ILLINOIS POLLUTION CONTROL BOARD
July 14, 1983

IN THE MATTER OF:	)	
	)	R81-16
MAJOR SOURCE CONSTRUCTION	)	DOCKET B
AND MODIFICATION	)	
PART 203 OF CHAPTER 2: AIR POLLUTION	)	

OPINION OF THE BOARD (by J. D. Dumelle):

With the adoption of Public Act 81-1444 on September 9, 1980 the Environmental Protection Act (Act) was amended to include Section 9.1(d), which mandates that the Board adopt regulations establishing permit programs in accordance with Sections 165 and 173 (42 U.S.C. 7475 and 42 U.S.C. 7503) of the Clean Air Act (CAA). Section 165 is found in Part C of the CAA, which encompasses the programs for "Prevention of Significant Deterioration of Air Quality" in areas designated attainment; Section 173 is found in Part D, "Plan Requirements for Nonattainment Areas." On May 1, 1981 the Illinois Environmental Protection Agency (Agency) filed its proposal outlining a permit program for new and modified major stationary sources in both attainment and nonattainment areas. Merit hearings were held on July 20 and 21, 1981 in Springfield and Chicago, respectively, and again on November 2 and 6, 1981 in the same locales. Economic hearings were held on September 20 and 27, 1982 in Chicago and Springfield, the Economic Impact Study having been received on August 6, 1982. Coincidently, First Notice was published in the Illinois Register, Vol. 6, Issue 32, on August 6, 1982. A final hearing was held on November 16, 1982 in Chicago to consider outstanding issues, especially those arising from the District of Columbia Appellate Court's decision of August 17, 1982 Natural Resource Defense Council v. Gorsuch, 13 ERC 1225 and 1993.

At the outset of this rulemaking the subject matter was separated into two dockets. The rules pertaining to the Prevention of Significant Deterioration (PSD) permit program were assigned to Docket A, while Docket B was reserved for the permitting rules for major sources and modifications in non-attainment areas. The latter are commonly referred to as New Source Review (NSR). Not only does Section 9.1 of the Act contain deadlines for adoption of the NSR rules, but Sections

It it the wish of the Board that the knowledge and concern contributed to this proceeding by Irvin G. Goodman before his death, and his legacy of inspiration be recognized and remembered. The Board also acknowledges the work of Marili McFawn, hearing officer and administrative assistant in this matter.

110(a)(2)(I), 172(a)(1), and most specifically Section 172(b)(6) in accordance with Section 173 of the CAA, require that these rules be adopted as properly enforceable provisions of the State Implementation Plan (SIP). If they are not, the United States Environmental Protection Agency (USEPA) is authorized under the CAA to impose growth sanctions. To avoid such action by the USEPA, and in accordance with Illinois law, adoption of the NSR rules is proposed separately from the PSD rules; this Opinion and the accompanying Order concern only Docket B.

Where air quality is modeled or monitored to be worse than that required by the National Ambient Air Quality Standards, in a nonattainment areas as defined in Section 171(2), the primary objective is obviously to improve the region's air quality as soon as possible. One avenue already established is to require existing sources to apply reasonably available control technologies, commonly known as the RACT program [§172(b) of the CAA]. Another approach is to control the emissions from newly constructed and modified sources. Therefore, the NSR program consists primarily of preconstruction rules to ensure that as built or modified, potentially large sources of air pollutants do not contribute to a region's air quality problems. Although the purpose of the NSR is similar to that of the RACT program, since it applies to sources not yet constructed or modified, NSR requirements are more demanding. These sources may only emit nonattainment designated pollutants at the Lowest Achievable Emission Rate (LAER). This is accomplished by applying the most stringent control technology known, and if appropriate, limitations on operating parameters. Furthermore, in accord with the need to improve air quality to acceptable healthy levels, these sources may also have to provide emission reductions from existing sources. Only if it is proven that these emission offsets are unnecessary for the area's reasonable further progress (RFP) towards attainment, can the new source forego providing them. Lastly, assuming improvement of air quality through the preconstruction review rules contained in Subparts A, B and C three rules are included at Subpart F to ensure the desired improvement continues. Sources receiving construction permits pursuant to NSR will be required, to maintain the LAER operating parameters, to keep current any necessary emission offsets, and to monitor emissions to establish the source's actual effect on the region's reasonable further progress.

SUBPART A: Definitions and General Provisions

The definitions currently found at Rules 101 and 102 of Chapter 2 are applicable to this Part. Of particular importance to the NSR rules are the definitions of "emission source" at Rule 101, and "stationary emission source" at Rule 201. An emission source is defined as "any equipment or facility of a type capable of emitting specified air contaminants to the atmosphere". As such, it provides a dual definition of a source. A source is either an entire plant or an individual piece of process equip-

ment within a plant. The importance of the dual definition within the context of the NSR rules is included at the "Significant Net Emission Increases" discussion. It should be noted that Rule 201 contains many definitions which more specifically describe "equipment", e. g. degreaser, firebox. The term "emission source" also provides a building block for "stationary emission source". A stationary emission source is defined as "an emission source which is not self-propelled." Obviously when the language "stationary source" is used in this Part, whether or not in the context of major stationary source, it is referring to a stationary emission source.

Four of the definitions found in Subpart A were adopted verbatim in R81-20, Alternative Control Strategies, on June 2, 1983. They are: "actual emissions", "allowable emissions", "emission baseline", and "potential to emit". All four are important in the context of NSR, as well as for Alternative Control Strategies.* Except for "emission baseline", these definitions parallel the federal versions found at 40 CFR 51.18(j), and only the definition of "allowable emissions" varies from that at 40 CFR 51.18(j)(xi). Generally, "allowable emissions" are calculated based on a source's maximum rated capacity and the applicable emission limitation found in Chapter 2. However, if the source's maximum rated capacity or emission rate is specified as a permit condition, calculating that source's "allowable emissions" is likewise limited. Emission estimates for start-ups, malfunctions, or breakdowns are also included in a source's allowable emissions if Rule 105 has been complied with. Since Rule 105 requires that these emissions be a part of the operating permit, it is appropriate that they be included as part of the source's allowable emissions. Lastly, if a source's allowable emissions cannot be determined, or are not established by a permit condition, then they shall be the source's "potential to emit". While the federal definition of "actual emissions" provides for this alternative, the federal definition of "allowable emissions" is silent. In either case, if a source's emissions cannot be determined using the body of the rule, it is logical and certainly no less stringent to allow potential emissions to be used.

Despite the fact that the terms "commence" and "construction" are already defined in Rule 101, expanded definitions of the same are proposed for Part 203. "Commence" now refers to beginning actual on-site construction, as well as the act of entering into binding contracts to construct or modify. The

*Assuming that all four are pertinent to both Parts 202 and 203, it may prove appropriate to include them in the general definition section of Chapter 2. This can be done in the course of final rulemaking on R79-14, Revisions to Chapter 2, or R81-2, Codification of Chapter 2.

contractual obligation has been further qualified to mean that it cannot be broken without substantial loss to the owner or operator. The definition of "construction" has been expanded to include not only an on-site physical change such as fabrication, erection or installation of an emission source, but also any change, physical or operational, which causes a change in actual emissions. As amended, the definitions for "commence" and "construction" are equivalent to those required by 40 CFR 51.18(j)(1)(xvi) and (xvii). A definition of "Begin Actual Construction" was proposed. It is not included in Subpart A, but is instead incorporated at Section 203.202, Preconstruction Permit Requirement. The distinction is that "commence" and "construction" are used throughout this Part, whereas "Begin Actual Construction" is not. Its meaning is limited to determining when a preconstruction permit is required.

The terms "available growth margin", "emission offset" and "reasonable further progress" are defined in Subpart A; there are no parallel federal regulations. All are concepts fundamental to the entire Part, especially to Subpart C. "Secondary emissions" is defined identically to that found in 40 CFR 51.18(j)(1)(viii). Secondary emissions are those contaminants emitted due to the newly constructed or modified sources, but are not emitted by the source itself. Emissions from off-site support facilities that would not have, but for the new construction or modification, increased emissions qualify as such indirect emissions. However, increased emissions coming directly from mobile sources, i.e. trains and ships, which service the new major source or modified stationary source, do not. It should be noted that while secondary emissions are not included in determining a source's potential to emit, those attributed to mobile sources are included. Furthermore, the requirement to provide the lowest achievable emission rate is not applicable to the secondary emission sources unless they themselves qualify for NSR (c.f. 45 FR 59878, September 11, 1980).

A number of terms associated with NSR were included in the Agency's proposal. They are: major modification, major stationary source, net emissions, and significant. Definitions for these words are instead included as part of the actual rules, since they themselves are fundamentally determinative as to whether NSR applies or emission offsets are necessary. The term "complete application," as proposed, is not included because existing Rule 103 provides a more sufficient outline of what and when a permit application is complete. Lastly, the terms "Lowest Achievable Emission Rate", "temporary" and "non-industrial area" are not defined, but instead are explained within the appropriate rule, Sections 203.301(a), 203.304(b) and 203.304(c), respectively.

In addition to the definitions, Subpart A includes two general rules. Section 203.150 provides that the application of these rules is not severable, and Section 203.155 provides that

for each pending NSR permit, there will be notice of the same and a period for public comment. To satisfy 40 CFR 51.18 (h), public participation should be initiated when the construction permit application is made pursuant to Section 203.203. Should applications for the preconstruction and construction permits be simultaneously made, then the notice of the pending application should be given once it has been determined that the project qualifies for NSR, i.e. that a preconstruction permit will be issued.

SUBPART B: Major Source Construction or Modification in Nonattainment Areas

As stated above, the NSR rules constitute a preconstruction review program. Fundamentally there are four situations that initiate NSR, or more explicitly, that require a project to comply with the Lowest Achievable Emission Rate and possibly the offset requirements set out in Subpart C. First, the NSR rules apply if a major stationary emission source is to be newly constructed. Secondly, any physical change at a stationary source which itself qualifies as a major stationary source, regardless of the source's size prior to the change, triggers NSR. Thirdly, reconstruction of an emission source, if the fixed capital cost of new components exceeds approximately half of an entirely new emission source, will be treated as a newly constructed major stationary source. Modification of a source which creates a significant net increase in its emissions is the final situation subjecting a project to NSR.

Permit Program

Given these four scenarios, should a project be likely to qualify as a new major source or major modification, application for a preconstruction permit is required pursuant to Section 203.202. Based on the information provided therein, a permit shall be issued designating the proposed project as a new major source or major modification. The permittee is thereby alerted to plan to satisfy the NSR requirements before irreversible decisions are made. Subsequently, but before actual work can begin on the source, a construction permit must be obtained, pursuant to Section 203.203. This permit requirement is not unlike that already found at Rule 103 of Chapter 2. However, a construction permit is also required prior to any change in the operation of a source which has been determined to constitute a major source or modification. Furthermore, a construction permit issued pursuant to this Section must contain those conditions singular to NSR.

When no separate permit process was proposed for these projects, the eighteen month limitation on the construction permit, Section 203.204, was too short for the larger projects.

(Public Comment #18). This bifurcated permitting process should provide sufficient flexibility for long-range planning, yet with the advance knowledge that NSR must be satisfied. If the anticipated length of a project, or individual phases of it accommodate it, both permits may be simultaneously applied for, thereby assuring acceptances of the planned project. If the anticipated duration of the project does not allow for this, the permittee is aware that ultimately the project must be designed to only emit LAER (Section 203.301), and that RFP in the area must be maintained through the project's contribution of necessary emission offsets (Section 203.302).

New Major Source and Major Modification

Pursuant to the combined definitions in current Rules 101 and 201, a stationary emission source may be an individual piece of equipment or entire facility. In the first situation, either the equipment or the facility to be constructed must be "major." Pursuant to Section 203.206(a), a source qualifies as "major" if it has the potential to emit 100 tons or more per year (tpy) of the pollutant for which the area is designated nonattainment. The 100 tpy limit is premised on the federal definition of major stationary source at 40 CFR 51.18(j)(1)(iv). Therefore, pursuant to Sections 203.201, 203.202 and 203.203, before building anew a major stationary source (that is, one which has potential to emit 100 tpy of the nonattainment designated pollutant), the application for the proposed project must undergo preconstruction review prior to a construction permit being issued.

The second project triggering NSR is a planned physical change which itself has the potential to emit 100 tpy of the pollutant for which the area is designated nonattainment. According to Section 203.206(b), it is immaterial whether the facility where the change will occur is itself major (that is, emits more than 100 tpy). Therefore, taking subparagraphs (a) and (b) individually or together, preconstruction review is applicable if new equipment or a new facility, either having the capacity to emit 100 tpy, is planned. Finally, in either case, if the nonattainment designated pollutant is ozone, the source's potential to emit will be based on organic material emissions, [50 CFR 51.18(j)(1)(v)(b)]. It should be noted that the NSR is applied only to project's potential to emit the nonattainment designated pollutant. Potential emissions of pollutants other than those are limited instead by New Source Performance Standards (NSPS), National Emissions Standards for Hazardous Air Pollutants (NESHAPS), Chapter 2 emission limits, and any desires of the applicant to secure future offsets.

Should reconstruction of a stationary emission source be undertaken rather than new construction or physical change, it too may qualify as a major source, and thus be subject to NSR.

However, determination of whether the reconstruction is major is based on the fixed capital cost of the project, rather than the potential emissions it will generate. [Otherwise, Section 203.206(b) which describes major physical changes, would suffice.] If the fixed capital costs of new components exceed approximately fifty percent of the fixed capital costs of an entirely new stationary source, the project will be considered as if it were new construction of a major stationary source. Four criteria defining fixed capital cost and for evaluating the emission contributed by the replaced equipment or facility are set out in Section 203.206(c). If a source is rebuilt to the extent outlined therein, it is appropriate that the activity contribute to the area's reasonable further progress, regardless of whether it has the potential to emit more than 100 tpy.

The NSR rules also apply to major modifications of stationary emission sources. Modification is defined as a physical change or change in the method of operation of a stationary emission source. This "change" is not simply that described in Section 203.206(b), which must be physical, and must have the potential to cause 100 or more tpy increase in emissions. A modification may be either physical or operational and to be "major" it need only create a significant net emission increase of a criteria pollutant or a substance regulated under Section 112 of the CAA, the NESHAP program.

A number of changes which might otherwise constitute a major modification are listed as exempted at Section 203.207. The first exception recognizes that routine maintenance is necessarily ongoing at a facility, and as such the facility should not be subject to NSR for keeping equipment in operating condition. The next three exceptions encourage use of alternative fuel, pursuant to federal law. Operational changes are also exempted if the increases they cause are within the source's allowable emissions pursuant to its prior permit. Seasonal shutdown of afterburners pursuant to Chapter 2's Rule 205(r) is also exempted, although it may cause a significant net emission increase. Lastly, a simple change of ownership of a stationary source does not qualify as a major modification. All but the exemption for seasonal shutdowns [Section 203.207(g)] parallel the federal exemptions listed at 40 CFR 51.18(j)(1)(v)(c)(2),(3) and (5). The federal guidelines do not currently exempt seasonal shutdowns of afterburners. However, the USEPA does accept Rule 205(r) and acknowledges that it has not amended its guidelines to be consistent (Public Comment no. 22). The intention of that Rule is to conserve fuel since the hydrocarbons released during the shutdowns pose little or no environmental harm. Thus, any emission increases are 'insignificant'. To insure that the NSR program does not frustrate this policy and the use of Rule 205(r), seasonal shutdowns are exempted.

The exemptions for operational changes and alternative fuel switching were formerly not allowed if such changes contradicted representations made in previous permit applications. It was

argued that this was not federally mandated, and furthermore, was unacceptable since permit applications do not constitute permit conditions. (Public Comments Nos. 11, 14, 15, 16, 18, 19 and 24). Both assertions are correct. Since Chapter 2 emission limits are expressed in mass emission and concentration limitations, so qualifying these exemptions would impose an unforseen "cap" on these sources. Accordingly, it has been deleted.

Significant Net Emission Increase

The netting concept is used only to determine whether a modification is major, and therefore subject to NSR. Whenever the term "net" is used, it represents a total figure after any applicable increases or decreases have been credited to an original amount. Net emission determination are calculated using actual emissions as defined at Section 203.102. In this instance, net emissions represent the total amount after any valid contemporaneous increases or decreases of air pollutants emitted from the equipment have been added and subtracted. Pursuant to Section 203.208(a), an increase or decrease is contemporaneous if it has occurred due to changes in the equipment's control or operation within five years of the application being made for the NSR permit at issue. However, the change must also have been made since the area was designated nonattainment by the USEPA, or since April 24, 1979, whichever is more recent. The 1979 date is the date the Agency originally adopted its own NSR rules, which were later voided by the Seventh Circuit Appellate Court in Citizens for a Better Environment v. Illinois Environmental Protection Agency, 649 F.2d 522 (7th Cir., 1981). Since that time, however, the Illinois Legislature reinstated these rules when it amended the Act with Section 9.1(e) and the reinstated rules included the April 24, 1979 cutoff date for an increase/decrease to be contemporaneous. This date is included, rather than the date the rules were legislatively reinstated, or the date Subpart B becomes effective, because it provides the greatest length of time for increases and decreases to be considered contemporaneous.

A contemporaneous decrease/increase must also be creditable. It is only if it has not been used in another permitting process, and then only to the extent of the difference between old and new emission levels. A decrease in actual emissions is only creditable if it is enforceable and the Agency does not demonstrate that the same decrease was already calculated into the SIP's demonstration of RFP. Lastly, the decrease must represent reductions in the same pollutant that the modification will increase, unless the applicant can demonstrate that the decrease will provide the same or better protection of public health and welfare in the area. Obviously, should the amount arrived at be zero or a negative figure, no net emission increase is attributable to the modification. (Note, if a net emission decrease is proven, that decrease could provide an offset at a later time.) Should it be greater than zero, the next step is to determine whether it

represents a significant emission increase. The significant levels which are found at Section 203.209, are those proposed by the Agency and listed at 40 CFR 51.18(j)(1)(x) for 40 CFR 61.

Four problems pertaining to this determination were raised by public commentators. The USEPA cited three discrepancies with federal requirements. Formerly the definition of "allowable emissions" included a provision that the emissions creditable to the shutdown of a source being replaced by a similar source be based on allowable emissions. This was unlike any other contemporaneously creditable emissions. The provision allowing for shutdowns has therefore been relocated to Section 203.208(b) where clearly any increase or decrease is to be premised on actual emissions. Secondly, citing 40 CFR 51.18(j)(1)(xii)(b)the USEPA suggested that the term "actual emissions" used in this Section be qualified so that the "rate of annual emissions" be expressed in "tons per year". Since the definition of "actual emissions" at Section 203.102 is defined as "annual" emissions, it naturally follows that when possible, "actual emissions" will be expressed in tons per year. This is especially true considering that ultimately the net emission figure will be determined to be or not to be "significant" pursuant to Section 203.209, which expresses significant levels in tons per year. Finally the USEPA argued that the definition of "allowable emissions" should be amended to prevent malfunction, start-up or breakdown emissions from existing sources to be used in the net emission calculation. However, since Section 203.208 only provides for use of "actual emissions", it is not necessary to so amend "allowable emissions" to avoid a discrepancy with federal requirements.

For the second time commentators argued that a "cap" would be imposed if emission reductions are not available because that same decrease was already used to demonstate attainment or RFP. (Public Comments Nos. 11, 14, and 18). However, in this instance this argument fails. At 40 CFR 51.18(j)(1)(vi)(e)(3) it is federally mandated that for decreases to be creditable, they must be so qualified. However, the federal language does not require that the Agency prove that it has used the emission reduction, whereas the proposed language at Section 203.208(c)(4) does. Thus the burden of proof is shifted to the Agency to demonstrate that the decrease the permittee wishes to use is not available. In light of the federal requirement, imposing the burden of proof on the Agency is all that can be done to satisfy the commentators' concerns.

Section 203.210, Relaxation of a Source-Specific Limitation, was vigorously opposed during the public comment period (Public Comments Nos. 14, 16, 18, 19, 20, 21 and 24) It provides that should a source be granted a relaxed emission limit pursuant to a statutorily required proceeding or a Chapter 2 mechanism [e.g. a Rule 204(g) proceeding], and the relief itself constitutes a major new source or modification, then the project implementing the relaxation is subject to NSR. The commentators argue that

once such relief is awarded, the source should not be subject to another review. They argue that for instance, requiring the source granted relief provided at Rule 204(g) (which was adopted in R80-22: Sulfur Dioxide Emission Limits) to undergo NSR would prohibit fruition of the rulemaking's statutory purpose of increasing the use of Illinois coal. The Board must note that although that was one statutory purpose, those rules were also to be "consistent with the need to attain or maintain the National Ambient Air Quality Standards" (Ill. Rev. Stat. 1981, ch. 111½, par. 1009.2, as amended). Since the purpose of NSR is also to achieve the latter, that is provide RFP, it is appropriate that should the relaxed limit create a "significant net increase", the NSR requirements be applied as necessary.

The commentators ask that this Section be deleted. Arguably it could be deleted, but not for the reasons they importune. Pursuant to Section 203.301 any construction, modification or change in operation which in itself constitutes a new major source or major modification is subject to NSR, regardless of the reasons or sanctions it is associated with. Although application of these rules may overlay relief otherwise granted, it should be remembered that generally air quality impacts are assessed before source-specific relaxations are granted. In fact, under Rule 204(e), Rule 204(g), and the Alternative Control Strategy processes air quality impacts must be assessed. Thus it will be readily determinable whether the change is major and whether offsets will be required. LAER will rarely be required since most relaxations will not involve changes to equipment.

SUBPART C: Requirements For Major Construction or Modification

Once it has been determined that construction of a new major stationary emission source, reconstruction or major modification of a facility or emission unit will occur, the permittee must provide the following:

Lowest Achievable Emission Rate

Based on either control equipment or process measures, the permit application must demonstrate that each source will achieve the lowest emission rate possible. Pursuant to Section 171(3) of the CAA and the definitions proposed at Section 203.301(a), this is one of three things:

1) the lowest emission limit in the SIP of any other state, unless demonstrated not achievable; then

2) the emission limit achieved in practice or is achievable by similar stationary sources; or

3) the applicable New Source Performance Standard (Reference Chapter 2: Part IX)

Federally, LAER is defined at §171(3) of the CAA and 40 CFR 51.18(j)(1)(xiii). Sources subject to NSR are required to achieve LAER pursuant to §173(2) of the CAA. According to the federal definition and usage, the source newly constructed or modified must achieve the more stringent of (1) an emission limit contained in any state's SIP for such category or class of stationary source, or (2) that achieved in practice by such class or category of stationary source, and in no case emit more than allowable under applicable new source standards of performance.

As proposed herein, the phrase "or is achievable" is included at the second part of this three part test. Thus, if it represents the most stringent control sources subject to NSR are required to implement not only the most advanced control technologies or operations already used by like sources, but also those used by similar sources and which are reasonably transferrable. The federal interpretation of LAER includes the concept of technology transfer (c.f. 45 FR 59875, September 11, 1980.) The phrase "is achievable" is included to clarify that technology transfer is to be considered in the LAER determination. In practice it is in keeping with the technology-forcing principle underlying LAER.

According to Section 203.301, the burden of proving which of the three represents LAER for the particular project rests on the applicant whether it be a new major stationary source or be major modifications. Subparagraphs (b) and (c) require that the applicant demonstrate how the chosen control equipment or operational limits will achieve LAER at the emission points of concern. However, this demonstration must be supported by the more encompassing demonstration required by subparagraph (d). The applicant must also explain how the particular LAER program was arrived upon, or in other words, which of the above three informational resources is it based on, how expansive was the search, how successful the application of the program to the project, and what are the anticipated emissions. Lastly, any alternative emission limits must also be set out, along with any additional information the Agency may reasonably require. Since Section 39(f)(1) of the Act authorizes the Agency to determine what constitutes LAER, it is appropriate that it be given the discretion to require additional information as necessary. Both the applicant in deciding on, and the Agency in evaluating a LAER program, must be mindful that as in the case of the RACT guidelines, the LAER control measures must be forward looking in order to achieve the goal of cleaning up the area. However, even more than is the case for existing sources, as explained above, new major changes or modifications must be planned and implemented using technology-forcing strategies.

Reasonable Further Progress

Section 173(1)(A) of the CAA also requires that RFP be demonstrated in nonattainment areas and any emission reductions thereby required be enforceable permit conditions. Section 173 (1)(B) specifically requires that the new or modified sources not cause or contribute to emission levels which exceed the allowance permitted for such pollutant under Section 172(b). Said subsection (b) requires that the SIP contain an allowance for new or modified sources. To assure that this allowance is there, and then again that the SIP's allowance margin is not exhausted, major construction or modification projects must provide emission offsets, if possible. Pursuant to Section 203.302(a)(3), if the applicant provides in the immediate vicinity of the project actual emission offsets at a ratio of 1.25:1 or greater, no modeling will be required to assure an air quality improvement. However, should these offsets not be readily available, the applicant may instead provide a one-to-one offset along with acceptable modeling which demonstrates minimal to no degradation of air quality [Section 203.302(a)(1)]. If the applicant proves by modeling that air quality will be improved by the new construction or modification, no specific offsets are required [Section 203.302(a)(2)]. These options are however only available to projects involving particulate matter, sulfur dioxide, nitrogen oxide, or carbon monoxide emissions. Projects involving organic material must provide actual emission offsets in excess of the proposed project's allowable emissions.

It was suggested that requiring the modeling to prove improvement at every location pursuant to Section 203.302(a)(2), is too stringent (Public Comment No. 18). However, since such a demonstration would exempt the project from providing offsets it cannot be relaxed. Subparagraph (b)'s requirement that actual emission offsets be provided for a proposed project's allowable volatile organic material emissions was considered inequitable by the same commentator. However, it is intended to insure that paper offsets are not provided, and that sufficient reductions are provided to offset maximum operations.

Two changes were made at Section 203.303, Baseline and Emission Offset Determination. Subparagraph (b)(1) requires that the offsets be of a type with approximately the same health implications. It has been rhetorically changed from the proposed version to parallel the language used at Section 203.208(c) describing those creditable emissions acceptable as decreases. It should be noted that the substance of Subparagraph (b)(1) also limits the practice of replacing hydrocarbons with those of less reactivity in order to obtain emission offsets. Federally this practice is limited to only those hydrocarbons listed at Table 1 of the USEPA's "recommended Policy on Control of Volatile Organic Compounds" as published on July 8, 1977 at 42 FR 35314 [40 CFR 51.18(j)(3)(ii)(d)]. According to the Emission Offset Interpretive Ruling, this policy is because ". . . EPA has found

that almost all non-methane hydrocarbons are photochemically reactive and that low reactivity hydrocarbons eventually form as much ozone as the highly reactive hydrocarbons." [40 CFR App. S IV (c)(4)]. In implementing Section 203.303, USEPA's 1977 policy determination on the reactivity of hydrocarbons shall serve as a guide in determining whether or not the replacement provides emission offsets because it is of a type with approximately the same qualitative significance for public health and welfare. Should this policy change or be scientifically proven incorrect, the flexibility of Section 203.303 (b)(1) shall likewise allow use of replacement hydrocarbons to gain offsets.

The second change at Section 203.303 involves the use of a reductions achieved with the shutdown of a source. It is qualified in accordance with 40 CFR Appendix S(IV)(C)(3). Thus in limited situations, shutdowns are allowed as emission offsets, just as they are permissable as emission credits. The USEPA requested that baselines based on uncontrolled rates pursuant to Section 203.303(c)(1) be qualified. As is the case with emission credits, the USEPA wanted it demonstrated that these uncontrolled emissions had not been previously used to demonstrate attainment or more appropriately, RFP. (Public Comment #22) Baselines are premised on uncontrolled emissions only when these are less than emissions allowed by Chapter 2 limitations. Thus the difference between uncontrolled and Chapter 2 allowable emissions is not available for offsets. It is this margin which is used in SIP demonstrations. For example, lime kilns were exempted from the sulfur dioxide limitation because their uncontrolled emissions are far less than that allowed by Rule 204 (R80-22 Opinion at page 16, February 24, 1983). Should a source, such as a lime kiln, reduce its uncontrolled emissions, it is these reductions which are available for offsets.

If emission offsets are not available at the time of application, Rule 203.304(a) stays the offset requirement so long as the applicant agrees to accept future permit limitations to provide offsets when they become available. The project will therefore initially consume part of the growth margin built into the SIP program, but eventually reestablish it. On the other hand, if the project source is temporary, located in a clean-pocket of the nonattainment area, or in a rural nonattainment area for particulate matter, offsets are never required. These exceptions are set out in Section 203.304(b), (c), and (e).

The clean-pocket exception has two specific qualifications. First, it must be demonstrated either by the analysis of the applicant or the Agency that emissions from the project located within the clean-pocket will not significantly impact the area's air quality. The levels of significance, set out at 203.304(d), are expressed in the same terms as air quality standards. [It should be noted that these same levels provide the maximum impact allowed when a project provides either equal or greater offsets

pursuant to Section 203.302(a) and (c).] Secondly, the emission offset requirement may be lifted for the clean-pocket location if on the date the air quality analysis is completed, no significant impact is demonstrated and the clean-pocket is being federally reviewed for attainment designation. The USEPA disagreed with the offset exemptions provided for both temporary sources and those located in clean-pockets. (Public Comment No. 22). They will be retained since both exemptions are limited to extent necessary to protect RFP.

The non-industrial exemption for sources involving TSP, found at subparagraph (e), lists five qualifying criteria. However, these criteria merely delineate areas which are non-attainment for the TSP secondary air quality standard due to rural fugitive sources. Thus, offsets from industrial TSP sources are not to be found and even if they were, they would not help to clean up the area. That the project will comply with the LAER requirements should suffice to keep the air in these areas as healthy as possible.

Remaining Requirements

Sections 203.305 and 203.306 contain two additional requirements of the permit applicant. For all projects, the owner or operator must provide a certificate that all other sources owned or operated by the same are (1) in compliance, or (2) on a compliance program. This is required under Section 173(3) of the CAA. Lastly, if the project involves emissions of organic material or carbon monoxide, the applicant must demonstrate that this is the proper location for the new construction or modification. This too is required under Section 172(b)(11)(A) of the CAA because Illinois has sought an extension of the 1982 deadline for attainment involving these pollutants.

SUBPART F: OPERATING REQUIREMENTS

As stated at the outset, the purpose of the NSR permitting program is to improve air quality in nonattainment areas with each major construction or major modification. Since the construction or modification project is required to comply with the LAER and emission offset requirements, as discussed above, three rules have been adopted to assure that the same, and therefore the air quality improvement, is maintained. Very simply, Sections 203.601 and 203.602 require that the LAER provisions and the emission offsets established at the construction permit stage must be maintained. It should be noted that should the original emission offsets become unavailable for some reasons, equivalent offsets can be substituted. Furthermore, after such a project is operational the Agency may require that ambient air quality monitoring that is reasonably necessary to determine the actual effect on the area (Section 203.603). Together these three requirements should assure air quality improvement.

CONCLUSION

The NSR regulations adopted herein adequately parallel the federal requirements to satisfy Part D of the Clean Air Act, while also providing a maximum of ease and flexibility for new source constructions and major modifications to be permitted in Illinois. For instance, the permitting process is structured to allow for the initial determination of whether NSR will apply, and if necessary, a sufficient lapse in time for a permittee to commit to the specifics of actual construction. All federal exemptions for activities otherwise considered as possible major modifications are included, as well as an exemption for seasonal shutdowns of hydrocarbon control equipment. The exemption for increases in operating hours is not eliminated due to permit representations, as originally proposed by the Agency. Therefore the associated cost included in the Economic Impact Study is no longer a factor. Three alternatives are available for providing emission offsets, one of which eliminates the need for offsets if modeling demonstrates only improvement in air quality. Another allows the project the option of providing a set ratio of offsets to avoid modeling and its associated costs. Finally, five certain exemptions from the emission offset requirements are included in the regulations. The first exemption allows the requirement for offsets to be deferred until such time as they are available. Given the sometime difficulty in securing offsets in a timely fashion, the rule provides flexibility while still assuring improved air quality.

The dual definition of source as it pertains to netting out of NSR is currently required for federal approval of this program, although it is subject to litigation. Nevertheless it is the appropriate concept for Illinois. The Economic Impact Study found that the historical and projected impact of netting out of review to be significant. It was estimated that the number of plants netting out of review may be ten times that greater than those going through review. However, the Economic Impact Study was based on six NSR permits being issued since 1977, and had not taken into consideration that during only one of the years was the plantwide definition in effect. Thus, the factor of ten must be an overestimate. Furthermore, to allow these new projects to escape NSR not only may jeopardize air quality, but ultimately means that more stringent controls will have to be applied to existing sources, at an unspecified cost. As a whole, the NSR regulations provide an equitable program to insure and improve air quality in those regions needing it most.

I, Christan L. Moffett, Clerk of the Illinois Pollution Control Board, hereby certify that the above Opinion was adopted on the 14th day of July, 1983 by a vote of 4-0.

Christan L. Moffett

Christan L. Moffett, Clerk
Illinois Pollution Control Board