

Questions from AWMA Talk on NSR

Question 1:

My reading of the rules is that the "demand growth" exclusion has 2 parts: (1) emissions increase is unrelated to the change and (2) the source was 'capable' of accommodating the increase pre-change.

What is an example of a case in which an emissions increase IS related to a change, BUT was capable of being accommodated pre-change? In other words, isn't any emissions increase that 'could' have been accommodated pre-change by definition 'unrelated' to the post-change emissions increase? Any insight is most appreciated, as the test seems to make explicit what is already implicit in the actual to projected future actual analysis.

Answer:

We haven't thought of an example that would be subject to NSR in which an emissions increase is related to a particular change yet was capable of being accommodated prior to the change. However, the question implies that both regulatory criteria may not be meaningful. The two criteria involved: emissions increases unrelated to the change and whether the source was capable of accommodating the increase prior to the change, result in four possible scenarios as follows:

	Not Related Emissions Increase	Related Emissions Increase
Not Capable of Being Accommodated	1. NOT EXCLUDABLE	2. NOT EXCLUDABLE
Capable of Being Accommodated	3. EXCLUDABLE	4. NOT EXCLUDABLE

The questioner's difficulty is identifying an emissions increase fitting into category four (as identified in the table). The two regulatory criteria are necessary to distinguish between emissions increases fitting into categories one through three. Emissions increases fitting into category three are excluded from counting towards NSR applicability. Without both regulatory criteria category three emissions increases could not be distinguished from emissions increases in categories one and two, it is clear that both regulatory criteria are necessary for the actual to projected actual applicability test.

As an example, consider the modification of a widget manufacturing line to produce gadgets in addition to widgets. Projected future emissions due to continued widget production are both unrelated to the modification and could have been accommodated (up to the permitted emission and/or production limits). The increase caused solely by the modification are projected future emissions due to gadget production (and/or any increased emissions from widget production the line was previously incapable of accommodating). These results are illustrated by the following table.

	Not Related Emissions Increase	Related Emissions Increase
Not Capable of Being Accommodated	Any emissions due to projected widget production that exceed pre-modification permit allowable emissions or production capacity	Any emissions due to projected gadget production
Capable of Being Accommodated	Any emissions due to projected widget production within permit allowable emissions or production capacity	NONE

Any changes to the production line that might fall into category four appear to be changes (such as efficiency improvements) that do not qualify as modifications under NSR. This is so because the line was already capable of accommodating the post-modification level of production.

Question 2

Can you point me to information regarding Michigan's rulemaking with respect to the EPA's 2002 NSR reforms? Will it include new PSD rules as well as revised NSR rules? Will a SIP revision be submitted to EPA by January 2, 2006? Thanks.

Answer:

Michigan is in the process of rulemaking for its own PSD program. The draft regulations are, for all practical purposes, identical to the December 2002 federal regulations with the Clean Unit and Pollution Control Project portions removed. Michigan has held back on its nonattainment NSR rulemaking until additional guidance is provided from EPA regarding implementation requirements for 8-hour ozone and PM2.5. The public comment period on the draft rules recently closed. At this time, it does not appear that Michigan will be submitting a SIP revision to EPA by January 2, 2006. A copy of the draft PSD rules are available at <http://www.deq.state.mi.us/apcrats/2004-008EQ.shtml>.

Question 3

The Michigan PSD workbook on page 4-5 states that "Each of these projected levels of actual annual emissions must be compared with the greater of: the excludable emissions; or, the BAE [baseline actual emissions] to determine the magnitude of the resulting emissions increase" and the case examples provided also subtract either the greater of the BAE or the excludable emissions but not both at the same time.

The PSD Workbook statement appears to contradict 40 CFR 52.21 that allows both the BAE and excludable emissions to be subtracted at the same time in the actual to projected actual applicability test as indicated in the below copied regulations. Please let us know if we are misinterpreting the PSD Workbook.

(c) Actual-to-projected-actual applicability test for projects that only involve existing emissions units. A significant emissions increase of a regulated NSR pollutant is projected to occur if the sum of the difference between the projected actual emissions (as defined in paragraph (b)(41) of this section) and the baseline actual emissions (as defined in paragraphs (b)(48)(i) and (ii) of this section), for each existing emissions unit, equals or exceeds the significant amount for that pollutant (as defined in paragraph (b)(23) of this section).

(b)(41)(i) Projected actual emissions means the maximum annual rate, in tons per year, at which an existing emissions unit is projected to emit a regulated NSR pollutant in any one of the 5 years (12-month period) following the date the unit resumes regular operation after the project, or in any one of the 10 years following that date, if the project involves increasing the emissions unit's design capacity or its potential to emit that regulated NSR pollutant and full utilization of the unit would result in a significant emissions increase or a significant net emissions increase at the major stationary source.

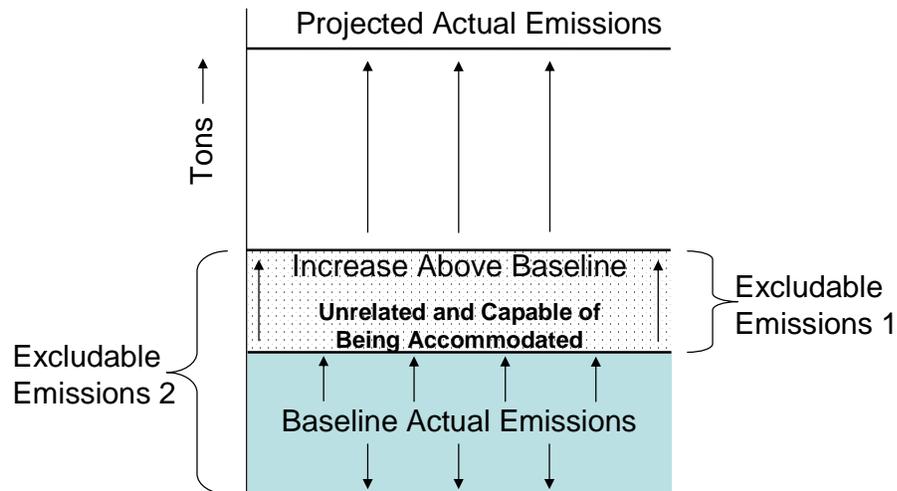
(ii) In determining the projected actual emissions under paragraph (b)(41)(i) of this section (before beginning actual construction), the owner or operator of the major stationary source:

(c) Shall exclude, in calculating any increase in emissions that results from the particular project, that portion of the unit's emissions following the project that an existing unit could have accommodated during the consecutive 24-month period used to establish the baseline actual emissions under paragraph (b)(48) of this section and that are also unrelated to the particular project, including any increased utilization due to product demand growth;

Answer:

The difference highlighted is a difference in semantics only. We have worded the PSD workbook in that fashion to make sure that there was no chance for double counting.

The regulations exclude the portion of an emissions increase not related to the particular change and capable of being accommodated. In excluding a portion of the "increase," the regulations allow the exclusion of emissions above baseline. In effect, they require baseline emissions to be subtracted from the total non-related, capable of being accommodated emissions. These emissions are identified as "Excludable Emissions 1" in the following diagram. When determining the emissions increase against which NSR applicability is determined, baseline is added to this "Excludable Emissions 1".



When Michigan's PSD Workbook was developed, we streamlined this process by keeping baseline in the excludable emissions. These emissions are identified as "Excludable Emissions 2" in the diagram above. Our approach removes the subset of emissions that are due to the change and are equivalent to the baseline from the mathematical equation. Thus, Michigan's PSD Workbook accomplishes the same thing as the regulations, in a way we hope is more understandable.

To illustrate, let's use the widget/gadget manufacturing example from above under three different scenarios:

- In all three scenarios, projected future gadget production is 250,000 units and 125 TPY.
- In the first scenario, projected future widget production and emissions will remain unchanged from the baseline period level of 250,000 units and 100 TPY.
- In the second, projected future widget production will double to 500,000 units and 200 TPY.
- In the third scenario, projected future widget production will decrease by a factor of five to 50,000 units and 20 TPY.

Scenario 1:

100 TPY of the total 225 TPY projected actual emissions result from widget production that is unrelated to the modification and could have been accommodated by the

unmodified equipment during the baseline period however; this 100 TPY does not represent an increase from the baseline period and therefore cannot be excluded. Therefore, the increase on which major NSR is determined is projected future emissions of 225 TPY minus baseline emissions of 100 TPY, or 125 TPY.

Under Michigan's approach, 100 TPY of the 225 TPY projected actual emissions were independent of the modification and could have been accommodated by the unmodified equipment during the baseline period and are therefore, excludable. Since, in this scenario, Michigan excludable emissions equals baseline, subtracting the larger of the two produces the same result – major NSR applicability is based on an emissions increase of 125 TPY.

In this scenario, both a strict application of the regulations and Michigan's approach produce the same result.

Scenario 2:

200 TPY of the total 325 TPY projected actual emissions result from widget production that is unrelated to the modification and could have been accommodated by the unmodified equipment during the baseline period. . Following the strict methodology of the regulations, only 100 TPY of this 200 TPY represents an increase from the baseline period. Thus only 100 TPY can be excluded. Therefore, the increase on which major NSR is determined is projected future emissions of 325 TPY minus baseline emissions of 100 TPY minus an additional 100 TPY of excludable emissions, or 125 TPY.

Under Michigan's approach, 200 TPY of the 325 TPY projected actual emissions were independent of the modification and could have been accommodated by the unmodified equipment during the baseline period and are therefore, excludable. Since, in this scenario, the 200 TPY of Michigan excludable emissions are greater than 100 TPY baseline actual emissions, major NSR applicability is based on projected actual emissions of 325 TPY minus Michigan excludable emissions of 200 TPY, or 125 TPY.

In this scenario, both a strict application of the regulations and Michigan's approach produce the same result.

Scenario 3:

20 TPY of the total 145 TPY projected actual emissions result from widget production that is unrelated to the modification and could have been accommodated by the unmodified equipment during the baseline period. Following the strict methodology of the regulations, none of these 20 TPY represent an increase from the baseline period. Thus there are no emissions that can be excluded. Therefore, the increase on which major NSR is determined is projected future emissions of 145 TPY minus baseline emissions of 100 TPY, or 45 TPY.

Under Michigan's approach, 20 TPY of the 325 TPY projected actual emissions were independent of the modification and could have been accommodated by the unmodified equipment during the baseline period and are therefore, excludable. Since, in this scenario, the 100 TPY of baseline actual emissions are greater than the 20 TPY of Michigan excludable emissions, major NSR applicability is based on projected actual emissions of 145 TPY minus baseline actual emissions of 100 TPY, or 45 TPY.

In this scenario, both a strict application of the regulations and Michigan's approach produce the same result.