent evaluation might be necessary to enable a boiler to consistently meet the emission standards in the rules.

The Department is, therefore, proposing an amendment to N.J.A.C. 7:27-27.7 that would allow, in certain circumstances, a facility-specific mercury control plan to be established for a coal-fired boiler. Provided that the plan is complied with fully, exceedances of the mercury emission standards in N.J.A.C. 7:27-27.7(a) would not be considered a violation for the one-year period of the plan approval.

The Department's approval of the plan would depend on several factors. These factors address whether best efforts were made to bring the boiler into compliance by the applicable deadline under the recently adopted rules, the likelihood that the additional efforts proposed under the plan will be sufficient to bring the boiler into compliance with mercury emission standards, and the levels of air pollution that the boiler is expected to emit during the term of the facility-specific mercury control plan.

Specifically, the Department will evaluate the air pollution control technologies that have been installed and are operating on the boiler. The Department expects such technologies to include a reagent injection system or other technologies specific to mercury control. The Department will consider whether those technologies could reasonably have been expected to enable the boiler to comply with the mercury emission standards, whether those technologies were installed early enough so that they could reasonably have been expected to bring the boiler into compliance with the standards on time, and whether the technologies were installed properly and are being operated properly. The Department recognizes that proper operation in this context does not mean perfect operation, since the purpose of the facility-specific plan is to allow some additional time for further adjustment and optimization.

In addition to evaluating the boiler's owner or operator's efforts to install and operate the necessary air pollution control technology to achieve compliance in advance of the deadline, the Department will also evaluate what additional work will be done after the deadline to bring the boiler into compliance. That additional work must have a reasonable possibility of success in order for the plan to be approved. In addition, if it becomes apparent that the additional work described in the plan is unlikely to bring the boiler into compliance, the Department may require the owner or operator to identify and implement further measures that have a greater chance of success.

Finally, the Department will also evaluate the expected emissions resulting from the boiler's operations during the term of the plan. Operations under the plan must be reasonably likely to result in compliance with emission standards for all air contaminants, and must be reasonably designed to minimize mercury emissions to the extent practicable.

The Department's approval of the plan, and resulting authorization for the boiler(s) to exceed the mercury emission standards, would remain valid for a one-year period beginning with the applicable compliance deadline under the recently adopted rules. If the applicable deadline is December 15, 2007, the authorization would expire on December 15, 2008. If the applicable deadline were December 15, 2012, the authorization would expire on December 15, 2013. For example, if a company has entered into an enforceable agreement and have to comply with N.J.A.C. 7:27-27.7(a) by December 15, 2012, that company can apply for one-year extension to December 15, 2013, if mercury controls installed and operated by December 15, 2012 do not achieve mercury standard. For the rest of the half of its capacity the company can also apply for one-year extension to December 15, 2008, if mercury controls installed and operated by December 15, 2007 do not achieve the mercury standard. Therefore, a company may apply for two facility specific mercury control plans for one-year extension, if justified, one for each half of the facility.

In N.J.A.C. 7:27A-3.10, the Department proposes to amend the existing penalty provisions. The proposed new penalties are consistent with existing penalties for similar

violations. Any owner or operator of a source subject to the proposed amendments to N.J.A.C. 7:27-27.2 who fails to comply with any applicable provision of this subchapter would be subject to civil administrative penalties in the amounts proposed in N.J.A.C. 7:27A-3.10(m)(27).

On December 10, 2004, the Department published a proposal to amend the Air Administrative Procedures and Penalties rules at N.J.A.C. 7:27A to implement the provisions of the Grace Period Law, N.J.S.A. 13:1D-125, et seq., which requires the establishment of procedures to ensure the consistent application of grace (compliance) periods for minor violations of certain environmental statutes (See 36 N.J.R. 5293(a)). Pursuant to that law, the Department, through rulemaking, designates certain types of violations of rules contained in sixteen environmental statutes as minor or non-minor violations.

The Department has determined that, based upon the criteria set forth at N.J.S.A. 13: 1D-129, a violation of the within proposed amendment to N.J.A.C. 7:27-27.7 would result in an emission increase. Such a violation would be contrary to the purpose of the Air Pollution Control rules, which is to control air pollution. Consequently, the violation would be considered non-minor and would not be subject to a grace period.

#### **Social Impact**

The Department expects the proposed amendments to have no social impact upon the State's residents, or on persons who work in the State or who visit the State for business and recreation.

#### **Economic Impact**

The proposed amendments may have a marginally positive economic impact on owners and operators of coal-fired boilers in the State. If the facility-specific mercury control plan were not available, the owner or operator of a boiler that needed additional time for optimization and adjustment would most likely have needed to enter into an administrative consent order, with penalties for any exceedance of the mercury standards. By providing the option of the facility-specific plan, the proposed amendments can provide additional time for optimization and adjustment, with some limited and temporary ability to exceed the mercury standard without incurring penalties.

#### **Environmental Impact**

The Department does not expect the proposed amendments to have a positive or negative impact on the environment. The emission reductions that would result from full compliance with the emissions standards in N.J.A.C. 7:27-27.7(a) are expected to improve the State's air, water and land quality, and to improve public health in the State. The Department discussed these beneficial effects in the Environmental Impact statement of the proposal of the recently adopted rules (36 N.J.R. 123(a), January 5, 2004). In theory, a facility-specific mercury control plan approved under the proposed amendments would allow greater mercury emissions for a one-year period than the mercury emissions allowed under N.J.A.C. 7:27-27.7(a). In practice, the Department believes that emissions would be no greater under the proposed amendments than under the existing rules. A coal-fired boiler's operations under a facility-specific mercury control plan are likely to be identical to the operations under the existing rules which have no provision for a

facility-specific plan. The only difference is that, without the plan, the operations would most likely be conducted under an administrative consent order with monetary penalties included. With the plan, facilities would have an additional year to comply, if justified, therefore obviating the need to enter into and operate under an administrative consent order.

Most of the emission reductions that would have been required in order for a coal-fired boiler(s) to meet the emission standards in existing N.J.A.C. 7:27-27.7(a) should have been achieved by the control system installed and measures applied to comply with the rules. The Department will not approve a plan unless it determines that the owner or operator has properly installed and is properly operating air pollution control technologies that could reasonably have been expected to enable the boiler to comply with those emission standards. In addition, the boiler must be operated in a manner that minimizes mercury emissions to the extent practicable. Considering that appropriate air pollution technology to control mercury emissions will already be in place, the Department expects that exceedances of the emission standards as allowed under an approved plan will be small and of a relatively short duration.

#### **Federal Standards Analysis**

Executive Order No. 27 (1994) and N.J.S.A. 52:14B-1 et seq. (P.L. 1995, c.65) require State agencies that adopt, readopt or amend State regulations that exceed any Federal standards or requirements to include in the rulemaking document a Federal Standard Analysis.

The United States Environmental Protection Agency (USEPA) adopted a mercury emission-trading rule for Electric Utility Steam Generating Units (EUSGU) on March 15, 2005 pursuant to section 111(d) of the Clean Air Act (CAA) (42 U.S.C. § 7412(d)). The New Jersey disagrees that regulation of hazardous air pollutants, including mercury, under this part of the CAA is appropriate. The Department believes that the New Jersey rules, published on November 4, 2004 (see 36 N.J.R. 5406(a)), are consistent with the intent of the CAA to require Maximum Achievable Control Technology (MACT).

The New Jersey standard of 3.0 milligram per megawatt hour or 90 percent control, which was adopted when there was no Federal rule governing mercury emissions from EUSGU, is more stringent than the newly adopted Federal rule for EUSGU of 9.53 milligram per megawatt hour (21 X 10<sup>6</sup> pound per megawatt hour for new bituminous coal units). The New Jersey mercury emissions limitation also is more stringent for existing units than EPA's emission-trading rule that sets caps for year 2010 and 2018, at levels well above the New Jersey performance standards for each facility.

The New Jersey rules published in December 2004, require compliance by either December 15, 2007 or December 15, 2012, for any facility that by December 15, 2007, has become subject to an enforceable agreement with the Department requiring it to install and operate air pollution control systems to control emissions of sulfur dioxide, nitrogen oxides, and particulate matter. USEPA adopted an emission-trading rule with emission caps for 2010 and 2018. USEPA claims its 2010 cap will not require the installation of mercury-specific air pollution control, and that the cap will be met by

mercury emission reductions that would occur as co-benefits from the control of sulfur dioxide and nitrogen oxide pursuant to the Clean Air Interstate Rule adopted on March 10, 2005.

Since the Federal rule for existing units is an emission-trading rule, a direct comparison with New Jersey's performance standards and compliance deadlines is not possible. The within proposed rule allowing one additional year for New Jersey coal-burning electric utilities to optimize mercury air pollution control systems would bring New Jersey's final compliance date to December 15, 2013, which is earlier than the 2018 deadline for the final cap under the Federal rules. Hence, the New Jersey rules remain more stringent than the Federal rule, as was intended by the recently-adopted New Jersey rules.

Under section 112 of the CAA (42 U.S.C. § 7412), which New Jersey believes should be the basis for Federal mercury rules for EUSGUs, there is a provision for a one-year administrative extension of compliance dates. Although this one-year administrative extension does not directly correlate with the one-year extension being proposed by New Jersey, there is a general correlation. The Federal one-year extension is for compliance with section 112(d) of the CAA (42 U.S.C. § 7411), as amended in 1990, if additional time is necessary for the installation of controls. New Jersey's proposed one-year extension recognizes the possibility that, despite the use of best efforts to timely install and operate air pollution controls sufficient to comply with the New Jersey rules, some additional time for adjustment, optimization, and alternative reagent evaluation might be necessary to enable a boiler to consistently meet the emission standards. To the extent that Federal and New Jersey extensions are for similar purposes, the within proposed rule is consistent with the Federal CAA.

The more expeditious compliance dates in the New Jersey mercury rules, and the limited extension that the within proposed rule would allow, are appropriate given the hazardous nature of mercury and the benefits of regulating mercury, as explained in the proposal and adoption of the New Jersey mercury rules. (See 36 N.J.R. 123(a), and 36 N.J.R. 5406(a)).

### **Jobs Impact**

The Department does not expect the proposed amendments to affect employment and jobs in the State. The work that would need to be done under a facility-specific mercury control plan is identical to the work that would need to be done if the Department made no provision for a facility-specific plan. The only difference is that, without the plan, the work would most likely be done pursuant to an administrative consent order with monetary penalties included.

### **Agricultural Industry Impact**

Pursuant to P.L. 1998, c. 48, adopted on July 2, 1998, codified at N.J.S.A. 52:14B-4(a)(2), the Department has evaluated the proposed amendments to determine the nature and extent of their impact on the agricultural industry.

For the reasons discussed in the social impact and environmental impact statements above, the Department does not expect that mercury emissions under the proposed amendments will differ materially from mercury emissions under the existing

rules. Therefore, the Department does not expect the proposed amendments to have any significant impact on the agricultural industry.

### **Regulatory Flexibility Statement**

As required by the New Jersey Regulatory Flexibility Act, N.J.S.A. 52:14B-16 et seq., the Department evaluated the reporting, recordkeeping, and other compliance requirements that the proposed amendments would impose upon small businesses. The Regulatory Flexibility Act defines the term “small business” as “any business which is a resident in this State, independently owned and operated and not dominant in its field, and which employs fewer than 100 full time employees.” Based upon this definition, the Department does not expect that small businesses will be subjected to additional requirements by the proposed amendments. The proposed amendments would apply to ten coal-fired boilers in New Jersey owned by PSEG Fossil LLC at Hudson and Mercer Generating Station; Conectiv at B.L England Station and Deepwater; City of Vineland; and PG&E National Energy Group at Caney's Point and Logan Generating Station. The Department has determined that none of these facilities is a small business, since each employs more than 100 full time employees or, in the case of the City of Vineland, is a municipality. Therefore, a regulatory flexibility analysis is not required.

### **Smart Growth Impact**

Executive Order No. 4 (2002) requires State agencies that adopt, amend or repeal State regulations to include in the rulemaking document a Smart Growth Impact statement that describes the impact of the proposed rule on the achievement of smart growth and implementation of the State Development and Redevelopment Plan (State Plan). The proposed amendments do not relate to the State's land use and development policies in a way that would either encourage or discourage any development or redevelopment in this State contrary to the guiding principles of the State Plan. As a result, the Department does not expect this rulemaking to have an impact on the State's achievement of smart growth or implementation of the State Plan.

Because the proposed amendments will further the Department's efforts to protect air quality, the proposed amendments support the conservation and environmental protection goals and policies underlying the State Plan.

Full text of the proposal follows (additions indicated in boldface **thus**; deletions indicated in brackets [thus]):

**CHAPTER 27**  
**AIR POLLUTION CONTROL**  
**Subchapter 27. CONTROL AND PROHIBITION OF MERCURY**  
**EMISSIONS**

**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), or (k) below. Compliance with this standard shall be measured pursuant to (b) below.

- 1. - 2. (No change)
- (b) - (j) (No change)

**(k) The Department may approve a facility-specific mercury control plan for a coal-fired boiler, which will apply to the boiler in lieu of the standards in (a) above. An exceedance of the standards in (a) above shall not be considered a violation of those standards during the term of the Department's approval of the plan, if there is full compliance with the plan during that term.**

**1. The plan shall apply to the boiler for a one-year period.**

**2. The owner or operator of a coal-fired boiler seeking the Department's approval of a plan shall submit an application for approval no later than 90 days before the compliance deadline applicable to the boiler under (a) or (d) above. The owner or operator shall send the application to the Department at the following address:**

**Chief, Bureau of Preconstruction Permitting**  
**Department of Environmental Protection**  
**401 East State Street**  
**PO Box 027**  
**Trenton, New Jersey 08625-0027**

**3. In the application, the owner or operator shall include:**

**i. A brief description of the coal-fired boiler(s) that are the subject of the application, air pollution control permit number(s), and any other identifying numbers;**

**ii. A list of all air pollution control technologies and measures that have been installed and are operating to control emissions of air contaminants from each coal-fired boiler;**

**iii. For each of the technologies and measures listed in ii above, the date of installation and commencement of operation;**

**iv. For each of the technologies and measures listed in ii above, an explanation of how the technology and measure was installed properly and is being operated properly;**

**v. A list of any air pollution control technologies or measures not listed in ii above that the owner or operator proposes to install and operate to control emissions of air contaminants from the coal-fired boiler(s);**

**vi. A summary of how the coal-fired boiler is expected to be operated and maintained during the term of the Department's approval of the plan, including any associated air pollution control equipment and measures, which are designed to maintain compliance with all applicable air pollution control requirements other than those in (a) above, and which are designed and operated to minimize emissions of mercury to the extent practicable;**

vii. A summary of additional efforts that are to be undertaken to achieve compliance with the standards in (a) above before the expiration of the Department's approval of the plan;

viii. The results of each mercury stack test and other emissions measurements for the coal-fired boiler following the installation and commencement of operation of the air pollution control technologies and measures listed in ii above;

ix. Any other information which the Department requests that is reasonably necessary to enable it to determine whether the application satisfies the requirements of 6 below; and

x. A certification signed by the owner or operator, satisfying the requirements of N.J.A.C. 7:27-1.39.

4. Within 30 days after receiving an application for approval of a plan, the Department shall notify the owner or operator in writing whether the submission includes all of the information required under 3 above. If the application is incomplete, then:

i. The Department shall include in the notice a list of the deficiencies, a statement of the additional information required to make the proposed plan or request complete, and a time by which the owner or operator must submit a complete proposed plan or request;

ii. The owner or operator shall correct the deficiencies listed in the Department's notice within the time stated in the Department's notice; and

iii. The Department may deny the application if the owner or operator fails to correct the deficiencies within the allotted time.

5. The Department may approve, approve and modify, or disapprove the plan proposed in the application. The Department will notify the owner or operator of the action in writing.

6. The Department shall approve a plan only if the application satisfies the following requirements:

i. The application contains all of the information required under 3 above;

ii. The Department determines that the owner or operator has properly installed air pollution control technologies and implemented measures that could reasonably have been expected to enable the boiler(s) to comply with the standards in (a) above. The Department shall consider this requirement to have been met if, in taking action under N.J.A.C. 7:27-8 or 7:27-22 to permit the installation of air pollution control technology on the boiler(s), the Department confirmed that the boiler's air pollution control technologies and measures are expected to achieve at least a 90 percent reduction in mercury emissions or less than 3 mg/MWhr;

iii. The Department determines that the technologies and measures described in ii above are being properly implemented;

iv. The Department determines that the technologies and measures described in ii above were implemented at a time that made it reasonable to expect that the boiler could comply with the standards in (a) above by the applicable deadline for compliance;

v. The Department determines that the operation and maintenance described in 3vi above are reasonably likely to maintain compliance with all applicable air pollution control requirements other than those in (a) above, and will reasonably minimize emissions of mercury to the extent practicable; and

vi. The Department determines that the efforts that are to be undertaken to achieve compliance with the standards in (a) above, as described in 3vii above, have a reasonable possibility of success.

7. During the term of the plan, the Department may issue written notice requiring the owner or operator to provide an explanation of additional efforts that are to be undertaken to achieve compliance with the standards in (a) above, beyond the efforts described in 3vii above, if the efforts described in 3vii above no longer appear to have a reasonable possibility of success. The written notice shall include the time by which the owner or operator is required to provide this explanation.

8. The Department may revoke its approval of a plan by written notice to the owner or operator, if the Department determines that its decision to approve was materially affected by a misstatement or omission of fact in the application or in any supporting documentation, or if the owner or operator fails to provide an explanation of additional efforts and implement those additional efforts within the time allotted in the Department's notice under 7 above.

**Chapter 27 A AIR ADMINISTRATION PROCEDURES AND PENALTIES  
Subchapter 3. CIVIL ADMINISTRATIVE PENALTIES AND REQUESTS FOR  
ADJUDICATORY HEARINGS.**

**7:27A-3.10 Civil administrative penalties for violation of rules adopted pursuant to the Act**

(a) - (l) (No change.)

(m) The violations of N.J.A.C. 7:27 and the civil administrative penalty amounts for each violation are as set forth in the following Civil Administrative Penalty Schedule. The numbers of the following subsections correspond to the numbers of the corresponding subchapter in N.J.A.C. 7:27. The rule summaries for the requirements set forth in the Civil Administrative Penalty Schedule in this subsection are provided for informational purposes only and have no legal effect.

**CIVIL ADMINISTRATIVE PENALTY SCHEDULE**

1. - 26. (No change.)

27. The violations of N.J.A.C. 7:27-27, Control and Prohibition of Mercury Emissions, and the civil administrative penalty amounts for each violation are as set forth in the following table:

Citation	Rule Summary	Type of Violation	First Offense	Second Offense	Third Offense	Fourth and Each Subsequent Offense
<u>N.J.A.C. 7:27-27.7(k)</u>	<u>Operate in accordance with approved plan</u>	<u>NM</u>	<u>\$10,000<sup>3</sup></u>	<u>\$20,000<sup>3</sup></u>	<u>\$50,000<sup>3</sup></u>	<u>\$50,000<sup>3</sup></u>

28. - 31. (No change.)

(n) - (p) (No change.)

Based on consultation with staff, I hereby certify that the above statements, including the Federal Standards Statement, addressing the requirements of Executive Order 27 (1994) and N.J.S.A. 52:14B-23, permit the public to understand accurately and plainly the purposes and expected consequences of this proposal. I hereby authorize this proposal.

Date: \_\_\_\_\_

\_\_\_\_\_  
 Bradley M. Campbell,  
 Commissioner  
 Department of Environmental Protection