New Source Review Program Supplemental Discussion

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Introduction

DEQ proposes mostly minor changes to the rules that implement the New Source Review[1] program in Oregon, but the proposed rules also include a few significant changes. The minor changes include reorganizing the rules so that elements of the program are grouped together, as well as providing clarification for some of the provisions. The two significant changes include: 1) replacing the current definition of a major source in nonattainment areas with the federal definition (this change would also apply to maintenance areas); and 2) revising the procedures for demonstrating "net air quality benefit" when offsets are required for NSR actions in nonattainment and maintenance areas.

In addition to the changes identified above, DEQ proposes establishing two new designations for the air quality in a localized area. Currently, there are three designations used in the Oregon rules. *Attainment or unclassified areas* are areas where the air quality is below, or is presumed to be below, the Ambient Air Quality Standards (AAQS). *Nonattainment areas* are areas where the air quality does not meet the AAQS for a particular pollutant and have been formally designated nonattainment by EPA. Once designated as nonattainment, an area remains designated as nonattainment until DEQ requests and EPA approves that the area be redesignated as an attainment area. The redesignation includes the development and implementation of a maintenance plan to ensure that the area will not become a nonattainment area again. Hence, DEQ rules refer to redesignated areas as *maintenance areas*.

The new area designations proposed by DEQ are "*Sustainment*" and "*Reattainment*" areas. Sustainment areas would be areas that have ambient monitoring data indicating that an area is not meeting the AAQS or is very close to not meeting the AAQS, but the area has not been formally designated as a nonattainment area by EPA. Reattainment areas would be areas that are currently designated as nonattainment areas, but there is sufficient ambient monitoring data indicating that the area is meeting the AAQS. These areas would be designated by the state and would be overlaid on the formal EPA area designations. For sustainment areas, DEQ is proposing NSR rules that will help to prevent an area from becoming formally designated as a nonattainment area[2]. For reattainment areas, DEQ is proposing rules that will serve as a bridge between nonattainment and maintenance area NSR rules. For both areas, the proposed NSR rules are designed to provide incentives for new or modified sources to obtain offsets from "priority" sources (sources that are considered to be significantly contributing to the air quality problems in the area). However, major sources, as defined by EPA, would still have to comply, at a minimum, with the NSR rules specified for the area as it is designated by EPA.

[1] As used in this discussion document, "NSR" is an umbrella term for the prevention of significant deterioration (PSD), and nonattainment and maintenance area NSR programs. PSD applies to sources locating in areas that are in attainment with the Ambient Air Quality Standards or otherwise not classified. Nonattainment NSR applies to sources locating in areas that are designated as nonattainment for the nonattainment pollutant only. Maintenance NSR applies to sources locating in maintenance areas for the maintenance pollutant only. Designations and redesignations are actions that must be reviewed and approved by Oregon's Environmental Quality Commission and EPA.

[2] Intended in part to complement EPA's PM Advance Program.

Background

DEQ's NSR program was approved by EPA in the early 1980's. This program regulates construction and modification of larger or major sources in the state. It is a unique program that utilizes Plant Site Emissions Limits and Baseline Emission Rates for regulating source emissions, as well as determining when new and modified sources are subject to NSR. Initially, sources that were operating during the baseline period of 1977 or 1978 were granted a PSEL equal to the actual emissions during the baseline period (i.e., the baseline emission rate). If the source's emissions remained at or below the baseline emission rate or did not increase by more than a significant emission rate above the baseline emission rate, the source would not be subject to NSR.

If a source requested an increase in their PSEL by more than a significant emission rate above the baseline emission rate, the source would be subject to NSR. If the increase did not involve a "major modification", the source was required to conduct an air quality impact analysis in attainment or unclassified areas or obtain offsets and demonstrate a "net air quality benefit" in nonattainment areas[3]. If the increase involved a "major modification" in an attainment or unclassified area and the source was a federal major source[4], the source was required to install Best Available Control Technology. If the increase involved a "major modification" in a nonattainment area and the source was a major source[5], the source was required to install the Lowest Achievable Emission Rate control technology. A major modification was defined as physical changes or changes in the method of operation at a source that result in accumulated emission increases equal to or more than a significant emission rate since the baseline period.

[3] Current rules include a hybrid approach for Maintenance Areas.
[4] A federal major source is a source that has the potential to emit 100 tons or more per year of an NSR regulated pollutant if the source is within one of 28 source categories listed in the rules or 250 tons or more per year of an NSR regulated pollutant if the source is not within one of the 28 source categories listed in the rules.
[5] A major source is a source that has the potential to emit an NSR regulated pollutant at or above the significant emission rate for the pollutant. The significant emission rates for each NSR regulated pollutant are defined in the rules. For example, the significant emission rate for particulate matter (PM) is 25 tons per year, and for sulfur dioxide (SO_2) the significant emission rate is 40 tons per year.

The following examples illustrate how the program works[6]:

Example 1: PSD triggered after a series of changes at a facility over a 15 year period.
Triggering pollutant: Particulate matter (significant emission rate (SER) = 25 tons/yr)

Year	PSEL	Reason for change	Requirement(s)	Comments
1980	80	----	None	Initial PSEL = baseline emission rate (BER)
1985	90	Add equipment with capacity to emit 10 tons	None	PSEL increase above BER (10 tpy) <SER
1990	100	Add equipment with capacity to emit 10 tons	None	PSEL increase above BER (20 tpy) <SER
1995	110	Modify equipment that increases capacity to emit by 10 tons	PSD: AQ analysis and BACT for equipment added in 1985 and 1990 and equipment modified in 1995	PSEL greater than BER by more than the SER, federal major source threshold = 100 tons/yr, accumulated increase due to physical modifications (30 tpy) >SER (i.e., "major modification")

[6] PM and SO_2 are used in these examples because they were the only two pollutants regulated under the NSR program when it was first approved in the early 1980's.

Example 2: PSD triggered when PSEL increased to utilize capacity of equipment added in previous permit actions (no physical change at time of increasing PSEL).
Triggering pollutant: Particulate matter (significant emission rate (SER) = 25 tons/yr)

Year	PSEL	Reason for change	Requirement(s)	Comments
1980	80	----	None	Initial PSEL = baseline emission rate (BER)
1985	90	Add equipment with capacity to emit 15 tons, but only requested increase in PSEL enough to operate at anticipated need.	None	PSEL increase above BER (10 tpy) <SER
1990	90	Add equipment with capacity to emit 15 tons per year, remove equipment that existed in baseline period (internal netting)	None	PSEL increase above BER (10 tpy) <SER
1995	110	Increase PSEL to utilize capacity of equipment added in 1985 and 1990 without a current physical change	PSD: AQ analysis and BACT for equipment added in 1985 and 1990	PSEL increase above BER (30 tpy) >SER, federal major source threshold = 100 tons/yr, accumulated increases due to physical modifications (30 tpy) >SER (i.e., "major modification")

Example 3: BACT is not required as a result of utilizing existing capacity
Pollutant: Sulfur dioxide (significant emission rate (SER) = 40 tons/yr)
Two small boilers capable of burning natural gas or oil

Year	PSEL	Reason for change	Requirement(s)	Comments
1980	80	----	None	Initial PSEL = baseline emission rate (BER) when mostly natural gas was burned in the boilers
1985	300	Utilize existing capacity, no physical change, just burn oil more hours per year	AQ analysis	PSEL increase above BER (220 tpy) >SER, but no physical changes so BACT was not required.

Example 4: PSD triggered due to modification even though PSEL decreases.
Triggering pollutant: Sulfur dioxide (significant emission rate (SER) = 40 tons/yr)
Two small boilers capable of burning natural gas or oil

Year	PSEL	Reason for change	Requirement(s)	Comments
1980	80	----	None	Initial PSEL = baseline emission rate (BER)
1985	300	Utilize existing capacity, no physical change, just burn oil more hours per year	AQ analysis	PSEL increase above BER (220 tpy) >SER, but no physical changes so BACT was not required
1990	250	Modify equipment (new burners, increased burner capacity, but more efficient combustion reduces fuel use)	PSD: AQ analysis and BACT	PSEL >BER (170 tpy) by more than SER and capacity of new burners (250 tpy) >SER (i.e., "major modification")

Example 5: PSD never triggered because capacity to emit decreases below baseline emission rate even though there were physical changes.
Pollutant: Particulate matter (significant emission rate (SER) = 25 tons/yr)

Year	PSEL	Reason for change	Requirement(s)	Comments
1980	300	----	None	Initial PSEL = baseline emission rate (BER)
1985	300	Replace equipment with lower emitting equipment	None	PSEL = BER, internal netting
1990	300	Add pollution control equipment to existing units and add another unit	None	PSEL = BER, over-control and internal netting
2000	300	Add one piece of equipment to replace two pieces of equipment	None	PSEL = BER, internal netting
2005	200	Previous changes have reduced the capacity to emit	Establish 100 tons of unassigned emissions that will be reduced to the SER if not used within 5 years	PSEL<BER, "unassigned emissions" codified in rules in 2001

Netting Basis

The original NSR program did not have a provision for adjusting a baseline emission rate, or for establishing what would effectively be a new "baseline" emission rate if a source went through NSR after the baseline period. In addition, the rules allowed a source to maintain a PSEL equal to the baseline emission rate even if the source no longer had the capacity to emit at the level it had in the baseline period. In the first case, a source could be subject to NSR every time there was a one ton increase in the PSEL even though the source had recently gone through NSR. In the second case, the source could avoid going through NSR even if there were significant changes at the facility that could impact air quality.

In the late 1990's, DEQ developed through guidance the concept of a "netting basis" as a way to adjust a baseline emission rate, or establish an emission rate analogous to a baseline emission rate once a source goes through NSR. The netting basis concept was codified in the rules in 2001 and specified the types of regulatory actions that could establish or change the netting basis and how it was to be calculated. In many cases, a source's netting basis was initially equal to its baseline emission rate, and could be adjusted from there. Included was a provision for addressing sources that had PSELs well above their capacity to emit by classifying the unneeded PSEL as unassigned emissions. If not used within a 5 year period, the amount of unassigned emissions that were greater than the significant emission rate for the pollutant would be removed from the PSEL and netting basis.

DEQ also clarified in the 2001 rule changes that the Prevention of Significant Deterioration provisions of the NSR program only applied to "federal major sources" (i.e., sources with the potential to emit a criteria pollutant greater than 100 tons per year for 28 listed source categories and 250 tons per year for all other sources). Prior to 2001, a source with potential to emit between the significant emission rate and the federal major source level was subject to "state" PSD, which required an air quality impact analysis but did not require BACT. The rule changes in 2001 did not affect the stringency of the program because sources with potential to emit between the significant emission rate and federal major source levels were still required to conduct an air quality impact analysis.

In this rulemaking, DEQ is providing clarification for the definition of a "major modification" to be consistent with the rule changes made in 2001 when the concept of the "netting basis" was codified. Prior to 2001, the definition of major modification referred to the "baseline period" for determining emission increases due to physical changes and changes in the method of operation. In 2001, the definition was revised by referring to either the baseline period or "the last new source review" action for the source. The intent was that future increases would be compared to the most recent netting basis established for the source. DEQ proposes removing reference to the baseline period or most recent NSR action to use instead the most recent netting basis for determining increases due to physical changes or changes in the method of operation.

This change provides clarification, but is also necessary in order to implement the NSR program for fine particulate matter ($PM_{2.5}$), which became a regulated pollutant in 2011. $PM_{2.5}$ is a fraction of both total particulate matter (PM) and coarse particulate matter (PM_{10}), which both have baseline periods of 1977/1978. However, due to the number of years between the baseline period and when $PM_{2.5}$ became a regulated pollutant, and the likelihood that most sources are configured differently now than in the baseline period, DEQ did not believe it was appropriate to establish a baseline emission rate for $PM_{2.5}$. In most cases, it would be impracticable to obtain the information from 1977/1978 to establish the baseline emission rate. Therefore, the 2011 rules required that a netting basis be established for $PM_{2.5}$, but not a baseline emission rate. The rules specified that the initial netting basis for $PM_{2.5}$ is the $PM_{2.5}$ fraction of the PM_{10} netting basis in effect on May 1, 2011. Using this approach, the netting basis for $PM_{2.5}$ reflects the current configuration of the facility, as well as all previous PM_{10} permitting decisions. As a result, moving forward, it is only necessary to compare emissions increases due to future changes at a source to the netting basis and not the baseline emission rate.

The netting basis is established for each NSR pollutant emitted from a source. Some sources have a netting basis of zero because they either did not exist in the baseline period or never went through NSR. For sources that have a netting basis, the netting basis is calculated according to the definition of "netting basis" (current rules) or as proposed in the netting basis section in the PSEL rules (division 222). For $PM_{2.5}$, the initial netting basis is established relative to the PM_{10} netting basis in effect on May 1, 2011.

Major Source Definition for Nonattainment and Maintenance Areas:

As discussed above, the major source level in nonattainment and maintenance areas is currently defined in DEQ rules as the *Significant Emission Rate* for the nonattainment or maintenance area pollutant. DEQ is proposing to change the major source level to align with the major source level defined in the federal rules, which is 100 tons per year for the nonattainment areas in Oregon[7]. This change allows DEQ to reorganize the NSR rules for minor sources into a program called State NSR, while the NSR rules that apply to major sources will be called "Major NSR". Proposed revisions to the NSR rules for minor sources will provide incentives to address the sources of air pollution in areas with air quality problems, but still maintain the minimum requirements of the federal program for major sources. In addition, as a point of clarification, while DEQ proposes to adjust the applicability threshold for major sources and Major NSR to the level used in the federal rules, the term "major source" will no longer be used in the applicability section of the NSR rules and DEQ is not proposing to change the current definition of major source.

The federal program for nonattainment areas requires new or modified major sources to obtain at least 1:1[8] offsets (offsets:emissions) for the emission increases associated with the project. DEQ's proposed rules would require 1.2:1[9] offsets, except that the ratio may be reduced to as low as 1:1 if some of the offsets come from priority sources; that is, the sources that are contributing to the air quality problems in the area. For minor sources, DEQ's proposed rules would require 1:1 offsets, except that the ratio may be reduced to as low as 0.5:1[10] if some or all of the offsets come from priority sources. Currently, there are two nonattainment areas in Oregon, Klamath Falls and Oakridge. Both areas are nonattainment for $PM_{2.5}$. The significant emission rate for $PM_{2.5}$ is 10 tons per year. DEQ has determined through monitoring and modeling that the most significant source of fine particulate emissions that are contributing to the air quality problems in these areas are residential wood heating devices. By increasing the offset ratio to 1.2:1 while allowing a reduction to the offset ratio as described above, the proposed rules provide an incentive for minor sources to obtain offsets from residential wood heating devices. Typically, woodstoves have very small emissions relative to industrial sources, but due to the plume characteristics (low velocity and low temperature), the smoke from residential wood heating devices has a significant impact in residential areas, especially during periods of air stagnation and inversions.

Federal Major Source Definition

In the current rules, a Federal Major Source is defined as a source with the potential to emit a criteria pollutant greater than 100 tons per year if in one of 28 listed source categories, and 250 tons per year for all other sources. DEQ proposes to change this definition to be area specific, so that Federal Major Source means:

- A source located in a nonattainment, reattainment, or maintenance area with potential to emit 100 tons per year or more of the regulated pollutant for which the area is designated; or

[7] EPA and DEQ rules include lower thresholds, depending on the severity of the nonattainment area classification.
[8] EPA establishes higher ratios for ozone precursors, depending on the severity of the ozone non-attainment area. DEQ does not propose any changes to the ozone precursor ratios that are in the current rules.
[9] DEQ's current rules require 1:1 offsets.
[10] EPA rules do not require offsets for minor sources.

- A source located in an attainment, unclassified, or sustainment area with the potential to emit a criteria pollutant greater than 100 tons per year if in one of 28 listed source categories, and 250 tons per year for all other sources.

With this change, only sources that meet the definition of Federal Major Source would be subject to Major NSR. However, DEQ has found that redefining this term now, after being in use since 2001, is very confusing. Therefore DEQ has reverted to the current definition and instead has clarified that Major NSR in nonattainment, reattainment or maintenance areas applies to sources with potential to emit 100 tons per year or more of the regulated pollutant for which the area is designated.

Sustainment and Reattainment Areas

Based upon levels of air pollutants, geographic areas are classified by EPA as attainment or nonattainment areas.

- A geographic area that meets or has pollutant levels below the national ambient air quality standards (AAQS) is called an attainment area.
- An area that exceeds the AAQS is designated a nonattainment area.

Each nonattainment area is declared for a specific pollutant. Nonattainment areas for different pollutants may overlap each other or share common boundaries.

All states strive to achieve attainment with state and federal air quality standards for a number of reasons. First and foremost, remaining in compliance helps protect public health, a key element of DEQ's mission. In addition, compliance with ambient air quality standards contributes to economic growth. Nonattainment area status can potentially limit production capabilities of existing industries and preclude siting of new industries that provide job opportunities. Attainment of ambient air quality standards also helps avoid a potential loss of federal highway funding that can result from nonattainment status. Lastly, it is costly and time consuming to develop and implement plans to bring areas back into attainment.

In addition to areas classified as attainment and nonattainment, some areas are described as “maintenance areas.” Maintenance areas are those geographic areas that at one time were classified as nonattainment, but are now consistently meeting the AAQS. Maintenance areas have been redesignated by the EPA from "nonattainment" to "attainment with a maintenance plan"; commonly called "maintenance areas." These areas have demonstrated through monitoring and modeling that they have sufficient controls in place to continue to meet the AAQS. They also have contingency measures in place that would be implemented should the areas start showing exceedances again.

As mentioned above, DEQ proposes adding two new area designations to the rules: sustainment and reattainment areas. These would be areas designated by the EQC, but not by EPA; as such, these new area designations would not override the EPA designations, but instead would overlay them.

Sustainment areas would be areas that are officially designated as attainment or unclassified areas by EPA, but ambient monitoring data has demonstrated that the air quality levels are close to or above the ambient air quality standards.

- Sources subject to Major NSR locating in sustainment areas would be required to satisfy the requirements for attainment or unclassified areas plus some additional requirements for obtaining offsets and demonstrating a net air quality benefit to address the air quality problems in the area.
- Sources subject to State NSR could either demonstrate that they would not cause or contribute to an exceedance of the ambient air quality standards and PSD increments; alternatively, the source

may obtain offsets and demonstrate a net air quality benefit. For these sources, the offset ratio would be specified when the area was designated as a sustainment area. In the first area proposed to be designated as a sustainment area (Lakeview), the proposed offset ratio is 0.1 to 1 (e.g., 10% offset) that could be reduced to 0.05 to 1 (e.g., 5% offset) if the offsets come from priority sources within the sustainment area. In addition, the source would be required to demonstrate that the emissions, after subtracting the priority source offsets, would not have impacts greater than the significant impact level in the neighborhood area around the ambient monitor and not exceed 10% of the ambient air quality standards in all other areas of the sustainment area.

Reattainment areas would be areas that are officially designated as nonattainment areas by EPA, but ambient monitoring data has demonstrated that the air quality levels are below the ambient air quality standards.

- Sources subject to Major NSR within reattainment areas would still have to comply with the rules for nonattainment areas.
- Sources subject to State NSR would have different requirements that are focused on keeping the ambient air quality levels below the ambient standards. Such sources would have to obtain offsets and demonstrate a net air quality benefit, with the focus more on the priority sources that have in the past contributed the most to the air quality problems in the area.

State New Source Review Program (component of overall Minor New Source Review Program)

DEQ is proposing a State NSR program that will cover the following:

- PSEL increases equal to or greater than the significant emission rate that do not involve a physical change or change in the method of operation for all sources in the state, both major and minor; and
- Construction and modification at sources that have emissions equal to or greater than the significant emission rate but less than 100 tons per year.

For sources in the significant emission rate to 100 tons per year range, the State NSR program for sources located in nonattainment and maintenance areas that make a major modification is very similar to the Major NSR program under which they were previously regulated. For sources that emit less than the significant emission rate, or that increase emissions without making a major modification, the State NSR program is similar to the existing PSEL program.

The State NSR program is part of DEQ's minor new source review program, along with the requirements for Notice of Construction and Approval of Plans (OAR 340-210-0205 through 340-210-0250), PSEL increases that are not subject to Major New Source Review (340-222-0041), and the ACDP permitting program (OAR 340, Division 216). The main reason for developing the State NSR program is to be able to address the sources that are causing the majority of the air quality problem in sustainment and nonattainment areas. DEQ has created a provision for the EQC to identify these sources as "priority" sources. Current PM nonattainment areas are the result of smoke from residential wood burning. Under the federal NSR program for major sources, offsets from residential wood burning are only allowed in Klamath Falls, whereas more flexibility is allowed in permitting minor sources. Therefore, a proposal for the State NSR program allows sources in the significant emission rate to 100 tons per year range to get offsets from priority sources defined by the EQC. This will directly address the air quality problem in these areas, helping the area meet the ambient air quality standards more quickly. DEQ is also providing

incentives, such as a lower offset ratio, for sources that offset part of their emissions with emissions from priority sources.

The following table shows the differences in permitting requirements for the sources that emit between the significant emission rate (SER) and 100 tons per year before and after the proposed rule changes:

	Sources that emit between the SER and 100 tons per year in **NONATTAINMENT Areas**	
	Current	Proposed
Source Classification	Major	Minor
Preconstruction Monitoring	not required	not required
Control Technology	LAER *	***BACT** *
NAQB	Offsets • 1.1:1 for ozone • 1.0:1 for other pollutants ** • Reduce impacts at majority of receptors; and • Impacts less than SIL at all receptors	Offsets • 1.1:1 for ozone • ***1.0:1 for other pollutants, with provision to reduce the ratio if offsets are obtained from priority sources*** ▪ Impacts less than SIL at all receptors ***or*** ▪ ***Impacts less than SIL at an average of receptors around DEQ approved ambient monitoring site and*** ▪ ***Source plus competing sources since area was designated less than 10% of the AAQS***

* If a major modification is involved

** Offset ratio varies for certain areas such as Medford-Ashland AQMA for PM_{10}, etc.

	Sources that emit between the SER and 100 tons per year in MAINTENANCE Areas	
	Current	Proposed
Source Classification	Major	Minor
Preconstruction Monitoring	**Yes*** **	***No***
Control Technology	BACT *	BACT *
NAQB	Offsets • 1.1:1 for ozone • 1.0:1 for other pollutants ** and NAQB ▪ Reduce impacts at majority of receptors; and ▪ Impacts less than SIL at all receptors Or • Growth allowance Or • Model below maintenance area limits	Offsets • 1.1:1 for ozone • ***1.0:1 for other pollutants, with provision to reduce the ratio if offsets are obtained from priority sources*** ▪ Impacts less than SIL at all receptors ***or*** ▪ ***Impacts less than SIL at an average of receptors around DEQ approved ambient monitoring site and*** ▪ ***Source plus competing sources since area was designated less than 10% of the AAQS*** Or • Growth allowance Or • Model below maintenance area limits

*** If impacts are greater than the Significant Monitoring Concentration (current exemptions will still apply, as well)

Net Air Quality Benefit

In addition to the offset requirements, DEQ rules currently have very prescriptive requirements for demonstrating the net air quality benefit associated with the offsets. The federal program includes reference to "net air quality benefit" but does not provide specific criteria for demonstrating net air quality benefit. Presumably, the net air quality benefit associated with offsets under the federal program is determined on a case-by-case qualitative (rather than quantitative) basis. DEQ has reviewed other state programs approved by EPA and found that most programs rely merely on offsets for the demonstration of net air quality benefit.

DEQ's rules currently have two criteria for determining whether offsets provide a net air quality benefit; both rely on modeling. The first criterion is that the offsets must reduce the proposed source's impacts at a majority of the receptors within the designated area. The second criteria is that the source's emissions along with the required offsets will result in impacts less than the significant impact level (SIL) at all receptors within the nonattainment area. These two criteria were established in 2001 and were never fully evaluated before they were adopted. As it turns out, DEQ has found that these two criteria are virtually impossible to meet because emissions from different locations do not impact the same receptors. In order

to satisfy the criteria, the offsets would have to come from almost the same location as the proposed project.

From adoption of these requirements in 2001 until 2009, meeting the requirements of net air quality benefit was not an issue for sources that triggered NSR/PSD because all of the proposed sources were located in attainment or unclassified areas and did not significantly impact air quality in a designated nonattainment or maintenance area. Therefore, these sources did not have to meet the requirements of net air quality benefit.

In 2009, a source located in a nonattainment area wanted to expand but couldn't meet the second part of the net air quality benefit test because the offsets were from a different part of the nonattainment area. Legislation was passed to redefine net air quality benefit for small scale local energy projects as a result. Recently the net air quality benefit test was applied to a new business in a nonattainment area that was essentially co-located with the existing business that provided the offsets. Because the businesses were co-located, they were able to show that modeled impacts resulted in less than a significant impact level increase at all modeled receptors. If the businesses had not been co-located, this requirement would have been impossible to meet because of meteorological conditions and different topography.

Upon further review of the federal rules, as well as other state programs, DEQ does not believe the nonattainment NSR rules were intended to prevent new sources from being built in nonattainment areas if the source's emissions are offset by emission reductions from other sources within the area. Further, DEQ does not believe that the criteria established in 2001 can be met. On the other hand, DEQ believes that offsets by themselves are not a sufficient demonstration of net air quality benefit. Even though the emissions from a proposed project may be fully offset so that there is no net increase in emissions within the nonattainment area, the impacts of the source's emissions could still adversely affect specific areas within the nonattainment area.

Therefore, DEQ proposes modifying the criteria for demonstrating net air quality benefit as follows:

1. Obtain offsets in accordance with the provisions discussed above, which provide incentives for obtaining offsets from the priority sources; and
2. Conduct modeling that:
    a. Demonstrates that the source's impacts without taking into consideration any offsets are less than the significant impact level at all receptors within the designated area; or
    b. Demonstrates that the source's impacts without taking into consideration any offsets are less than the significant impact level at receptors in the neighborhood of the monitoring site used for the designation of the area;
    and
    Demonstrates that the source's impacts after subtracting offsets from priority source's plus the impacts from all other emission increases (including contemporaneous offsets) and decreases since the area was designated are less than 10% of AAQS[11] at all other receptors within the designated area.

DEQ believes that the demonstrations above will ensure that the air quality in a designated area will not get worse as a result of new or modified sources, and in most cases will improve, especially if the proposed source obtains offsets from other priority sources within the designated area.

[11] This is analogous to the PSD increment, but using 10% of the AAQS is more protective than the Class II PSD increments. The PSD increment was established to "prevent significant deterioration" in attainment areas. That same concept is appropriate for any airshed.

When priority sources are identified for an area and appropriate offset allowances are established, sources subject to either Major or State NSR may obtain offsets from priority sources. In most areas, but not all, sources can reduce the offset ratio by obtaining part of their offsets from priority sources. In nonattainment, reattainment and maintenance areas, the minimum offset ratio allowed for the underlying federal designations is 1.0:1. In nonattainment and reattainment areas DEQ has increased the offset ratio to 1.2:1, which may be reduced to 1.0:1 by obtaining priority source offsets for both Major and State NSR. In maintenance areas the offset ratio of 1.0:1 is being retained. Since the minimum allowed offset ratio for Major NSR is 1.0:1, it is not reducible, but it is reducible for State NSR. Since the minimum requirement of 1.0:1 offsets for Major NSR is still the same as the federal NSR program, offsetting with priority source emissions should be approvable by EPA.

New Violation of AAQS

OAR 340-202-0050(2) provides general authority for DEQ to prohibit construction of a new or modified source if the source by itself would cause or contribute to a violation of an AAQS. DEQ has added this requirement to the NSR rules for each designated area. The proposed rules also include a provision that new and modified sources cannot cause or contribute to a ***new*** violation of an ambient air quality standard or PSD increment. DEQ interprets this requirement as follows:

For areas where the background concentration is above the AAQS: A new or modified source can't cause or contribute to a new violation because the area is already violating the AAQS. In this case, the rules are intended to improve the air quality in the general area, or at least prevent the air quality from getting worse as a result of the proposed new or modified source by requiring offsets and:

- Using SIL to show that the source will not make the air quality worse in the neighborhood around the monitoring site(s).
- Using 10% of AAQS[11] to show that a source (plus competing sources) will not make the air quality worse in all other areas of the designated area.

For areas with background within an SIL of the standard: The source could cause or contribute to a "new" violation. Sources subject to Major NSR would be required to demonstrate that their impact when added to the background does not cause a violation of the standard. This analysis needs to include the impacts of other sources if they are not included in the background monitoring data. The analysis would also account for offsets (e.g., emission reductions as a result of the project). Sources subject to State NSR may either satisfy the requirement as specified above for Major NSR or obtain offsets and demonstrate net air quality benefit as required for sources locating in nonattainment areas.

For areas with background more than the SIL below the standard: The source could cause or contribute to a "new" violation if the source's impacts are greater than the SIL. The PSD analysis is required to show that a source will not cause or contribute to a violation of the standard; or, for sustainment areas a source must obtain offsets and:

- Use the SIL to show that the source will not make the air quality significantly worse in the neighborhood area around the monitoring site(s).
- Use 10% of AAQS[11] to show that a source (plus competing sources) will not make the air quality worse in all other areas of the designated area.