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## NEW SOURCE REVIEW (NSR):

### A PLAIN ENGLISH PRIMER AND UPDATE ON EPA'S RECENT CHANGES

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#### Introduction: Excitement Over NSR

In May, 2003, EPA received over 225,000 comments on a proposed regulation. This number covers every man, woman, and child in Lincoln, Nebraska. What is going on?

The 225,000 comments represent one stage of probably the hottest controversy EPA has dealt with in years: new source review (NSR) under the Clean Air Act (CAA). For those who may be confused by the public charges and counter-charges, I would like to provide some basic background.

I would also like to explain why some people are so excited. Here is an opening example. Assume a widget factory manager wants to modify his factory by reconfiguring some pipes and replacing some old parts. By doing this, he will both reduce the time the factory must shut down for maintenance and improve the factory's production efficiency.

If this modification is not subject to NSR, the project might be completed in a few months at a cost of \$50,000. If the modification is subject to NSR, the project might be, after years of administrative permitting and followup litigation: (a) completed at a cost of \$5,000,000; or (b) legally prohibited.

As you consider that example and read this article, keep in mind the following question: *what factory manager in his right mind would want NSR, and what opponent of the factory would in his right mind not want NSR?*

#### Three Preliminary Points

First, what is a "source"? Virtually every type of industrial, manufacturing, energy, electronic, hi-tech, and low-tech facility imaginable will have some type of air pollutant emissions associated with it and will therefore be regulated by the CAA. Each such facility is an air pollution "source" under the CAA.

Second, "new source review" is a misnomer. If all that were involved were truly "new" sources, NSR wouldn't be such a big issue. To describe the issue accurately, one should refer to "new and modified source review." Since everyone already calls the issue NSR I'll stick with that, but remember the "modified" component has created virtually all the recent controversy.

Third, whenever a company plans to construct a new source or modify an existing source, that construction or modification will either "trigger" NSR or it will not. Whether NSR will be triggered can have dramatic consequences, as the widget example shows.

#### Three NSR Attributes Provide Major Pain or Pleasure, Depending Upon Your Perspective

To help understand how NSR can have such dramatic consequences, three NSR attributes must be understood. First, a *permit* will be required if NSR is triggered. Second, that permit is a *preconstruction* permit. Third, if NSR is triggered, the facility will be required to install some form of *best technology*.

#### (1) Permit—Unwelcome Even In Mr. Rogers' Neighborhood?

CAA permits usually involve much time, money and trouble. One does not simply drop into an office, pay a fee, and saunter out with a permit. Rather, a great deal of legal process must be followed.

A permit application must be accompanied by a multitude of technical information. EPA (or a State EPA analog) staff will usually take months to digest the information and will almost always demand more information before they deem the application complete. EPA or State staff will then prepare a *proposed* permit with reams of background documentation. EPA or the State must then issue a public notice of the proposal, and provide a period (often 30-60 days, but sometimes more) for written public comment. An opportunity for a public hearing on the proposed permit is often provided.

At the risk of stating the obvious, the desires of a manufacturing facility's management are often not in perfect harmony with the desires of the facility's neighbors, environmental groups, and other interests. (Mr. Rogers always welcomed everyone to his neighborhood, but he never – at least explicitly – included in any song a welcome to coal-fired boilers.) It is common, therefore, for CAA permits to be hotly contested.

The CAA and similar State laws provide great opportunity for project opponents to throw monkey wrenches into facility owners' plans whenever a permit is required. The permit issuance process can be dragged out for years, as advocates demand more and more delays to consider more and more thousands of pages of objections and comments.

To make things worse (or better, depending upon your perspective), there is almost always an opportunity to *litigate* over the results of a final permit decision through the judicial review process. Judicial review can add years to the process.

(2) WAIT!!!! To Make Things Worse (or Better), the Permit Is a Preconstruction Permit

So you want to construct a new facility or modify an existing facility, and you learn that NSR is triggered. Then you must *wait*. The CAA is very explicit on this: you can be subject to major monetary penalties, and even thrown in jail, if you *so much as turn a spade of dirt* on the new project or modification until your final permit is issued.

In many other legal settings, a party needing a permit can at least start construction or modification while the application is pending, so long as he does not start actual operation of the new or modified facility before the permit is issued. Not so for NSR.

(3) Final Nail In Coffin (or Lily in Bouquet): A “Best Technology” Requirement

It is important to understand the concept of an “existing” pollution source, as contrasted to a “new” or “modified” source. Very generally, an existing source is a factory, plant, etc. that is already constructed and operating on the date certain laws become effective. A “new” source is one that begins construction after that date, and a “modified” source (described more fully below) is an existing source for which some form of modification is begun after that date.

In structuring the CAA Congress could have, but did not, adopt an approach requiring all existing pollution sources to install “best technology” for pollution control. Rather, Congress chose to rely primarily on an area-wide “air shed” or “ambient air quality” approach to regulating air pollution from existing sources. Under this approach, the degree to which existing sources must control their air emissions depends upon the quality of the “ambient,” or “air shed” air, in that particular geographical area.

Under this approach, three existing widget factories identical in every material respect could be subject to dramatically different air pollution requirements depending upon where they are located. Existing factory #1, located where the “ambient” air exceeds the CAA’s ambient standards, might be required to reduce its emissions by 90% through installing technology that cost \$10 million. Existing factory #2, located where ambient air is very clean, might be subject to *no* control requirements. Existing factory #3, located where ambient air is moderately clean, might be required to spend \$2 million.

The CAA takes a totally different approach, however, for new and modified sources that trigger NSR. Each such source, as a condition to obtaining its NSR permit, must install and maintain a form of *best technology* for air pollution control.

It is beyond the scope of this article to explain complicated details, but in some situations this best technology is called “best available control technology,” or “BACT;”

while in other situations this best technology is called “lowest achievable emission rate,” or “LAER.” Here is the main point: either form of best technology will almost always be very expensive.

**Primary NSR Issues Have Focused on “Modified” Sources**

If a factory or plant is truly brand new, NSR issues are usually cut and dry. There are certain size thresholds exempting very small new sources from undergoing NSR, but little confusion is usually presented as to whether NSR is triggered. Moreover, those seeking to locate a brand new facility generally expect to deal with permitting delays, and can plan their designs to accommodate the best technology requirements reasonably economically.

Whether a particular change to an existing source will be considered a “modification” that triggers NSR is the issue stoking most of the flames. The CAA says very little about this; rather simply, the CAA says that any modification of an existing source that will cause an increase in air pollutant emissions will trigger NSR.

EPA regulations have long provided, however, that not every single modification that increases emissions by any amount will trigger NSR. Rather, EPA’s regulations have provided three basic parameters to the issue of whether a change to an existing source will be deemed a “modification” triggering NSR.

First, EPA’s regulations include numerical “significance” levels. Under the theory that Congress could not have intended that each and every pollutant emission increase – no matter how slight or *de minimis* – would trigger NSR, EPA’s regulations specify that before NSR will be triggered, emissions must increase by specified “threshold” amounts (expressed in tons per year (“tpy”)). The thresholds vary from pollutant to pollutant, and vary depending upon the quality of the ambient air in the area that the source is located.

Second, the regulations provide that NSR will be triggered only where there will be a *net* increase in emissions from a source above the threshold levels. Thus, assume a manufacturing plant has several air pollution emitting units. It desires to install an entirely new unit that will emit 100 tpy of a certain pollutant, and is willing to shut down two existing units that together emit 100 tpy of the same pollutant. Since there will be no *net* increase in emissions from the source, the project may in certain situations avoid NSR triggering.

Third, the regulations provide that certain types of changes will not, as a matter of definition, be deemed a “modification” that could trigger NSR. For instance, assume a threshold level for a certain pollutant is 100 tpy – that is, normally a change that would increase net emissions of that pollutant by 100 tpy would trigger NSR. *But if the change were one of the types of activities that the regulation had by definition stated did not constitute a “modification,” even*

a change that would increase emissions by 10,000 tpy would not trigger NSR.

### So What Is EPA Doing Now That Is Causing Such Angst?

As noted above, proponents and opponents of industrial facilities have good reason to feel passionately that NSR should or should not be triggered in a given situation. Well, EPA is in the process of changing and clarifying the nationally-applicable regulations that determine whether NSR is triggered in various modification situations. Since the outcome of EPA's rulemaking process (followed by judicial review) might either greatly increase or decrease the number of NSR events triggered throughout the U.S., advocacy groups on all sides of the NSR issue are swarming all over the EPA rulemaking process (and followup litigation).

Very generally, EPA has been issuing final and proposed rules designed to curtail the triggering of NSR for facility modifications. As the entire process unfolds after judicial review, however, there might be a major expansion of the types of modifications that would trigger NSR.

EPA issued one major *final* NSR rule (with several components) on December 31, 2002. EPA also issued one major *proposed* rule on December 31, 2002. EPA officials have also announced they intend to issue at least one and possibly two additional *proposed* rules in the next several months.

### Points To Help Understand Implications of New Rules and Proposals

I would like to explain some basics in terms of a simple equation. As noted earlier, EPA regulations provide that a modification resulting in a net emission increase over a numeric threshold will trigger NSR. Assume for a certain pollutant, a net increase of 100 tons per year (tpy) or more will trigger NSR. So the critical question is whether  $y$  equals or exceeds  $x$  plus 100, where  $y$  is the tpy emitted after the modification and  $x$  is the tpy currently emitted. If  $y$  is less than  $x$  plus 100, NSR will not be triggered; if  $y$  equals or exceeds  $x$  plus 100, NSR will be triggered.

It is obvious that the numbers one assigns to  $x$  and  $y$  will be absolutely critical. One may assume this should be a fairly straightforward, non-controversial exercise, but it is not.

One problem is that virtually no source emits a pollutant at exactly the same rate and volume 24 hours a day, 365 days a year, year after year. In fact, if you reviewed a factory's history, you might see major swings in emission rates associated with fluctuating product demand. And if you tried to predict emissions into the future, you must also cope with uncertainties involving demand and efficiency improvements.

### Higher $x$ 's and Lower $y$ 's.

So how do you settle on a figure for the current

emissions ( $x$ ) and the future emissions ( $y$ )? This is the first basic issue addressed by EPA's final NSR rule issued on December 31, 2002. EPA's new rule changes current rules and policies in a way that will result in fewer modifications triggering NSR. EPA has done this by making it easier for source owners to use (i) *higher* numbers for current emission assumptions (the  $x$  in the equation) and (ii) *lower* numbers for future emission assumptions (the  $y$  in the equation). As a matter of logic, if it is now easier to use both a higher  $x$  and a lower  $y$ ,  $y$  will not equal or exceed  $x$  plus 100 as often as it would in the past.

To help source owners use a higher  $x$ , the new rules allow the owner to pick the two-year period out of the last ten years of plant operation with the highest tpy numbers. Under the old rules, source owners were generally required to use the most recent two years.

To help source owners use a lower  $y$ , the new rules allow the owner to use a projected *actual* emission level in estimating future tpy. This means that the source owner can take into account reasonable estimates of plant down time and non-operational time (such as projecting that certain emission-causing operations will occur only on certain hours on certain days). Under the old rules and policies, source owners were generally not allowed to take credits for projected plant down time; rather, they were required to assume that the plant would be continuously emitting under the maximum operational conditions that the plant was legally allowed to operate ("maximum allowable" emissions).

### Going beyond the $x$ 's and $y$ 's.

Two additional components of the new final rule should also result in fewer modifications triggering NSR. Each component provides an approach under which modifications will avoid NSR even where they will produce a net emission increase of more than the threshold amount (that is, even where  $y$  equals or exceeds  $x$  plus 100, NSR will still not be triggered).

"PALs." The first new component is the "plantwide applicability limit," or PAL. This allows a source with several distinct pollution-causing units to obtain, by undergoing a permit review process, an overall emission limit for the source (taking account of the actual emissions from all emission units operating at the time). This overall limit is called the PAL, and it is good for ten years.

Once the 10-year PAL is in place, the source has tremendous flexibility to make modifications without triggering NSR. For it can engage in any number of discrete unit closings and constructions of new units and modifications of existing units without triggering NSR so long as the whole source will not in the aggregate at any time have actual emissions over the PAL level.

For example, assume the PAL established for a

source in one year is 1500 tpy. In the next year, the source shuts down three units, each of which were contributing 200 tpy. Then four years later, the source desires to add a unit that will emit 400 tpy and six years later, the source desires to add a unit that will emit 200 tpy.

Under the old rules, the new 400 tpy unit and the new 200 tpy unit would each independently have triggered NSR. Under the new rules, with the above-described PAL in place, they would not. Going back to the example at the beginning of the article, years of delay could be avoided and millions of dollars could be saved.<sup>1</sup>

“Clean units.” The second new component is called the “clean unit” exemption. Very generally, the purpose is to protect facilities’ major investments for ten years where they have installed expensive “best technology” with respect to an air pollution unit. Without getting into complicated details, the following example should illustrate.

Assume a source undertakes a modification in 2003 that triggers NSR, and the source spends \$10 million to install the “best technology” requirement required by EPA during the permitting process. Then, in 2008, the source wants to undertake a modification that would increase net emissions by over the threshold number for the pollutants in question (100 tpy in the examples above).

Under the old rules, the 2008 modification would clearly trigger NSR. Under the new “clean unit” rules, the 2008 modification would not trigger NSR if certain conditions were met. Again, years of delays and millions of dollars might be saved.

“PCPs.” An interesting element of the new final rule is the “pollution control project” (PCP) exemption. The current structure of federal environmental statutes – dating back to the 1970s – offers almost no opportunity for inter-media “tradeoffs” involving requirements from various statutes (Clean Water Act, CAA, Resource Recovery and Conservation Act (RCRA), etc.). Similarly, there is almost no opportunity within each statute for “tradeoffs” between and among various standards and requirements.

For instance, assume under the CAA there are numeric standards for three pollutants, a, b, and c. Traditionally under CAA and EPA rules, a new source of these three pollutants would have to be reviewed to assure it would not cause violations of the ambient standards for each of the three pollutants. Even if a new source would result in *improvements* – even incredibly significant improvements – in the loadings to the atmosphere of pollutants a and b, if the source would slightly increase violations of pollutant c, its construction would be prohibited.

The PCP portions of the new rule are designed to provide some relief from this long-established principle. In

carefully circumscribed circumstances, projects (including modifications) that might otherwise trigger NSR are excluded from NSR and otherwise allowed to proceed based on the “tradeoff” that there will be net environmental benefits.

### **The Biggest NSR Issue Right Now, Despite Its Name, Is Anything But “Routine”**

The controversy surrounding the recent final rule pales in intensity to the controversy raised by the proposed rule EPA issued on December 31, 2002 – the “routine repair, maintenance, and replacement” (RMRR) proposal. Even though the CAA does not specify such an exemption, EPA’s regulations have long provided that RMRR modifications are not modifications that trigger NSR.

The scope of this exemption is extremely critical, because modifications that qualify as RMRR are automatically deemed not to be modifications that trigger NSR, *no matter how many hundreds or thousands of tons of new pollution* may be associated with them. As environmental groups may with justification argue, RMRR if not carefully defined could in essence take the “modification” out of NSR.

EPA’s rules have never defined RMRR, and EPA has instead established a regime over the last few years in which sources may obtain case-by-case determinations. EPA has brought enforcement actions in the last few years against sources that – EPA claims – made modifications that triggered NSR without seeking or obtaining the necessary NSR permit. The sources have defended against these enforcement claims by asserting their modifications qualified as RMRR.

Because the regulations have never defined RMRR and there has been so much confusion in the litigation, EPA is now trying to provide more certainty by proposing new regulations that would define RMRR. It is this proposal, published in the December 31, 2002 *Federal Register*, that drew the 225,000 comments.

The proposal offers two basic approaches. One relies on an annual dollar “allowance” under which defined types of expenditures could be made each year at a plant, and so long as the expenditures did not exceed some percentage of the total capital costs necessary to replace the facility, the work would be deemed RMRR. EPA’s proposal does not mention a specific percentage figure, but EPA officials have mentioned percentages in the range of 10-30% in public discussions.

The second approach, known as the “equipment replacement provision,” would focus on the type of equipment that was being replaced. A facility could replace equipment within a “process unit” and stay within the RMRR boundaries so long as the replacement equipment would serve the same basic function as the replaced equipment and the costs would not exceed a certain percentage (not yet specified) of



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the costs of the relevant process unit.

The public comment period on the RMRR proposal closed in May, 2003, and it will probably be many months before EPA issues a final RMRR rule. One thing that is virtually as certain as the sun rising tomorrow: there will be long and protracted judicial review of the final rule, so whatever EPA says in the final rule may eventually be struck down by the courts.

### **More Proposed NSR Rules To Come**

A number of inter-related issues are critical to the NSR program. It would have been nice if EPA had addressed all these issues in a single rulemaking so the interested public could have a better understanding of how the issues fit together and how the program as a whole might work. This would have also been a much more manageable approach for the rulemaking and judicial review processes, as commentators and litigators could have had one consolidated proceeding in which to address these inter-related issues.

It might have been nice, but it is not to be. EPA has not only bifurcated RMRR from the final rules issued on December 31, 2002, but has also deferred separate proposals on other issues. For key NSR issues known as “debottlenecking” and “aggregation” and “allowable PALs” EPA has announced it will issue proposed rulemakings over the next several months. (Perhaps by fall 2003.)

Even if EPA includes all the remaining issues in one proposal (which is not certain), there will thus be at least three separate NSR rulemaking and judicial review tracks. This multi-track approach is certain to cause much confusion and disruption among interested parties and state agencies. It may take a full-time brigade of lawyers just to keep score.

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### **Footnotes**

<sup>1</sup> One might note that if the source owner had timed the earlier unit shutdowns to coincide with the construction of the new units, NSR might have been avoided because there would be no *net* increase in emissions each time. This is true, but in order to obtain “netting” credit, the owner would still have to go through the *permitting* process unless the old units were completely shut down before construction of any kind began on the new units. Most clearly, the new PAL provisions give the source owner much greater flexibility in avoiding NSR, avoiding paperwork, and in timing shutdowns and startups when compared to the old rules.