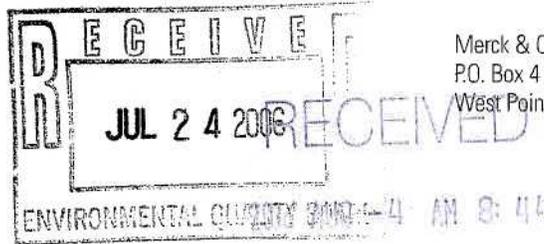


Original: 2535

Environmental Quality Board  
Rachel Carson State Office Building  
15<sup>th</sup> Floor  
400 Market Street  
Harrisburg, PA17101-2301



Merck & Co., Inc.  
P.O. Box 4  
West Point, PA 19486-0004

Subject: Merck & Co., Inc. comments pertaining to the proposed  
Pennsylvania Nonattainment New Source Review Regulations



Dear Sir/Madam:

Merck & Co. (Merck) appreciates the opportunity to provide comments regarding the proposed Pennsylvania Nonattainment New Source Review (NNSR) Regulations that were published in the Pennsylvania Bulletin on April 29, 2006. Merck operates two facilities within Pennsylvania, Danville and West Point, that will be impacted by the proposed regulations.

The Merck facility in West Point, Pennsylvania is located within a nonattainment area for the 8-hour ozone standard as well as the PM<sub>2.5</sub> standard. Additionally, Danville is located in a nonattainment for the 8-hour ozone standard. Operations at these facilities are constrained by the strict NNSR requirements that already apply in this area. Therefore, Merck has a fundamental interest in seeing that the Pennsylvania Department of Environmental Protection (DEP) implements a clear, balanced, and workable set of NNSR regulations. Merck is offering comments on the proposed rule changes in the spirit of furthering our shared goal of achieving further progress toward attainment of the ozone and PM<sub>2.5</sub> standards within a regulatory framework that fosters economic development in the five-county region of Southeastern Pennsylvania, and through-out the state.

Merck offers the following comments and suggestions concerning various aspects of the proposed rule. Comments regarding issues that we are most concerned about are presented in Sections I through XI, while minor comments (typographical errors, etc.) are summarized in the table in Section XII.

## **I. Rule Clarity and Complexity**

In responding to the Environmental Quality Board's request for public comments, Merck first wishes to discuss our concerns related to the complexity of the rule. Merck, in managing operations under the present NNSR rules, has, at times, found the existing rules often vague and difficult to interpret. Unfortunately the new rules that DEP has developed are still complex and difficult to understand.

Individual examples of confusing provisions within this draft regulation are too numerous to discuss here. Merck has attempted to highlight some of the more prominent examples in Section V of these comments. For example, the definition of "de minimis emissions increase" in §127.201 is "*an increase in actual emissions or potential to emit which is*

*less than the emissions rate that is significant as specified in this section.*” Does this mean that a change by itself must be below the significance threshold to be considered de minimis, or rather that the *net* increase must be below this level?

The federal new source review provisions in 40 CFR Part 51 and Part 52 are among the most complex provisions of the federal environmental regulations. As proof, one needs to look no further than the volumes of guidance memos that the U.S. Environmental Protection Agency (EPA) has written in its attempt to clarify these regulations. In fact, the mere existence of this body of guidance helps to mitigate the complexity of the federal program. Not only does this guidance help to keep interpretation of the rules consistent between different regions of the country, affected sources can search the guidance and often find memos that directly address their specific situation. No such body of guidance exists for the Pennsylvania NNSR program. Firms seeking clarifications regarding confusing provisions of the rule are often given ad hoc interpretations from the local DEP office. These interpretations aren't readily available to the general public, which opens the door to varying interpretations across the Commonwealth.

DEP may have valid reasons for deviating from the federal NNSR program, but in drafting its own rule DEP assumes the responsibility to assure that the rule is, to the extent possible, written so that affected sources can understand it. Through our detailed comments below, Merck has attempted to eliminate some of the confusing language in the draft rule. However, we believe that a better approach would be to re-draft the rule such that it only deviates from the language of the federal rule where absolutely necessary to achieve DEP's goals, and then carefully craft the language in those portions to be as clear as possible.

## **II. Nonattainment Area Classification - §127.201(f) et al.**

The draft regulation maintains the five-county region in southeastern Pennsylvania as a severe nonattainment area for the new 8-hour ozone standard, even though the EPA has reclassified the region as a moderate nonattainment area for this standard. This approach maintains the existing 25 ton per year applicability thresholds for NNSR as well as the 1.3:1 offset requirements. The reason given for maintaining the severe nonattainment area classification is that it is needed to ensure that the Philadelphia area achieves and maintains the 8-hr ozone standard, which is more stringent than the previous 1-hr standard.

Title 35, Chapter 23, Section 4004.2 of the Pennsylvania Air Pollution Control Act contains a general prohibition against establishing control measures or other requirements that are “*more stringent than those required by the Clean Air Act.*” One exception to this prohibition is in cases where the Environmental Quality Board (EQB) determines that it is reasonably necessary for a control measure or other requirement to exceed minimum Clean Air Act requirements in order for the Commonwealth to achieve or maintain ambient air quality standards. While EQB apparently believes that it has met this requirement, there was little or no factual data provided to support their determination.

Due to the considerable costs this decision will impose on businesses within the Commonwealth, EQB should either provide additional data to support their determination that it is appropriate to go beyond the federal requirements in this case, or allow the five-county region to become a moderate nonattainment area for the new ozone standard as designated by EPA.

### III. Definitions - §127.201a

Merck found the following definitions to be confusing:

- *Major facility* – The definition as provided can be interpreted several different ways. For example, does the use of the term “physical change” exclude other changes that could be considered modifications? Also, does the phrase “which does not exceed the major facility thresholds specified in this subchapter” pertain to the facility at which the change occurs or the change itself?
- *Major modification* – The way it is written, this definition appears to preclude the use of netting as (A) and (B) are not linked. The federal rules specify that a major modification is determined by a 2-step process, there has to be an emissions increase greater than the applicable threshold and a new emissions increase.
- *Projected actual emissions* – Projected actual emissions are not clearly defined in §127.201a or in the referenced citation within the definition §127.203a(a)(6).
- *Regulated NSR pollutant* – We do not understand paragraph (iii) pertaining to constituent or precursor pollutants.

### IV. PM<sub>2.5</sub> Precursors – §127.202(b) & §127.203(g)

DEP has proposed adding PM<sub>2.5</sub> precursors to the list of NNSR pollutants. The draft rule doesn't explicitly identify these precursor pollutants, but NO<sub>x</sub> and SO<sub>2</sub> are the two most prominent ones. VOC and ammonia are also considered PM<sub>2.5</sub> precursors. In the case of NO<sub>x</sub>, SO<sub>2</sub>, and VOCs, the rule would effectively drop the NNSR threshold from 40 or 25 tpy to 15 tpy. This is a significant change that is worthy of careful consideration due to the potential costs and widespread impacts.

Merck questions the need to include PM<sub>2.5</sub> precursors to the list of NNSR pollutants. Modeling conducted by EPA<sup>1</sup> suggests that current emission reductions that are “on the way” as part of the Clean Air Interstate Rule (CAIR) will bring 21 of 22 Pennsylvania counties that have been designated as nonattainment for the PM<sub>2.5</sub> NAAQS into attainment by the year 2010. The lone exception is Allegheny County, which is impacted by local sources of PM<sub>2.5</sub>. Applying a 15 tpy applicability threshold for PM<sub>2.5</sub> precursor emissions could force affected sources throughout the state to install advanced controls

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<sup>1</sup> EPA CAIR website, <http://www.epa.gov/cair/pa.html>, viewed June 19, 2006.

that will have little effect on PM<sub>2.5</sub> levels in Allegheny County. DEP should reconsider this provision in light of the potentially significant costs and limited public benefit that would result. At a minimum, the final rule should clarify what is meant by a PM<sub>2.5</sub> precursor.

#### **V. Baseline Period - §127.203a(5)(i)**

Merck objects to DEP's decision not to adopt the 10-year "look-back" provision in the EPA rule for calculating baseline emissions. DEP is proposing to retain the 5-year look-back provision in the current rule because it would increase the number of projects that will be subject to NSR.

Merck believes that the 5-year look-back period is unfair to industry, and that retaining it represents a misguided approach for achieving DEP's air quality objectives. The reason that EPA included the 10-year look-back provision in the NSR reform rules is that the shorter period was not long enough to encompass variability due to the business cycle, and in some cases resulted in the confiscation of underused capacity at sources that have had low utilization rates for extended periods of time. For example, Merck has experienced changes in production mix that based on demand, could change back. EPA's baseline calculation procedure recognizes that market fluctuations are a normal occurrence in most industries, and that a source's operating level (and emissions) does not remain constant throughout a source's business cycle.

No source should be penalized for simply responding to market forces. If DEP's goal is to subject more sources to NNSR, then it should consider more equitable ways of accomplishing this goal. Therefore, Merck strongly supports retention of the 10-year look-back period.

#### **VI. Emission Limits - §127.203a(a)(6)**

DEP's proposed use of emission limits to make future actual emissions enforceable is not consistent with the federal NSR reform rule. DEP's approach is not materially different than accepting an emission limit to ensure that a major modification threshold is not exceeded which is common under the existing NNSR regulations. Merck strongly supports elimination of all language related to limiting projected future actual emissions through an enforceable permit restriction.

#### **VII. De Minimis Emission Aggregation - §127.203(b)(1)**

One of the most burdensome provisions of the current NNSR rule also appears in the draft rules: the requirement to aggregate emission increases and decreases to determine compliance with the 100 pound per hour and 1,000 pound per day de minimis thresholds. These short-term emission thresholds apply in addition to the annual thresholds, and are inconsistent with the federal NNSR regulations.

In Merck's experience, tracking compliance with the short-term emission thresholds requires a significant level of effort to quantify what have largely been very minor emission changes. To date, the only projects at our West Point facility to trigger these thresholds involved the installation of two emergency diesel engines that have a potential to emit NO<sub>x</sub> at levels above the short term threshold of 1,000 lb/day but whose annual emissions are very low due to limits placed on the hours of operation. In addition, actual daily emissions from these engines do not approach the 1,000 lb/day threshold because they typically are operated only for very short periods for testing purposes. Historically, at the West Point site, over the last 10 years, actual emissions increases have been 25% of the permitted or potential emissions increases.

Merck believes that the historical 25 ton per year applicability threshold for severe nonattainment areas has been more than adequate to protect and improve air quality in southeastern Pennsylvania. The short-term (daily and hourly) thresholds should be removed from the rule due to the unreasonable recordkeeping burden that they place on affected sources, and the apparent lack of a significant air quality benefit.

Another observation regarding §127.203(b)(1) is that the language is very confusing. The provisions of §127.203(b)(1) apparently apply to de-minimis increases only but the rule is vague at best. Merck strongly suggests that this provision be re-worded to clarify the requirement.

#### **VIII. Multiple Emission Units and Pollutants - §127.203a (a)(5)(i)(D)**

The draft NNSR rule states that *"when a project involves multiple emission units or multiple regulated NSR pollutants, one consecutive 2-year period must be used to determine the baseline actual emissions for all pollutants and for all the emission units affected by the project."* The corresponding provision of the EPA NSR reform rule states that, while the same consecutive 24-month period must be used for all emission units being changed, a different 24-month period may be used for each pollutant [see 40 CFR 52.21(b)(48)(i)(c)]. The Pennsylvania rule should be consistent with the federal rule in this regard.

#### **IX. ERC Generation and Creation - §127.207(1)(i)**

The proposed rule adds a restriction that emission reductions necessary to meet allowance-based programs may not be used to generate emission reduction credits (ERCs). This provision does not make sense because an inherent feature of allowance-based programs, such as the NO<sub>x</sub> Budget Program, is that they allow sources the option of purchasing allowances rather than making reductions. Therefore, no source is required to make reductions to meet an emission limit. The decision whether to install controls, purchase allowances, or some combination of the two is usually made purely on the basis of economics.

Merck believes that imposing this restriction on the generation of ERCs could, in fact, be counterproductive with respect to DEP's goal of improving air quality. Sources

contemplating emission controls in response to market-based programs would otherwise view ERC's as an incentive to install controls or to increase their efficiency. This incentive would be in addition to that provided by the avoiding the cost of purchasing allowances or revenue obtained from the sale of excess allowances. That is because ERC's have a monetary value that can be factored into the economic decision. If DEP excludes such emission reductions from consideration for ERC's, the case for no controls or less-efficient controls becomes more compelling.

If the final NNSR rule is promulgated with this proposed exclusion, then DEP should clarify whether all reductions undertaken in response to allowance-based programs are excluded from eligibility for the creation of ERC's, or whether ERC's can be created for emission reductions that exceed the underlying emission rate goals of the allowance-based program. While Merck's reading of this provision is that all emission reductions are excluded, it is not entirely clear.

## **X. PAL Requirements - §127.218**

After reviewing the proposed plantwide applicability limit (PAL) provisions of the draft rule, Merck questions whether PADEP is committed to allowing PAL permits. The PAL provisions in the proposed rule virtually remove any associated benefit of obtaining a PAL in Pennsylvania. The rule imposes several restrictions that go well beyond the federal regulations and that will have the effect of seriously discouraging sources from utilizing this form of flexible permitting. Among these provisions are:

- Mandating that baseline emissions be calculated using annual emissions and not specifying a 24-month period;
- Retaining all previous emission limitations in the PAL permit (§127.218(a)(4));
- Establishing the most recent 2-year period, or a representative 2 years in 5 look-back period for establishing baseline emissions rather than 10 years as specified in the EPA NSR reform rules;

In Merck's opinion, DEP is misguided in its belief that imposing these restrictions will be more protective than EPA's approach. The EPA conducted a "Flexible Permit Implementation Review" in 2002<sup>2</sup> to evaluate the success of several innovative air permits that were implemented prior to the December 2002 New Source Review (NSR) reforms. EPA found that the various flexible permits that were part of the evaluation represented a win-win situation for the permittee and the environment. The facilities were able to initiate changes without the typical administrative issues associated with new source permitting and the flexible permitting provided environmental performance equivalent to or better than the traditional permitting process.

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<sup>2</sup> U.S. EPA, "Evaluation of Implementation Experience with Innovative Air Permits: Results of the U.S. EPA Flexible Permit Initiative", U.S. EPA Contract No. 68-D9-9018.

In addition to the above comments, Merck offers the following additional comments regarding PALs. These comments specifically address issues raised in the preamble to the proposed NNSR rule and are consistent with our belief that the final rule should be reflect corresponding federal requirements for PALs.

- PALs should have a 10-year term and be fixed rather than declining.
- PALs should be based on actual emissions and not potential emissions.
- DEP should have the option of not reopening a PAL permit if emission limits change during the 10-year term of the permit.
- The enforcement consequences of noncompliance with a PAL should be the same as for noncompliance with a conventional permit.

Merck supports a final NNSR rule that follows the federal model for establishing PAL permits. By discouraging sources from utilizing PALs, DEP is turning its back on potential emission reductions as well as the opportunity to provide needed flexibility to industry in southeastern Pennsylvania.

## XI. Implementation

It is not clear from the regulation what the expectation is regarding original netting calculations. Are facilities required to go back and recalculate their numbers based on the proposed definition of “Baseline Actual Emissions” per the calculation method specified in 25 PA Code 127.203a(a)(5). If netting numbers need to be revised is there a window after final publication to make those adjustments or is it the expectation that upon final publication that any necessary changes will be incorporated immediately?

## XII. Additional Comments

In addition to the preceding major comments, Merck also wishes to submit the following minor comments for consideration.

Citation	Comment
§127.201a	The definition of “PAL Permit” includes state operating permits, despite the fact that EPA regulations prohibit PALs from being established within such permits.
§127.203(e)(2)	This section refers to “...relaxation of an <i>enforcement</i> limitation...” We believe that this should read “relaxation of an <i>enforceable</i> limitation”
§127.205(1)	This paragraph references §127.203a(a)(4)(ii)(B). We could not find this reference within the rule. This reference should be corrected.

If you have questions regarding these comments, please contact me at (215) 652-4247 or Maria Galloway at (215) 652-6939.

Sincerely,

A handwritten signature in black ink that reads "Amy E. Earley". The signature is written in a cursive, flowing style.

Amy E. Earley  
Site Environmental Engineering

Cc: S. Wittmer, Merck & Co., Inc.  
J. Friday, Merck & Co., Inc.