

NONATTAINMENT AREA (NAA) PERMITS IN TEXAS

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BACKGROUND:

NSR PERMITTING PROCESS

PREVENTION OF SIGNIFICANT DETERIORATION (PSD) AND NONATTAINMENT PERMITTING REQUIREMENTS WERE CREATED BY THE 1977 FEDERAL CLEAN AIR ACT (FCAA) AMENDMENTS. THE FEDERAL REGULATIONS IMPLEMENTING THESE PERMITTING PROGRAMS WERE FINALIZED AFTER COURT CHALLENGES ON AUGUST 7, 1980, AND HAVE REMAINED IN EFFECT WITH MINOR REVISIONS UNTIL NOW. THESE PERMITTING PROGRAMS HAVE BEEN FULLY DELEGATED TO THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ), AND INCORPORATE THE FEDERAL RULES BY REFERENCE.

Under TCEQ's rules, new major stationary sources of air pollution and major modifications to existing major stationary sources are required to obtain an air pollution permit before commencing construction. A stationary source generally includes all pollutant-emitting activities that belong to the same industrial grouping, are located on contiguous or adjacent properties, and are under common ownership or control.

The permitting process, called New Source Review (NSR), is required whether the major source or modification is planned for an area where the National Ambient Air Quality Standards (NAAQS) are exceeded (nonattainment areas) or an area where air quality is acceptable (attainment and unclassifiable areas). Permits for sources in attainment areas are referred to as PSD permits, while permits for sources located in nonattainment areas are referred to as nonattainment area (NAA) permits.

In order to trigger NAA permitting requirements, the proposed project must be a major stationary source or a major modification. The Clean Air Act Amendments of 1990 defined the major source size and the major modification thresholds for nonattainment areas depending upon the degree of nonattainment for each area. These levels are described in the table on the following page.

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TABLE 1. NONATTAINMENT THRESHOLDS						
Nonattainment Pollutant	Criteria Pollutant	County or Area (See Map)	Nonattainment Classification	Major Source Tons/yr	Major Modification Significant Rate Tons/yr	Offset Ratio
Ozone	VOC or NO _x	Wise County (2008 Std.)	Moderate	100	40	1.15 : 1
Ozone	VOC or NO _x	DFW Area* (9 counties) (1997 std.)	Serious	50	25	1.20 : 1
Ozone	VOC or NO _x	HGB Area** (8 counties) (1997 std.)	Severe	25	25	1.30 : 1
PM10	PM10	City of El Paso	Moderate	100	15	1.00 : 1
Lead (Pb)	Lead	Part of Collin County	NA	100	0.6	1.00 : 1

*Collin, Dallas, Denton, Tarrant, Ellis, Johnson, Parker, Kaufman, and Rockwall Counties (See Map)

**Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, and Waller Counties (See Map)

NONATTAINMENT AREAS

Classification of Nonattainment Areas:

City of El Paso PM10 - Moderate

Dallas-Fort Worth Ozone
1997 8-hr Standard - Serious
2008 8-hr Standard - Moderate

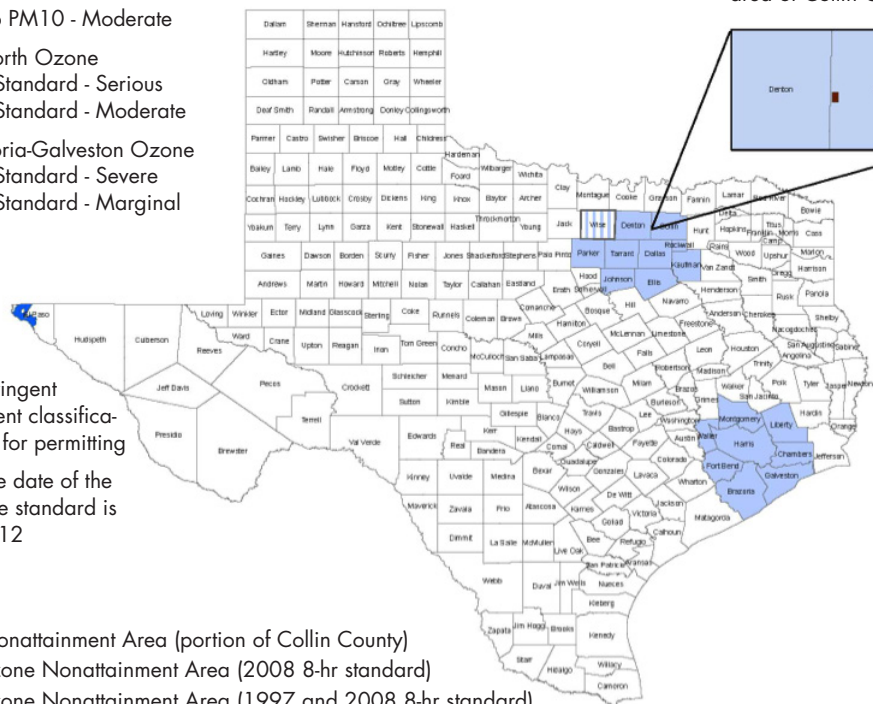
Houston-Brazoria-Galveston Ozone
1997 8-hr Standard - Severe
2008 8-hr Standard - Marginal

NOTES:

- The most stringent nonattainment classification is used for permitting
- The effective date of the 2008 ozone standard is July 20, 2012

Legend

- Lead Nonattainment Area (portion of Collin County)
- 8-hr Ozone Nonattainment Area (2008 8-hr standard)
- 8-hr Ozone Nonattainment Area (1997 and 2008 8-hr standard)
- PM10 Nonattainment Area (portion of El Paso County)



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OUR SERVICES AND APPROACH:

OZONE NONATTAINMENT COMPLIANCE

NAA permitting is a complex and protracted process that Sage helps navigate. Since ozone is the most common nonattainment pollutant encountered, it will be the focus of this discussion.

MAJOR SOURCE DETERMINATION

The major source determination is straightforward. We compare any new proposed emissions from the source to be located in the nonattainment area to the above major source thresholds. If any are exceeded, NAA permitting is triggered.

MAJOR MODIFICATION CALCULATIONS

A major modification is generally a physical change or change in the method of operation of a major stationary source that would result in a significant net increase in the emission of any regulated pollutant. In determining if a proposed project increase would cause a significant net increase to occur, Sage makes several calculations. First, we determine the proposed project emissions, typically the potential to emit (PTE). We then determine the baseline actual emissions, which is the average actual emission rate over any consecutive 24-month period in the previous ten years for the facility being modified (for utilities, it's the previous five years). If the difference between the baseline actual emission rate and the proposed project emission increase is equal to or greater than the netting threshold, then netting is triggered.

For Serious and Severe nonattainment areas, the netting threshold is five tons per year for VOC or NO_x. For Moderate nonattainment areas, the netting threshold is 40 tons per year. If the difference between the baseline actual emissions and the project emissions do not exceed the netting threshold, then netting is not triggered and NAA NSR does not apply to the project.

Remember, project emissions include emissions from any new equipment or emission increases from any changes to existing equipment, debottlenecking of any up-stream or down-stream equipment, or any increased utilization of support facilities such as boilers. If the difference between the baseline actual emissions and the project emissions is equal to or exceeds the netting threshold, contemporaneous netting calculations must be made in order to determine if the net emissions increase is equal to or greater than the significant emission rate for a major modification. The significant emission rates for a major modification are listed in Table 1. This is a critical step in NAA permit applicability. It is very beneficial to net out of NA permitting if possible.

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To do the netting calculations, we follow a three-step process:

STEP 1 We first determine the contemporaneous period, which is defined as five years back from the proposed start of construction date, forward to the proposed start of operation date. The time between these two dates is the contemporaneous period.

STEP 2 We define all creditable emission increases and decreases that have or will occur in the contemporaneous period. Creditable increases are the project emissions plus all authorized emission increases in the contemporaneous period. Creditable decreases are all emission decreases that exceed the State Implementation Plan (SIP) requirements that occurred during the contemporaneous period.

STEP 3 We sum all the creditable increases and decreases in the contemporaneous period and compare the result to the NAA major modification significance levels. If the calculated net increase equals or exceeds the significance levels, NAA permitting is triggered; if not NAA is not triggered.

NAA PERMIT APPLICATION

If NAA permitting cannot be avoided, then Sage assists in preparing the required NAA permit application. This application requires five demonstrations in order for the permit to be issued:

1. The applicant proposes the installation of lowest achievable emission rate (LAER) controls
2. The permit applicant must provide emission offsets at the prescribed offset ratio depending on the nonattainment level of the project location
3. An alternate site analysis must be prepared which demonstrates that the benefits of the project outweigh the environmental and social costs of the project
4. The applicant must certify that all major sources owned or operated by the applicant are in compliance with all applicable rules and regulations
5. The applicant must provide adequate public notice and the opportunity for public participation. Sage helps with each of these demonstrations.

LAER DETERMINATION

LAER is defined as the most stringent emission limitation contained in the implementation plan of any state for such class or category; or the most stringent emission limitation achieved in practice by such class or category of source.

STEP 1 **Identify applicable emission limits from all 50 states' SIPs.** The most stringent emissions limitation contained in any state SIP for a class or category of source must be considered LAER, unless a more stringent emissions limitation has been achieved in practice or the SIP limitation is demonstrated by the applicant to be unachievable. LAER cannot be less stringent than any applicable NSPS or Part 61 or Part 63 NESHAP. The LAER determination tends to be less certain than a BACT determination due to the relatively low number of LAER determinations. The greatest certainty for a LAER limit exists when that limit is actually being achieved. However, a SIP limit should be initially considered achievable even if it has not been applied to a source. Sage provides a detailed analysis of potential control options from all 50 states' SIPs.

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STEP 2 Identify the most stringent emission limit actually achieved in practice.

Available control options are those air pollution control technologies with a practical potential for application to the proposed equipment and the regulated pollutant under review. This includes technologies employed outside the United States. Air pollution control technologies include the application of processes or available methods, systems, and techniques, including fuel cleaning or innovative fuel combustion techniques for control of the affected pollutant. Sage identifies all technically feasible control technology options (using the U.S. EPA BACT/MACT/LAER clearinghouse, if necessary), and analyzes the most stringent controls actually achieved in practice for the proposed source category.

STEP 3 Eliminate the technically infeasible options and select LAER control

option. The LAER review takes technical feasibility into account but not economic reasonableness, which is considered in a BACT analysis. While the LAER requirement does not consider economic, energy, or other environmental factors, a LAER option is not considered achievable if the cost of the control is so great that the proposed project could not be built or operated. If some other plant in the same or comparable industry uses that control technology, then such use constitutes evidence that the cost to the industry of that control option is not prohibitive. Sage assists in analyzing all control options and selecting the appropriate LAER choice.

PROVIDE EMISSIONS OFFSETS AT PRESCRIBED RATIO

A major source or a major modification proposed to be located in a nonattainment area must obtain emissions offsets as a condition of permit approval. These offsets, generally obtained from existing sources located in the vicinity of the proposed source must (1) offset the emissions increase from the new or modified source, and (2) provide a net air quality benefit. The obvious purpose of acquiring offsetting emissions decreases is to allow an area to move toward attainment of the NAAQS, while still allowing some industrial growth.

The amount of the offset is prescribed by the offset ratio depending upon the level of nonattainment of the area when the proposed project is located. Offsets must meet four criteria:

- 1. Offsets must be real** in that the emission reductions are not reduction of the PTE but of actual emissions. There are no credits for reductions of emissions exceeding an emission limit or reductions occurring as a result of another rule or SIP requirement.
- 2. Offsets must be quantifiable** to the extent that the actual emission rate can be determined with a high degree of certainty.
- 3. Offsets are usually made federally enforceable** by the addition of a permit special provision that describes the offset emissions generation and quantification.
- 4. Offset emissions are permanent** and cannot be used for future netting or offset purposed.

Offset emissions are typically generated by emission reduction credits (ERCs) and are certified by the Emissions Banking and Trading rules of the TCEQ. In order to be used as offset credits, the reductions must be certified by the TCEQ. Sage has been involved in a number of transactions involving ERC certification and trades and is uniquely qualified to assist clients in this area.

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ALTERNATE SITE ANALYSIS

This section of the NAA permit application requires that the applicant provide an analysis of alternative sites, sizes, production processes, and environmental control techniques for the proposed source. This demonstrates that the benefits of the proposed source significantly outweigh the environmental and social costs imposed as a result of its location, construction, or modification.

The EPA has not issued detailed guidelines describing how the alternate site analysis should be conducted. However, the TCEQ has developed Form 9N, which has a series of fill-in-the-blank questions to be answered by the applicant. Sage is familiar with TCEQ Form 9N and routinely completes this form for clients. With its completion, the applicant is deemed to have fulfilled the requirement for the alternate site analysis.

COMPLIANCE CERTIFICATION

In order for the reviewing agency to approve a NAA permit, the permit applicant must certify that all major sources owned or operated by the applicant (or by any entity controlling, controlled by, or under common control with the applicant) in the State are in compliance or are on a schedule for compliance with all applicable emission limitations and standards under the Clean Air Act. This includes all regulations in an EPA-approved SIP, including those requirements more stringent than federal requirements. With the advent of the federal Title V operating permit program annual compliance certification requirement, this is generally not a significant issue to the applicant. Sage reviews all Title V annual compliance certifications to ensure that this step is not a barrier in the permit review process.

PUBLIC NOTICE

Before an NAA permit is issued, the permit rules require that adequate opportunity for public involvement must be made. This is done through the public notice and comment procedures. Each reviewing authority has adopted regulations specifying the public notice procedures, which include newspaper notice, posting of signs at the proposed site, and procedures for receiving public comment, including public hearing procedures. The process is agency-driven. Sage assists permit applicants in following the specific public notice procedures, as directed by the reviewing agency.

ADMINISTRATIVE DATA

There are other parts to the NAA permit application that Sage prepares, including facility location information and maps, process flow diagrams, records of permits issued and emission control projects at other units, and any other items as required by the reviewing agency. Sage coordinates with the facility and the reviewing agency to incorporate all relevant documentation within the permit application. Sage also proposes special conditions language for the final permit to provide maximum operating flexibility while maintaining compliance with all regulations.

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TIMING/PROCESS

NAA permit application reviews can take 6-12 months or longer depending upon EPA and citizen involvement in the public notice period. Sage assists in negotiating permit conditions and works with the reviewing agency to compress the timelines in the review process. We generally require 1-3 months to prepare an NAA application, depending upon the size and complexity of the proposed project and the availability of the required permit application data requirements.

SUMMARY:

SAGE'S APPROACH TO NAA PERMITTING

Sage provides turnkey services for the NAA permitting process. We help clients avoid NAA permitting altogether by developing strategic project timelines, pollution reduction projects, and innovative netting approaches. If NAA permitting is triggered, Sage prepares the permit application and shepherds the application through the review process.