

**DEPARTMENT OF ENVIRONMENTAL PROTECTION**  
**Bureau of Air Quality**

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known as The Air Pollution Control Act, (35 P.S. § 4001 et seq.)

**PURPOSE:** To provide compliance assistance, and clarification of the Chapter  
145 (1-90) regulations.

**APPLICABILITY:** Staff/Regulated Public

**DISCLAIMER:** The policies and procedures outlined in this guidance document  
are intended to supplement existing requirements. Nothing in the  
policies or procedures shall affect regulatory requirements.

The policies and procedures herein are not an adjudication or a  
regulation. There is no intention on the part of DEP to give the  
rules in these policies that weight or deference. This document  
establishes the framework, within which DEP will exercise its  
administrative discretion in the future. DEP reserves the discretion  
to deviate from this policy statement if circumstances warrant.

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## Section 1: Introduction

**After reading this introduction you should know what this Overview covers, and where to obtain the latest information on the regulation.**

The Department published the Chapter 145 regulations in the Pennsylvania Bulletin on September 23, 2000 that take the place of the Federal “SIP Call” part 97 NO<sub>x</sub> Budget Trading Program regulations<sup>1</sup> applicable to Pennsylvania and other “SIP Call” states and 25 Pa Code Chapter 123.101-120, NO<sub>x</sub> Allowance Requirements. This overview may assist you in determining if you -- as the owner or operator of a stationary air pollution source -- are subject to the regulation and what to do if you are required to comply.

The final Chapter 145 Subchapter A. NO<sub>x</sub> Budget Trading Program rule largely mirrors the Federal NO<sub>x</sub> Budget Trading Program (40 CFR Part 97). These programs are cost-effective approaches for reducing ozone season NO<sub>x</sub> emissions from the affected sources. As described below, this overview includes information on who is affected by the rule, the requirements that apply to these sources, and the details of the trading program.

The range of trading may increase if EPA acts on additional section 126 petitions. You can determine whether EPA has issued a new rule to address additional section 126 by checking the EPA Regional Transport of Ozone (RTO) website and Clean Air Markets Division’s (CAMD -- formerly known as the Acid Rain Division) web site.

This document is intended to aid general understanding of the major requirements of the regulation. Provisions contained in the regulation are not supplemented or narrowed by this document. The regulation contains the detailed requirements and procedures that must be followed to assure compliance.

### 1.1 Who can use this overview?

If you are an owner and/or operator of a large stationary source that burns fossil fuel, then you could use this overview to help you:

- Determine whether the unit(s) at your facility are subject to the regulation, and
- Understand the requirements.

### 1.2 What does the overview cover?

This Overview covers the basic requirements of the rule including the criteria used to determine who is affected by the rule (Section 3), how the trading program works (Section 4), what permit actions are required (Section 5), and what monitoring, reporting and recordkeeping requirements apply (Section 6). Sections 7 and 8 cover other issues related to compliance.

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<sup>1</sup> The Federal regulations referred to here are the U.S. Environmental Protection Agency (EPA) regulations entitled “Findings of Significant Contribution and Rulemaking on Section 126 Petitions for Purposes of Reducing Interstate Ozone Transport” (Federal Register, Vol. 65, No. 11, pages 2674 - 2767) that were published on January 18, 2000 under authority of section 126 of the Clean Air Act (the Act).

**See Appendix A to this Overview for a list of contacts and other resources.**

### **1.3 How do I use this overview?**

**Section 1** introduces you to this Overview and the regulation. You should be able to determine whether you could be affected by the rule.

**Section 2** provides a general explanation of how the program works. The section also summarizes the major compliance timetables and explains how this rule relates to other Federal, State and local requirements.

**Section 3** provides a detailed description of the applicability provisions of the rule and includes a step-by-step sample analysis to help determine if you are subject to the regulation.

**Section 4** describes how the rule has you meet your emission limits. This section outlines what options the rule provides you with to meet your reduction obligations and how the trading program works.

**Section 5** provides a brief synopsis of the permit actions and describes in sequence the detailed steps new sources must follow to assure they will obtain allowances from the set-aside.

**Section 6** describes in some detail the emissions monitoring, reporting and recordkeeping requirements contained in the regulation that you must meet to account for all of your emissions.

**Section 7** includes information on other common questions such as conducting a self-audit to determine compliance, and the ability to obtain additional allowances for compliance needs.

**Section 8** includes information on the compliance assurance process. This section describes how the Administrator determines compliance and how violations may be corrected.

**Appendices** to the Overview include forms information and contacts and other resources.

## Section 2: Requirements of the Regulation

The final Chapter 145 rule addresses units in Pennsylvania. The EPA final Section 126 rule addresses units in the affected States (or portions of States) identified in Figure 2-1. The final Chapter 145 rule requires NO<sub>x</sub> emission reductions at all large electric generating and industrial boilers and turbines as described in Section 3. Sources are required to meet certain NO<sub>x</sub> emission limitations in the context of an emissions trading program, obtain permits, and meet the monitoring and reporting requirements as described in Sections 4 through 6 of this Overview.

### 2.1 Scope of the 126 rulemaking

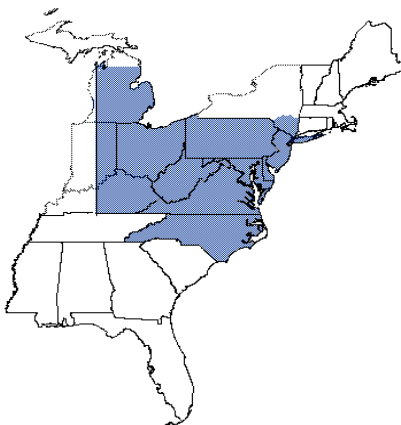


Figure 2-1: Areas Affected Under the Section 126 Final Rule

### 2.2 Nature of the trading program

The NO<sub>x</sub> Budget Trading Program is a “cap-and-trade” program. This type of emission trading program is a proven method for achieving air quality objectives, while simultaneously providing compliance flexibility to sources. The freedom to pursue various compliance strategies (i.e., switching fuels, installing pollution control technologies, or buying authorizations to emit (allowances) from other firms) reduces the cost of compliance in a market-based program relative to costs under a command-and-control approach. Under the NO<sub>x</sub> Budget Trading Program, initial allowances are distributed to all affected units based on historical heat input. Since emitting fewer tons than the allocation results in surplus allowances that may be sold on the market, pollution prevention becomes increasingly cost-effective and innovation in control technology is encouraged. The Department will update allowance allocations every five years. The Department will use more recent heat input data, to update the allowance allocations.

### 2.3 How do I demonstrate compliance?

Within two months after each ozone season (May 1 through September 30), the NO<sub>x</sub> Authorized Account Representative (NO<sub>x</sub> AAR or AAR) for your source will have to certify that each affected unit was in compliance with the emissions limitation and the requirements of the trading program. If you own a source that commenced operation before May 1, 1997, you will receive an initial allowance allocation based on historical operating information. If you own a source

that commenced operation on or after May 1, 1997, you are eligible to receive allowances from the new source set-aside. You will use the monitoring data you collect to account for all your emissions, and then compare your emissions to your allowances.

If the allowance allocation you receive is less than your actual ozone season emissions, you may take advantage of the flexibility provided by the allowance market to buy allowances. You have until November 30th of each year, which is two months after the end of the ozone season, to obtain sufficient allowances to cover your emissions. See Section 8 for a discussion of the penalties and other potential enforcement consequences for failing to meet the requirement to hold sufficient allowances to cover your emissions.

## 2.4 Compliance timetable

Chapter 145 establishes several major compliance milestones for monitoring, establishing your allowance trading accounts, and certifying compliance with your emission reduction obligations. The following table describes these major compliance deadlines in chronological order. In addition, there are a number of specific schedules for when you must submit various reports and other notifications. These types of timing issues are discussed in Sections 3 through 6, below.

**Table 2-1: Major Compliance Deadlines**

<b>Deadline</b>	<b>Requirements</b>
May 1, 2000  (only for units applying for early reduction credits)	Install all monitoring systems in accordance with §§ 75.72 and 75.76 <b>and</b> Complete all monitoring certification tests in accordance with § 145.71  *Note that 145.70 (2)(i) allows compliance with 123.108 as an alternative for 2000.
November 1, 2001	Submit an Account Certificate of Representation, (the regulation does not mandate this date).  [NOTE: You may also submit your application for a general account at this time. November 1, 2001 is not an absolute deadline for the submittal of the account certificate or general account application. However, general, compliance, and overdraft accounts will not be established, until permit amendments are effective and these documents have been submitted.]
May 1, 2002	Install all monitoring systems in accordance with §§ 75.72 and 75.76 <b>and</b> Complete all monitoring certification tests in accordance with § 145.71 <b>and</b> Begin recording, reporting, and quality assuring all monitoring data <b>and</b> [NOTE 1: If your unit first starts operating on or after January 1, 2002, your deadline is the later of: May 1, 2002, or 90 days after an EGU first operates, or 180 days after a non-EGU first operates.]  [NOTE 2: If you add a new stack or flue after the deadline, you will need to meet the above requirements within 90 days following the date on which emissions are released from the stack (or by May 1 of the following year if the unit only reports during the ozone season).]



**Table 2-1: Major Compliance Deadlines con't**

<b>Deadline</b>	<b>Requirements</b>
February 1, 2003	Submit requests for early reduction credits (issued from compliance supplement pool for reductions achieved in 2001 and 2002, or as provided in Section 145.43)
May 1, 2003	First control period begins
November 30, 2003 (and each year thereafter)	Submit a Compliance Certification Report. You must obtain allowances to cover any shortfall (e.g., if ozone season NO <sub>x</sub> emissions were greater than allocations). This November 30 “true-up” deadline applies in 2003 and every following year.
November 30, 2004	Use (or lose) early reduction credits issued from the compliance supplement pool for compliance during 2003 and 2004 control periods.

## **2.5 How does this regulation relate to other Federal, State, and local requirements?**

### **Sources affected by Chapter 145 still must comply with other applicable Federal, State, or local NO<sub>x</sub> requirements.**

There are a number of other Federal and State programs or regulations that require the reduction of NO<sub>x</sub> emissions. The NO<sub>x</sub> SIP Call, Ozone Transport Commission (OTC) NO<sub>x</sub> Budget Program, Acid Rain Program, New Source Performance Standards (NSPS), Reasonably Available Control Technology (RACT) SIP requirements, Prevention of Significant Deterioration (PSD), and other Clean Air Act regulatory programs may include requirements to reduce NO<sub>x</sub> emissions.

#### **2.5.1 NO<sub>x</sub> SIP Call**

Under the NO<sub>x</sub> SIP Call, States with sources subject to the section 126 rule are under an independent obligation to reduce NO<sub>x</sub> emissions. These States may choose to obtain reductions from the same or different sources. One option for States is to adopt the NO<sub>x</sub> Budget Trading Program (40 CFR Part 96), which is nearly identical to the Federal NO<sub>x</sub> Budget Trading Program in the section 126 rulemaking. Both programs assume the same level of control for large EGUs and non-EGUs.

The two programs can be integrated as Pennsylvania has done. The Chapter 145 trading program replaces the Federal NO<sub>x</sub> Budget Trading Program and satisfies the SIP call control requirement for the covered sources. Sources trading under the section 126 trading program may trade allowances freely with sources trading under the NO<sub>x</sub> SIP Call trading program, and vice versa. However, under the NO<sub>x</sub> SIP Call, States have the option of reducing their NO<sub>x</sub> emissions through a mechanism other than the EPA-administered NO<sub>x</sub> Budget Trading Program. Allowances can only be traded between affected units in those states that adopt an EPA administered NO<sub>x</sub> Budget Trading Program.

#### **2.5.2. OTC NO<sub>x</sub> Budget Program**

The Ozone Transport Commission (OTC) comprises the following jurisdictions: Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York,

Pennsylvania, Rhode Island, Vermont, Washington D.C., Maryland, and the northern counties of Virginia. A subset of these participate in the OTC NO<sub>x</sub> Budget Program. This program includes sources located in Connecticut, Delaware, New Hampshire, New Jersey, Maryland, New York, Massachusetts, Pennsylvania, and Rhode Island. Sources in these areas began submitting compliance data under Phase II of the OTC program in 1999. Many are also affected under the Federal NO<sub>x</sub> Budget Trading Program. Because of these similarities, EPA is working with the affected States to ensure appropriate integration of the programs in 2003. (EPA expects to propose that sources currently participating only in the OTC NO<sub>x</sub> Budget Program will be able to trade freely with those sources affected by the Federal NO<sub>x</sub> Budget Trading Program.)

### ***2.5.3 Acid Rain Program***

To reduce the formation of acid rain, EPA's Acid Rain Program achieves reductions in NO<sub>x</sub> and other pollutants emitted from large electric generating units. Under the Acid Rain Program, these units are required to continuously measure, record and report NO<sub>x</sub> and other emissions on a year-round basis. The monitoring requirements for sources affected by the Acid Rain Program are generally the same as those for sources affected under the Chapter 145 regulation. Therefore, you will be able to satisfy most of your monitoring obligations under the NO<sub>x</sub> Budget Trading Program by using your existing monitoring at Acid Rain units. See Section 6 for further information on monitoring requirements.

### ***2.5.4 Other requirements***

Other programs, such as New Source Performance Standards (NSPS), State Reasonably Available Control Technology (RACT) requirements, or Prevention of Significant Deterioration (PSD) also can include requirements for NO<sub>x</sub> reductions or emission limitations. The requirements under these programs are not affected by the Chapter 145. Sources remain responsible for meeting all existing NO<sub>x</sub> reduction requirements. Chapter 145 is affected by the Chapter 127 New Source Review program. Chapter 145.90 requires the retirement of allowances if a source subject to Chapter 145 trades emission reduction credits to a source that is not subject to Chapter 145. Without this requirement twice the allowable emissions would occur, undermining the emission reductions both programs are designed to achieve.

### ***2.5.5 Local Air Agencies***

Two counties in Pennsylvania have local air agencies that operate under authorization agreements with the Department. The agreements allow the local agencies to impose permit conditions with which sources must comply. However, because of its statewide nature, administration of the NO<sub>x</sub> Budget program remains with the Department.

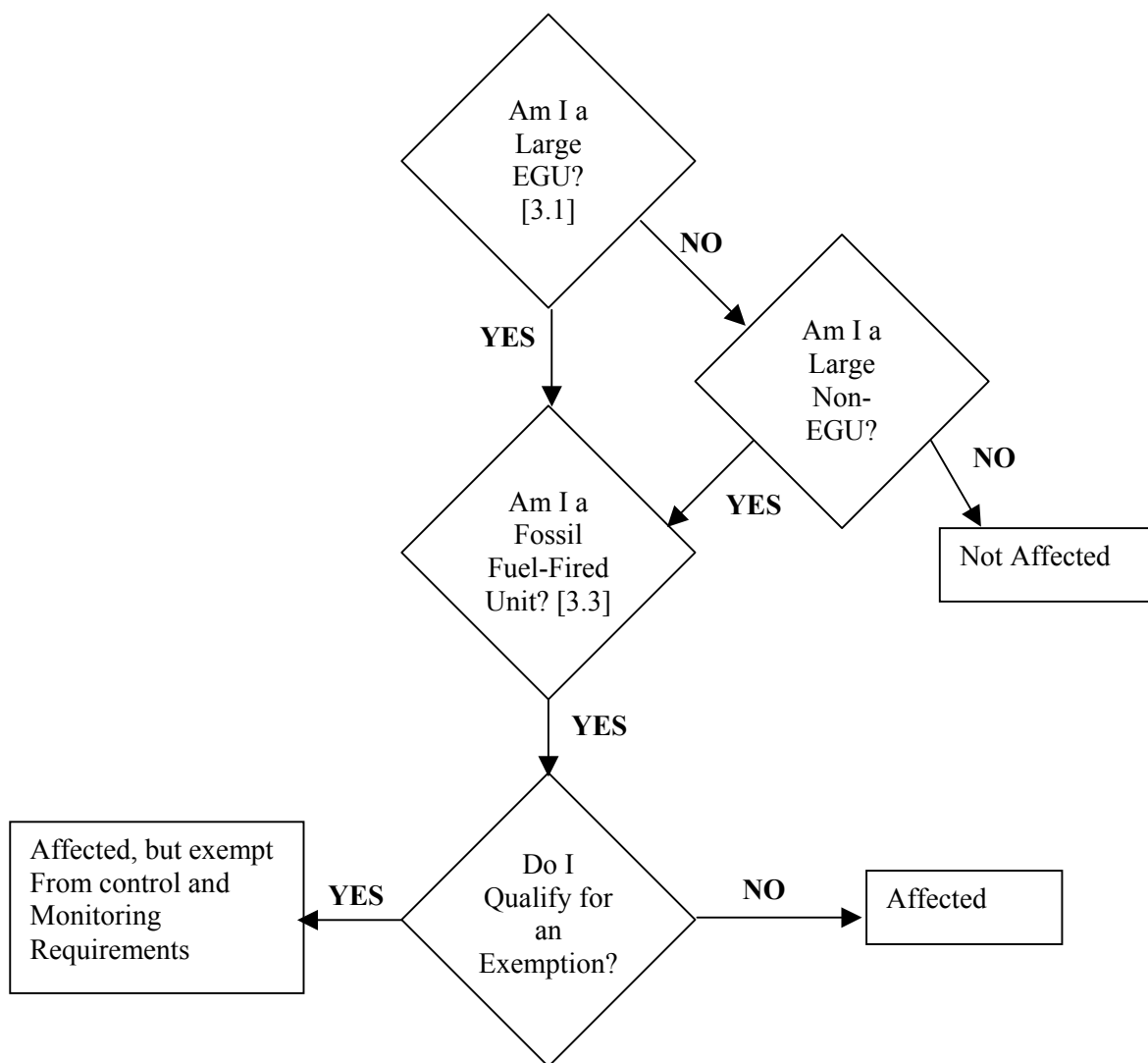
## Section 3: Applicability

**Section 3 should assist you in determining whether you are subject to Chapter 145.**

Chapter 145 Subchapter A. applies to stationary, fossil fuel-fired boilers, combustion turbines, or combined cycle systems (“units”). To determine whether you are potentially affected as a “NO<sub>x</sub> Budget unit” under Chapter 145, use the guidance in this Section 3 as illustrated in Figure 3-1, below.

If your NO<sub>x</sub> Budget unit operated during 1995 or 1996, you will receive an initial allocation (even if the unit qualifies for an exemption). The allocations for EGUs and non-EGUs are listed in the appropriate operating permit. If your NO<sub>x</sub> Budget unit began operations after May 1, 1997, you are considered a “new” unit. Unless you obtain an exemption for a new NO<sub>x</sub> Budget unit as a low-permit-limit unit, the Department will issue allowances to you for the unit from the new source set-aside. Allowance allocations are explained in further detail in Section 4.

**Figure 3-1: Applicability Determination Process**



### 3.1 Do I own or operate a large EGU?

**NOTE! Your EGU must also be fossil fuel-fired -- see Section 3.3.**

The following checklist will help determine whether your unit qualifies as a large electric generating unit (EGU) under the rulemaking.

**Table 3-1: EGU Applicability**

<b>If....</b>	<b>And...</b>	<b>Then...</b>
The unit commenced operation before January 1, 1997	During 1995 or 1996, served a generator greater than 25 MWe that produced electricity for sale under firm contract to the grid	The unit is classified as a large EGU
The unit commenced operation between January 1, 1997 and January 1, 1999	During 1997 or 1998, served a generator greater than 25 MWe that produced electricity for sale under firm contract to the grid	The unit is classified as a large EGU
The unit commenced operation on or after January 1, 1999	At any time, served a generator that has a nameplate capacity greater than 25 MWe and that produces electricity for sale	The unit is classified as a large EGU

There are two key terms you should understand to determine your applicability as a large EGU (see § 145.2 for the actual definitions):

- **Commence operation** means that the unit has begun any mechanical, chemical or electronic process, including start-up of a unit's combustion chamber. That "commence operation" date generally remains your commence operation date even if you later modify, reconstruct or repower the unit.
- **Electricity for sale under firm contract to the grid** is defined as where the capacity involved is intended to be available at all times during the period covered by the guaranteed commitment to deliver, even under adverse conditions. See Glossary of Electric Utility Terms, Edison Electric Institute, Publication No. 70-40. Generally, capacity under firm contract to the electricity grid is included on EIA form 860A (called EIA form 860 before 1998), or is reported as capacity projected for summer or winter peak periods on EIA form 411 (Item 2.1 or 2.2, line 10).

### 3.2 Do I own or operate a large non-EGU?

**NOTE: Your non - EGU must also be fossil fuel-fired -- see Section 3.3.**

The following checklist will help determine whether your unit is affected as a large non-EGU under the rulemaking.

**Table 3-2: Non-EGU Applicability**

<b>If....</b>	<b>And...</b>	<b>Then...</b>
The unit commenced operation before January 1, 1997	Has a maximum design heat input greater than 250 mmBtu/hr and did NOT serve during 1995 or 1996 a generator that produced electricity for sale under a firm contract to the electric grid	The unit is classified as a large non-EGU
The unit commenced operation between January 1, 1997 and January 1, 1999	Has a maximum design heat input greater than 250 mmBtu/hr and did NOT serve during 1997 or 1998 a generator that produced electricity for sale under a firm contract to the electric grid	The unit is classified as a large non-EGU
The unit commenced operation on or after January 1, 1999	Has a maximum design heat input greater than 250 mmBtu/hr and did NOT at any time serve a generator producing electricity for sale	The unit is classified as a large non-EGU
The unit commenced operation on or after January 1, 1999	Has a maximum design heat input greater than 250 mmBtu/hr and at any time, serves a generator that is 25 MWe or less and that has the potential to use no more than 50% of the potential electrical output capacity of the unit	The unit is classified as a large non-EGU

The “**commenced operation**” term is the same for non-EGUs as EGUs. The key term for non-EGU applicability is “**potential electrical output capacity**,” defined as 33% of a unit’s maximum design heat input capacity. See also 40 CFR 52.34(a), 72.2, and Part 72, Appendix D.

### **3.3 Does my unit meet the fossil fuel-fired test?**

**NOTE: Not all existing affected fossil fuel-fired EGUs and non-EGUs that EPA/DEP have identified are listed in Part 97, Appendices A and B, respectively**

If your unit meets the large EGU or large non-EGU criteria summarized in Sections 3.1 and 3.2, respectively, it will be an affected, NO<sub>x</sub> Budget Unit under the trading program **only** if it is also a “fossil fuel-fired” unit.

The following checklist will help determine whether your unit is affected as a fossil fuel-fired unit under the rulemaking.

**Table 3-3: Fossil Fuel-fired Applicability Test**

<b>If....</b>	<b>And...</b>	<b>Then...</b>
The unit commenced operation before January 1, 1996	The combustion of fossil fuel accounts for greater than 50% of the annual heat input on a Btu basis during 1995 (or if no heat input in 1995, during the last year of operation prior to 1995)	The unit is classified as fossil fuel-fired
The unit commenced operation between January 1, 1996 and January 1, 1997	The combustion of fossil fuel accounts for greater than 50% of the annual heat input on a Btu basis during 1996	The unit is classified as fossil fuel-fired
The unit commenced operation on or after January 1, 1997	<p>(1) The actual combustion of fossil fuel accounts for greater than 50% of the annual heat input on a Btu basis during any year</p> <p style="text-align: center;"><b>or</b></p> <p>(2) The projected combustion of fossil fuel accounts for greater than 50% of the annual heat input on a Btu basis during any year</p>	The unit is classified as fossil fuel-fired (In Case (2), the unit is not “fossil fuel-fired” until the date (during such year) that the combustion of fossil fuel begins.)

### **3.4 What if my applicability determination is in disagreement with the Department’s determination?**

If you have a unit that you believe does not meet the applicability criteria for the program, please contact the Department to discuss removing the unit from the NO<sub>x</sub> Budget Trading Program. Conversely, if you believe your unit is affected but no NO<sub>x</sub> budget permit conditions are contained in your permit, contact the Department.

Generally, if you have an affected NO<sub>x</sub> Budget unit that commenced operation before January 1, 1997, and that unit has not received an allocation in your permit, you will have to purchase the necessary amount of allowances to operate your unit from other sources that are participating in the allowance market. Although your unit(s) will not receive an allocation during the initial allocation period (i.e. 2003 through 2007), they will receive an allocation as existing unit(s) under all subsequent allocation periods based on the monitoring data collected under the NO<sub>x</sub> Budget Trading Program.

### **3.5 Can I obtain an exemption for a low emitting unit?**

**If a unit qualifies for an exemption based on a permit term limiting NO<sub>x</sub> emissions to ≤ 25 tons per season, you do not have to monitor or report the unit’s emissions. However, you must establish an AAR and a general account, and report certain ozone season data.**

Units with a very low, federally-enforceable permit limitation (25 tons or less of NO<sub>x</sub> per ozone season) may be exempt from most of the requirements of this program, even if they meet the

basic applicability criteria outlined in Sections 3.1-3.3 of this Overview. To obtain this exemption, the unit's permit must restrict the unit's NO<sub>x</sub> mass emissions by limiting its operating hours or heat input to a level that, when multiplied by a conservative, default emissions rate contained in the rule, results in a total of 25 tons or less of ozone season NO<sub>x</sub>. Even if a unit obtains an exemption, you will still be required to comply with several provisions listed in §145.4 (b). If you want to exempt a unit, you must meet all of the following (refer to §145.4 (b) for exact requirements):

- Have a federally-enforceable permit restricting control period operating hours or heat input to a level that ensures that when multiplied by a default emissions rate set by the regulation, results in NO<sub>x</sub> emissions ≤25 tons of NO<sub>x</sub> per ozone season.
- Keep records to demonstrate compliance with the permit (including restrictions on operating time or heat input). All records must be maintained for at least five years.
- Report hours of operation or heat input (as applicable) during the ozone season to your permitting authority by November 1 following each ozone season.
- Establish a NO<sub>x</sub> Authorized Account Representative (AAR) and a general account from which the NO<sub>x</sub> Budget Administrator will deduct any allocated allowances in an amount equal to the permit limit on the unit's NO<sub>x</sub> emissions.
- Ensure that any allowance allocations issued for the ozone season for which you are exempt are sufficient to cover the amount that will be deducted from the general account by EPA to reflect the unit's NO<sub>x</sub> emission limitation (in tons of NO<sub>x</sub>). If you sell or otherwise transfer allowances from the general account for an exempt unit, you must ensure that the unit's general account ultimately holds sufficient allowances to account for the deduction that will be made by EPA to reflect the exemption.

#### ***» How do I apply for an exemption?***

To apply for an exemption, you should follow the Department's procedures for applying for a federally-enforceable permit, or for revising an existing federally enforceable permit, that meets the requirements for an exemption. Before submitting an application, make sure that your unit can meet the requirements listed above, especially on an ongoing basis. You may contact the Department with any further questions or to ensure that the appropriate paperwork is complete.

#### ***» What will my permit limitation look like?***

The Department will express the limitation of 25 tons (or less) of NO<sub>x</sub> per ozone season in terms of operating hours or heat input. The Department will use the steps in Figure 3-2 to calculate the limit.

#### ***» How are allowances allocated to my exempt unit?***

For your initial allocation, you will receive the allocation listed in your permit. For subsequent allocations, you will not receive any allowances because your heat input will be treated as zero for purposes of allocations. In that case, you will no longer be required to deduct allowances

from your general account that equal your emission limitation. Instead, for those years, the trading budget will be reduced by the amount of allowances equal to the unit's emission limitation. This trading program budget reduction will also apply for any exempt units that do not qualify for an initial allocation. Similarly, if you have an exempt unit that qualifies as a new unit, EPA will deduct from the new source set-aside the amount of allocations equal to the emission limitation for the unit. If the permit conditions are violated, you must hold sufficient allowances to cover emissions since the exemption would no longer apply and you may be subject to fines or penalties (see discussion below).

**Figure 3-2: Steps to Set a Permit Limit that Qualifies for the Exemption**

**STEP 1: Choose the highest applicable default NO<sub>x</sub> rate (lb/mmBtu) from 40 CFR section 75.19 Table 2 which as of the date of this document is per the following list:**

<u>Boiler type</u>	<u>Fuel type</u>	<u>NO<sub>x</sub> emission rate</u>
Turbine	Gas	0.7
Turbine	Oil	1.2
Boiler	Gas	1.5
Boiler	Oil	2

**STEP 2: Use the default NO<sub>x</sub> rate to determine the maximum potential hourly NO<sub>x</sub> mass emission (lb/hr) as follows:**

**Maximum potential hourly NO<sub>x</sub> mass emissions (lb/hr) =**  
*[Unit's max. rated heat input (mmBtu/hour)] x [Highest default NO<sub>x</sub> rate (lb/mmBtu)]*

**STEP 3: Use the maximum potential hourly NO<sub>x</sub> mass emissions to determine your unit's Allowable operating hours:**

$$\text{Allowable seasonal operating hours} = \frac{50,000 \text{ lbs NO}_x \text{ (or less if applicable)}}{\text{Maximum potential hourly NO}_x \text{ mass emissions}}$$

***A heat input limit would be calculated dividing the permit restriction tonnage by the unit's highest default NO<sub>x</sub> emission rate otherwise applicable to the unit under 40 CFR section 75.19 -- Either limit will be placed in the permit at the permittees request.***

**» When does the exemption take effect?**

If the permit with the limitation becomes final during an ozone season and after the unit has operated during the ozone season, the effective date will be either May 1 (if the limitation applied for that entire time in the control period during which the unit operated) or October 1 (if the limitation did not apply for that entire time).



***» When is the exemption no longer effective?***

- The date on which the operating hours or heat input and NO<sub>x</sub> emissions restriction is either removed from your federally-enforceable permit or is no longer applicable.
- The date on which your unit's operating hours or heat input exceed the permit limitation.
- The date from which you fail to prove that the unit met this permit limitation.

***» What happens if an exemption is no longer effective for my unit?***

- You will be subject to all requirements for affected units under the NO<sub>x</sub> Budget Trading Program.
- For purposes of allocations and monitoring, your unit will be treated as commencing operation on the date on which the exemption is no longer effective.
- You will be required to comply with all applicable provisions for monitoring, allocations, permitting, reporting, and other trading program requirements for units that have just begun operating. For example, if your unit loses its exemption, you have until the earlier of either 90 days (or 180 days, depending on the type of unit), or until May 1 of the following year to certify the required monitoring system. Until you certify the required monitoring systems, you will have to report your data based on reference method data or certain maximum default values. See Section 2.5 above, for applicable deadlines.

***» What happens if I violate the permit condition?***

- You may be subject to fines or penalties for violating your permit.

**3.6 Can a retired unit qualify for an exemption?**

**If a unit qualifies for the retired unit exemption, you do not have to monitor or report the unit's emissions. However, you must establish an AAR and a general account.**

A unit that permanently retires from service is exempt from the requirements of this program, even if the unit meets the basic applicability criteria in Sections 3.1-3.3 of this Overview. Within 30 days of permanent retirement, you must submit documentation to EPA and the Department. This document should state that the unit is permanently retired and will comply with the requirements for an exemption. Even if your unit is retired, you will still be required to comply with the provisions in §145.5 and the conditions listed in §145.5 (b)(1). A permanently retired unit is not eligible to be a NO<sub>x</sub> Budget opt-in unit.

For your permanently retired unit, you must:

- Designate a NO<sub>x</sub> AAR.

- Submit a statement to the Department within 30 days of retirement (with a copy to CAMD, Attn: Section 126 Retired Unit Exemption), stating that the unit is permanently retired and will comply with the requirements for the exemption.
- Ensure that the unit will not emit any nitrogen oxides starting on the date that the exemption takes effect.
- Establish a general account to record any allowances issued to the unit. The account must exist for each control period for which allowance(s) are allocated to the unit.
- Maintain records for five years demonstrating that the unit is permanently retired, this period may be extended by the Department or Administrator.
- Comply with the requirements of the NO<sub>x</sub> Budget Trading Program for any period of time during which the exemption is not in effect.

***» When does the exemption take effect?***

- The exemption for a retired unit is effective the day on which the unit is permanently retired.

***» What if I want to resume operation at an exempt retired unit?***

- Submit a restart request in accordance with §145.5 (c)(2) to the Department at least 18 months prior to the date on which the unit resumes operation. The unit will no longer be exempt at the date on which the request is submitted or is required to be submitted (145.5 (6)(i)(A) and (B)). Therefore, you will need to comply with all applicable provisions.

### **3.7 Can I opt a unit into the trading program?**

You may opt individual units into the trading program. These units will be subject to all of the same requirements that would apply to the core sources that meet the applicability criteria described in Sections 3.1, 3.2 and 3.3 of this Overview. You are eligible to opt one or more units into the trading program if those units are:

- Not already subject to the rule;
- Not exempted under the rule;
- Operating stationary sources that are fossil fuel-fired and vent all emissions to one or more stacks;
- Located in a State covered by the regulation,
- Able to monitor NO<sub>x</sub> mass emissions according to Part 75 and Chapter 145. All opt-in units will have the opportunity to use non-CEMS or alternative monitoring methods as allowed for other smaller or lower emitting unit.

If you are interested in this option, you should contact the Department.

## Section 4: Operation of the Trading Program

**After reading Section 4, you should know how the trading program works, including what compliance options you have, what forms and other reports you must submit, how you receive and trade allowances, and how your allowances are used for compliance.**

### 4.1 What is the basic structure of the program?

The NO<sub>x</sub> Budget Trading Program is a “cap-and-trade” type of program. The “cap” is in the form of an aggregation of emissions from affected sources in each State. Each State’s budget is based on: (i) historical heat input and/or emissions data, (ii) a growth factor, and (iii) the desired level of emission reduction for the program. That budget is then distributed to affected units in the form of “allowances.” One allowance is equal to one ton of NO<sub>x</sub> emissions and may be used to authorize NO<sub>x</sub> emissions during the ozone season for which it was allocated or for a subsequent ozone season.

Under the NO<sub>x</sub> Budget Program, allowances are distributed to existing units on the basis of historical heat input data, with a portion of the State’s budget withheld for a “new unit set-aside.” As new units come on line, their owners or operators can apply for allowances from this set aside. The Department will update allowance allocations every five years. Once the Department allocates the allowances, owners or operators of units are free to trade and transfer allowances between units or with general account holders (brokers, interest groups, etc.). By the NO<sub>x</sub> allowance transfer deadline (two months after the end of the ozone season), you must hold sufficient allowances for each of your units in the appropriate accounts to cover its total seasonal emissions.

### 4.2 What emission limits must I meet?

Unlike a traditional command-and-control regulation in which emission limits are generally expressed in terms of a specific limit or percent reduction, under the NO<sub>x</sub> Trading Program the reduction obligation for your affected unit is expressed as a general obligation to hold sufficient allowances to cover all your ozone season emissions. As a starting point, the unit’s “assumed” reduction obligation is equal to the unit’s ozone season emissions minus the unit’s initial allowance allocation. You can use the allocated allowances and the ability to obtain additional allowances from other market participants, together with any emission control strategies you choose, to meet your general obligation to hold allowances equal to or greater than your emissions. Section 145.42 describes the allocation methodology. In general, initial allowance allocations are established as follows:

- **Existing units.** Chapter 145 has allocated 95 percent of the statewide budget to individual existing units based on their heat input. The Department will update NO<sub>x</sub> allowance allocations every five years for five year blocks.
- **New units.** Chapter 145 reserves up to five percent of each State’s budget to allocate to new units. For the initial allocation cycle (2003-2007), “new units” are units that commence operation on or after May 1, 1997. Although considered “new” units for the

first allocation cycle, these units **will** be considered “existing” units for a future allocation cycle. For example, units commencing operation between May 1, 1997 and April 30, 2003, are “existing” units for the second (2008-2012) allocation cycle. Units that come online between May 1, 2003 and May 1, 2008 will be considered “new” units for the second allocation cycle. This same switch from new to existing unit status will apply to subsequent groups of “new” units for each subsequent allowance allocation cycle. Section 4.5 of this Overview describes how the new unit set-aside will be allocated to individual new units.

- ***Opt-in units.*** If you have chosen to “opt in” to the NO<sub>x</sub> Budget Trading Program, you must first apply to the Department in accordance with §§145.80-88. For each control period that you have an approval the Department will allocate to you NO<sub>x</sub> allowances based on your unit’s heat input and NO<sub>x</sub> emission rate for the previous year. At that point, you have the same flexibility as a standard NO<sub>x</sub> Budget unit for meeting your obligation to hold allowances equal to or greater than your emissions. Section 4.5 of this Overview describes how the Department calculates these opt-in unit allowances.

#### **4.3 What control and other compliance options do I have?**

The inherent flexibility of a cap-and-trade program provides you with a number of compliance strategies. It will be up to you to determine which strategy is the least-cost option for your circumstances. Some compliance options include:

- Fuel switching
- Combustion modifications
- Allowance purchasing/trading
- Post-combustion NO<sub>x</sub> control

You can pursue any one or a combination of these strategies to ensure that you hold sufficient allowances to cover your ozone season emissions by November 30th of each year after the end of an applicable ozone season control period beginning with November 30, 2003.

The following table summarizes some of the common combustion and post-combustion control options that you may use to meet the emission limits. These control options are often combined to optimize both NO<sub>x</sub> reduction and cost-effectiveness.

**Table 4-1: Typical Combustion/Post-combustion Control Options**

<b>Control Option</b>	<b>Description</b>
Operational Modifications	This control option entails changing certain boiler operational parameters to create conditions in the furnace that will lower NO <sub>x</sub> production. Examples are burners-out-of-service, low excess air, biased firing, and optimization software. In burners-out-of-service, selected burners are removed from service by stopping fuel flow, but air flow is maintained to create staged combustion in the furnace. Low excess air involves operating at the lowest possible excess air level while maintaining good combustion, and biased firing involves injecting more fuel to some burners (typically the upper burners) to create staged combustion conditions in the furnace. Optimization software is installed to optimize the combustion process on a real time basis.
Low-NO <sub>x</sub> Burners (LNB)	LNB limits NO <sub>x</sub> formation by controlling the stoichiometric and temperature profiles of the combustion process. This control is achieved by design features that regulate the aerodynamic distribution and mixing of the fuel and air, resulting in one or more of the following conditions: (a) reduced oxygen in the primary flame zone, which limits fuel NO <sub>x</sub> formation; (b) reduced flame temperature, which limits thermal NO <sub>x</sub> formation; and (c) reduced residence time at peak temperature, which limits thermal NO <sub>x</sub> formation. LNB can typically achieve NO <sub>x</sub> reductions between 30 and 65 percent from uncontrolled levels.
Dry Low-NO <sub>x</sub> (DLN)	DLN chambers with variable geometry combustion systems adjust the flow of air mass to the thermal load to control the temperature of the flame. As a result of this technique, flame temperature is lowered and the production of thermal NO <sub>x</sub> is decreased without the injection of steam or water and without any flue gas treatment.
Overfire Air (OFA)	OFA, also referred to as air staging, is a combustion control technology in which a fraction, 5 to 20 percent, of the total combustion air is diverted from the burners and injected through ports located downstream of the top burner level. OFA is generally used in conjunction with operating the burners at a lower-than-normal air-to-fuel ratio, which reduces NO <sub>x</sub> formation. The OFA is then added to achieve complete combustion. OFA can be used in conjunction with LNBs. The addition of OFA to LNB can increase the reductions by an additional 10 to 25 percent.
Natural Gas Reburning (NGR)	NGR is a combustion control technology in which part of the main fuel heat input is diverted to locations above the main burners, thus creating a secondary combustion zone called the reburn zone. In NGR, the secondary (or reburn) fuel, natural gas, is injected to produce a slightly fuel rich reburn zone. Completion or overfire air is added above the reburn zone to complete burnout of reburn fuel. As flue gas passes through the reburn zone, part of NO <sub>x</sub> formed in the main combustion zone is reduced by hydrocarbon fragments (free radicals) and converted to molecular nitrogen (N <sub>2</sub> ). In general, NGR is capable of providing 50 to 60 percent NO <sub>x</sub> reduction on coal-fired boilers.

**Table 4-1: Typical Combustion/Post-combustion Control Options con't**

Control Option	Description
Selective Non-Catalytic Reduction (SNCR)	SNCR is a post-combustion technology in which a reagent (ammonia or urea) is injected into the furnace above the combustion zone, where it reacts with NO <sub>x</sub> to reduce it to N <sub>2</sub> and water. SNCR reactions occur in the temperature range of 900 to 1100°C. In general, SNCR is capable of providing levels of NO <sub>x</sub> reduction ranging from 30 to 60 percent.
Selective Catalytic Reduction (SCR)	SCR is a post-combustion NO <sub>x</sub> reduction technology in which ammonia is added to the flue gas, which then passes through layers of a catalyst. The ammonia and NO <sub>x</sub> react on the surface of the catalyst, forming N <sub>2</sub> and water. SCR reactions occur in a temperature range of 300 to 400°C. In general, SCR is capable of providing high levels of NO <sub>x</sub> reduction, ranging from 80 to 90 percent.

These options vary in cost, complexity, and effectiveness. For additional information on these control technologies and their relative cost-effectiveness, you may visit EPA's Acid Rain web page. You may find it helpful to use the planning tool created by CAMD to help utility boilers and other sources calculate cost and cost-effectiveness ratios for combinations of NO<sub>x</sub> control technologies. This tool allows the user to identify specific operational characteristics to help identify the most cost-effective NO<sub>x</sub> control strategy.

**NOTE For a free EPA tool to help you analyze potential costs of different combinations of combustion and post-combustion control strategies, see:**  
**[www.epa.gov/acidrain/NOx/noxtech.htm](http://www.epa.gov/acidrain/NOx/noxtech.htm)**

#### **4.4 How do I get started?**

##### **4.4.1 Selecting an AAR**

You must designate a NO<sub>x</sub> Authorized Account Representative (AAR) if you are participating in the NO<sub>x</sub> trading program. The AAR is the person responsible for transferring allowances and otherwise managing your accounts, and for certifying all reports for the program (including all reports to the NO<sub>x</sub> Allowance Tracking System (NATS) and the Emission Tracking System (ETS)). If you have an Acid Rain source that is also a NO<sub>x</sub> Budget source, it is recommended that you designate the person who is the Acid Rain Designated Representative (DR) as the NO<sub>x</sub> AAR. You may also appoint an alternate AAR and provide a procedure for the alternate AAR to act in place of the AAR.

**Table 4-2: AAR Selection Requirements**

If you are...	Then you...
A source whose unit(s) are affected by the Acid Rain Program and you have an SO <sub>2</sub> DR	Must designate that person as your NO <sub>x</sub> AAR <b>or</b> Must appoint a separate NO <sub>x</sub> AAR
A source whose unit(s) are not affected by the Acid Rain Program	Must appoint an AAR

Forms and additional information may be found at <http://www.epa.gov/acidrain>. Also see Appendix B to this Overview.

» *What is an account certificate of representation?*

Whether you choose to designate your existing Acid Rain DR as your NO<sub>x</sub> AAR or you appoint a new AAR, you must submit an Account Certificate of Representation form. If you choose to appoint an alternate AAR, you must designate that person on the same form. The form is used only to certify your NO<sub>x</sub> AAR and should not be used for your Acid Rain DR. You should submit the form to the Department for review, the Department will forward it to EPA for recording in NATS.

**Table 4-3: Account Certificate of Representation Form Requirements**

Information Required
Complete source names and unit IDs
State where source is located
ORIS Code of source (or other plant ID if no ORIS code)
Name and following contact information for the Authorized Account Representative (for alternate AAR as well, if applicable): --identification number --address --phone and fax numbers --e-mail (optional)
Name of every owner and operator of the source and each affected unit at the source
Certification language and signatures of AAR and any alternate AAR (see § 145.13(a)(4))

» *Do I use particular identifiers for my plant and unit(s) in the AAR form?*

Yes. An important aspect of your AAR form, and all of your subsequent reporting and recordkeeping obligations under the NO<sub>x</sub> Budget Trading Program, is to maintain consistency throughout the program in how you identify your facility and each affected unit. There are three primary identifiers you will use:

- **Plant name.** If you are in the Acid Rain Program or the Chapter 123 NO<sub>x</sub> Budget Program, the Department will use the name used for your facility under those programs. For other units, the Department will attempt to match your plant name with the name used for a Title V or FESOP permit. Although you should maintain the same name if possible for ease of implementation, you may change your plant name if necessary (such as in the event of an ownership change) by submitting a revised Account Certificate of Representation form to the Department (see below).

- **Plant ID Number.** For Acid Rain Program plants, EPA uses as the plant ID number the Office of Regulatory Information Systems (ORIS) code assigned for reporting to the Energy Information Administration (EIA). You must use this plant ID number for the NO<sub>x</sub> Budget Trading Program as well, even if you use a different number for permit or other purposes. EPA Aerometric Information Retrieval System (AIRS) or Facility Index Data System (FINDS) ID numbers, for instance, are not appropriate for this program. If you do not have an ORIS code, contact EPA's Clean Air Markets Division for guidance.

For sources covered by the Chapter 123 NO<sub>x</sub> budget program, you will continue to use the plant ID number assigned under that program. For sources that report to EIA, this number is the ORIS plant ID. For non-EIA reporting sources, EPA has assigned you a plant ID for OTC program purposes. In either case, you will continue to use that plant ID number.

For sources that are not subject to the Acid Rain Program or the Chapter 123 program, you must use your ORIS plant ID if you report to EIA. If you do not have an ORIS plant ID, EPA will assign you a unique plant ID for the NO<sub>x</sub> Budget Trading Program. As appropriate, EPA will consult with the Department in order to coordinate this ID assignment. Again, contact EPA's Clean Air Markets Division for guidance.

- **Unit ID.** It is vital that the unit ID be consistent on all applications, permits, and certifications. This includes, among others, the Account Certificate of Representation, the monitoring plan, and the quarterly reports. If you are in the Acid Rain Program or the Chapter 123 NO<sub>x</sub> Budget Program, you must continue to use the unit ID number assigned under those programs. If you are not in either program, consult the EDR Version 2.1 Reporting Instructions. You may submit a unit ID of your choice in the Account Certificate of Representation form, subject to the alphanumeric nomenclature constraints specified in the EDR instructions.

**It is important that you never change the unit ID!** Furthermore, you must use the unit ID number exactly as assigned -- for instance, if the number is "001," you cannot report information that identifies the unit as "1," "CT1," or some other variation of "1." Finally, never re-use a unit ID. For example, if you retire a unit with the ID of "1," do not identify a new unit with the ID of "1".

#### **» May I change my AAR?**

You may change your AAR or alternate AAR at any time. However, the change is not effective until the Department approves and EPA receives a new and complete Account Certificate of Representation form. Until this superseding form is received by EPA, your previous NO<sub>x</sub> AAR still functions as the AAR.

#### **» What special requirements must my AAR meet for submitting reports?**

Anything submitted by or on behalf of your source under the NO<sub>x</sub> Budget Trading program must be signed and certified by your AAR. Each submission must include the following certification statement:



*"I am authorized to make this submission on behalf of the owners and operators of the NO<sub>x</sub> Budget sources or the NO<sub>x</sub> Budget units for which the submission is made. I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment."*

#### **4.4.2 Establishing accounts**

**NOTE! After receipt of the Account Certificate of Representation form, the Administrator will automatically establish a compliance account for each affected unit.**

You must have an account where your allowances will be held. To establish an account, first you must submit the Account Certificate of Representation form for your AAR to the Department. After the Administrator receives this form, the Administrator will automatically establish a compliance account for each NO<sub>x</sub> Budget unit at your NO<sub>x</sub> Budget source (a source with one or more affected NO<sub>x</sub> Budget units). If the source has more than one NO<sub>x</sub> Budget unit, then the Administrator also will establish an overdraft account for the source. Opt-in units at a source are treated as NO<sub>x</sub> Budget units. The owners or operators of exempt units (i.e., low-permit-limit units and permanently retired units) and all other organizations and individuals who wish to purchase and trade NO<sub>x</sub> Budget allowances must request that EPA establish a general account.

A twelve-digit number is used to identify accounts. This number incorporates the plant's ORIS code and the number of the unit with which the compliance account is affiliated. For general accounts, a "9999" designation will apply at the beginning of the account number to signify that the account is a general account.

#### **4.5 How do I get my allowances?**

**State trading budgets.** Chapter 145, Section 145.40 establishes the trading budget for Pennsylvania. The budgets are used to allocate allowances to the units in Pennsylvania.

**Initial allowances to existing units.** Chapter 145 establishes a detailed procedure for allocating allowances to units based on their historical seasonal heat input. For 2003-2007 allocations for existing units (those that commenced operation prior to May 1, 1997), the Department has already calculated the allowances using this methodology. The allocations are set out in permits issued to sources. The basic methodology is as follows:

- For an EGU, multiply the unit's historical heat input by 0.15 lb/mmBtu and divide by 2,000 lb/ton. The historical heat input is the average of the two highest amounts of the unit's heat input for the ozone seasons in 1995 through 1998.
- For a non-EGU, multiply the unit's historical heat input by 0.17 lb/mmBtu and divide by 2,000 lb/ton. The historical heat input is equal to the 1995 ozone season heat input or, if EPA believes that reliable data for the 1996-1998 control periods are available, the

average of the two highest amounts of the unit's heat input for the ozone seasons 1995 through 1998.

After calculating the allowance allocations in this manner the allocations are adjusted proportionally so that the total allocations in each State equal ninety-five percent of the NO<sub>x</sub> trading program budget. The remaining five percent is set aside for corrections and new units. After the Administrator determines overall compliance at all existing and new units, and any other distributions from the set aside are made by the Department, the Department will distribute any allowances remaining in the new unit set aside to existing units.

**Updating allowance allocations.** Under the NO<sub>x</sub> Budget Trading Program, the Department will allocate allowances for five year periods. The initial five year period is 2003-2007. Currently, Chapter 145 assumes the same methodology for updating the allowance allocations as for initial allocations, except that:

- Units that commence operations before May 1, 2003 will be treated as existing units for the first allocation update automatically if they have complete historical heat input data for 2002-2004 control periods. If a unit began operation after 2003 and therefore does not have 02/03 data but has at least one year of operating data (04 season) the operator may request on that basis to be treated as an existing unit (for the 2008-2012 period). Otherwise the unit will be treated as a new source.
- See Table 4-4 for details of how this process will work for the first three allocation cycles.

**Table 4-4: Treatment of New Units When Updating Allocations**

<b>If you commence operation of a new unit (or modify and trigger applicability for an existing unit) before ...</b>	<b>The Department will use heat input data from the following periods ...</b>	<b>To treat the unit as an existing unit for the purpose of updating allocations in the period ...</b>
May 1, 2003	2002-04	2008-12
May 1, 2008	2005-09	2013-17
May 1, 2013	2010-14	2018-22

**Allowances for new units.** If you have a new unit that is required to participate in the NO<sub>x</sub> trading program, you will be eligible for allowances from the set aside. (See Chapter 5.3 for a detailed overview of how the allocations are tied to the plan approval and permit process.) If you have a unit that is not currently subject to the NO<sub>x</sub> trading program and you become subject to the program, then the unit will be treated as a new unit and you will be eligible to receive allowances from the new unit set aside. As noted above, you will be eligible to receive these set aside allowances until a subsequent allocation updating, at which time (depending on how close to the next allocation your unit actually commences operation) you will receive an allocation as an existing source.

To receive allowances from the new unit set aside, your AAR must submit a request to the Department (*each year*) to be allocated allowances for that year's control period. The request can be submitted no earlier than the date on which the Department issued a plan approval to

construct the unit, and no later than January 1st of the year of the control period for which allowances are requested. The allocations will be made publicly available prior to May 1st of that same year. Refer to section 5.3 of this outline for further details.

For a new unit, you may request allowances based on:

- The lesser of a NO<sub>x</sub> emission rate of 0.15 lb/mmBtu for an EGU (0.17 lb/mmBtu for a non-EGU) or the unit's most stringent permitted limit **multiplied by**,
- The lesser of 3,672 hours or the number of control period hours remaining from the day the unit commences (or is projected to commence) operation; and then **divided by**,
- 2,000 lb/ton to obtain the allowance value in tons, rounded to the nearest ton.

The Department will then review your request in order to allocate your allowances.

The following steps apply to allocate the new unit set-aside allowances and return any unneeded allowances to the existing (excluding any new) affected units:

- Step 1:** The Department will check to assure that your request meets the timing requirements in the rule and that you requested the appropriate amount of allowances.
- Step 2:** The Department will adjust the amount you requested as appropriate based on the review in Step 1.
- Step 3:** The Department sums all requests (as adjusted in Step 2) for new units.
- Step 4:** The Department uses the following equation to determine your unit's pro-rata share of the oversubscribed set-aside:

$$\text{Requested Allocation} * \left( \frac{\text{Total SetAside Allowances} - \text{Total Exempt Unit Allowances Deducted}}{\text{Total Approved Requested Allowances from Step 3}} \right)$$

- Step 5:** The Department allocates allowances to you consistent with your request (subject to an adjustment in Step 2 and Step 7).
- Step 6:** After the control period, in addition to the standard deduction, (one allowance for each ton of emissions), the Administrator deducts and transfers from your account allowances equal to: your unit's allowance allocation (Step 5) minus the NO<sub>x</sub> tons represented by [your actual control period heat input \* lesser of 0.15 lb/mmBtu (for an EGU) or 0.17 lb/mmBtu (for a non-EGU) or the units' most stringent State or Federal emissions limit]. If this calculation represents a zero or negative value, then no allowances are deducted from your account under this Step 6.
- Step 7:** All of the allowances remaining in the new unit set-aside (including allowances transferred from new units under Step 6) are then reallocated to the existing NO<sub>x</sub> Budget units on a pro rata basis, using the following formula:

$$\text{Each Unit's share} = \text{Total allowances from Step 6 in the Unit's State} * (\text{the Unit's allocation} \div \text{State trading budget excluding the new unit set-aside})$$

**Allowances for retired units.** Should you retire a unit that has been allocated allowances, you will continue to receive your allocation until a subsequent allocation update. If you bring the unit back on line after the allocation update, the permit will not be considered a new unit and will not receive an allocation until a future allocation update.

**Allowances for opt-in units.** To calculate an allowance allocation for an opt-in unit for the control period in a given year, The Department follows these steps:

<b>Step 1:</b>	The Department requires the unit to monitor heat input for a “baseline” control period in the ozone season prior to the unit obtaining op-in status.
<b>Step 2:</b>	The Department uses the lesser of the baseline heat input or the heat input from the immediately preceding control period.
<b>Step 3:</b>	The Department uses the NO <sub>x</sub> emissions rate that is the lesser of the baseline NO <sub>x</sub> rate or the unit’s most stringent State or Federal emissions limit.
<b>Step 4:</b>	The Department multiplies the heat input value in Step 2 by the NO <sub>x</sub> emission rate in Step 3 to determine your opt-in unit’s allocation.

**Crediting your allowances to your accounts.** The NO<sub>x</sub> Budget Administrator credits allocated allowances to an account designated by the NO<sub>x</sub> Budget Administrator for the use of your source or organization. The type of account depends upon the nature of your participation in the NO<sub>x</sub> trading program. *Compliance* and *overdraft* accounts are established by the NO<sub>x</sub> Budget Administrator for all affected and opt-in sources except low-permit-limit units and permanently retired units. Owners and operators of the latter two categories of units, and other organizations and individuals who wish to purchase and trade NO<sub>x</sub> Budget allowances, must apply for a *general* account.

#### **4.6 How are my trading program allowances tracked and deducted for compliance?**

**Access NATS information on the web at:** [www.epa.gov/ardpublic/acidrain/otc/nats](http://www.epa.gov/ardpublic/acidrain/otc/nats)

**Your accounts.** Once the Administrator receives and records your AAR Certificate of Representation, the Administrator will automatically establish a compliance account in the NO<sub>x</sub> Allowance Tracking System (NATS) for your source if you have a unit that is affected by the chapter 145 rule. If your source has more than one affected unit, the Administrator will also establish an overdraft account. If you are a source that is eligible to opt-in to the trading program, the Administrator will establish these accounts for you. Starting with the 2003 control period, your allowances will be recorded in your compliance account. However, there are some exceptions. If your unit has a federally-enforceable permit that meets the requirements for the exemption for low-permit-limit units or if it is a permanently retired unit, your allowances will be recorded in a general account that you establish. This is because your allowance holdings will no longer be reconciled with your emissions.

**Table 4-5: Assigning Allowance Accounts**

<b>If you are...</b>	<b>Then you...</b>
An affected or opt-in source with one unit	Will automatically be assigned a compliance account
An affected or opt-in source with more than one unit	Will automatically be assigned a compliance account <b>and</b> an overdraft account
An exempt unit (either because of low-permit-limit or retired unit status)	Must request a general account
An organization or individual that wishes to participate	Must request a general account

***Compliance deductions from your accounts.*** After a control period, the Administrator will deduct a number of allowances equal to the unit's NO<sub>x</sub> emissions (in tons) in the control period. The Administrator may deduct any NO<sub>x</sub> allowances that were allocated for that control period or a prior control period and that either are held in a compliance or overdraft account, or are transferred to your compliance or overdraft account by the transfer deadline for a given control period (November 30th after each ozone season). The Administrator will deduct first from your compliance account and then, should additional allowances be required, from your overdraft account.

If you do not indicate -- by serial number -- the order in which to deduct your allowances, the Administrator will use a first-in-first-out (FIFO) method of deduction. The Administrator first deducts the allowances allocated to your unit for the control period. Then, the Administrator deducts transfer allowances allocated to other units for the control period. Then it deducts allowances allocated to your unit for previous control periods. Finally, it deducts transfer allowances allocated to other units for previous control periods (see Section 4.7 below).

**Table 4-6: FIFO Allowance Deduction Rules**

<b>First-In-First-Out (FIFO) Procedure for Deducting Allowances</b>	
Deduct in this order from current control period:	Allowances allocated to the unit Transfers in order of date recorded
Then deduct in this order from prior control period:	Banked allowances Transfers in order of date recorded

***Excess emission penalty deductions from your accounts.*** If, after the Administrator deducts from both your current and prior control period allowances, you have not met your emissions limitation, you will owe an automatic allowance penalty for each ton of excess emissions. The Administrator will deduct three allowances from the unit's compliance account for each ton of excess emissions. These allowances will be deducted from the allocation for the control period after the control period in which the unit had excess emissions. You may also be subject to additional enforcement, including monetary penalties, for your failure to hold allowances sufficient to cover your emissions (see Section 8).

***Differences and coordination between NATS and ATS.*** The NO<sub>x</sub> Budget Allowance Tracking System (NATS) and the SO<sub>2</sub> Allowance Tracking System (ATS) are separate systems. However, some of the information entered into the NATS, such as plant and representative information, lookup and error tables, and transaction types, will be similar to information entered into the ATS. Along with information on accounts, allowances, and transactions, it will be kept separate from the ATS. With regard to shared or similar information, ATS software will be modified to automatically record changes in the NATS when new information is entered into the ATS. As with the ATS, the NATS will use a twelve-digit number (consisting of the year first usable followed by eight digits) as the serial number for allowances. Reports or file extracts should differentiate between allowances in the ATS and the NATS by using identifiers such as “S” for SO<sub>2</sub> allowances and “N” for NO<sub>x</sub> allowances.

#### **4.7 May I hold surplus allowances**

Yes. One of the major benefits of the NO<sub>x</sub> trading program is that you may hold in your account allowances in excess of the number required to comply with your emission limitation. You may “bank” any allowances received, including credits for early reductions, transferred allowances, and allowances allocated annually by the Department. These banked allowances may be used to achieve compliance or for transfer to other sources participating in the NO<sub>x</sub> trading program. The Administrator will designate as “banked” any allowances that remain in your compliance, overdraft, and general accounts at the end of the reconciliation period, after the Administrator has made all deductions for a given control period from these accounts.

You may begin banking allowances in the 2003 control period, and these banked allowances never expire. However, beginning in 2005 (after the 2004 control period) the Administrator will implement “flow control,” a mechanism for controlling the overuse of banked allowances for any control period in the entire region. For each control period, the Administrator will determine whether the total number of banked allowances exceeds ten percent of the overall NO<sub>x</sub> Budget for the following control period. If the number exceeds ten percent, the Administrator will apply an equal discount ratio to a certain percentage of the banked allowances of all sources. This means that you will be able to use a certain percentage of your banked allowances at the rate of 1 allowance per 1 ton of NO<sub>x</sub> emissions. The remaining balance of banked allowances will be discounted at the rate of 2 allowances per 1 ton of NO<sub>x</sub> emissions.

\*Note that only those allowances which the Administrator has designated as banked and which you use for compliance purposes are subject to discounting.

See the following example for calculating the effect of flow control on the use of allowances.

#### **Flow Control Example:**

<b>Step 1</b>	<b>the Administrator uses the flow control formula to calculate the ratio of banked allowances to the total Regional NO<sub>x</sub> budget. For example:</b>		
	• Regional NO <sub>x</sub> budget	=	290,000
	• Total banked allowances	=	36,500
	• Ratio (0.10 x 290,000)/36,500	=	0.8
<b>Step 2:</b>	<b>the Administrator applies the ratio to the banked allowances of all sources. For a hypothetical budget source:</b>		
	• Banked allowances in compliance account	=	5,000
	• 5,000 x 0.8	=	4,000 available at 1:1 (equivalent to 4,000 tons)
	• 5,000 - 4,000	=	1,000 available at 2:1 (equivalent to 500 tons)

#### **4.8 How do I transfer allowances?**

You may buy, sell, or trade allowances with other sources in the NO<sub>x</sub> Budget Trading Program as well as the Federal Program. In order for allowances to be properly transferred, they must be recorded in NATS. To submit allowance transfers you have two options: you can submit electronically or complete a paper form and send it to the Clean Air Marks Division (CAMD). Allowances can be transferred for either the Acid Rain Program or NO<sub>x</sub> Budget Program.

##### **Electronic**

On December 3, 2001, the On-Line Allowance Transfer System (OATS) was launched. OATS is an Internet application that allows participants in the SO<sub>2</sub> and NO<sub>x</sub> allowance markets to record their own allowance transfers, either by entering the data on screen or by submitting an XML file.

Current authorized Account Representatives (AAR) and Alternates may register to use OATS by sending an e-mail to \_\_\_\_\_ stating your name, phone number and e-mail address. You will be contacted with your User ID and initial password, which will need to be reset on initial login. Once you have received this information, you may log on to \_\_\_\_\_. AARs and Alternates who are registered may then register “agents,” people who are authorized to submit allowance transfers on behalf of the AAR. Allowance transfers can only take place if the account from which the allowances are being transferred (Transferor) and the account to which the allowances are being transferred (Transferee), each have a registered AAR. Also, to use OATS, your browser must support 128-bit encryption.

##### **Hardcopy**

Your AAR or alternate AAR must submit to the Administrator a NO<sub>x</sub> Allowance Transfer form providing the following information:

**Table 4-7: Allowance Transfer Forms**

<b>Information Required on Allowance Transfer Form</b>	
•	Numbers of both transferor and transferee accounts
•	Specification by serial number of each NO <sub>x</sub> allowance to be transferred
•	Name and signature of transferor's NO <sub>x</sub> AAR

The Administrator will record transfers within five business days of receipt of the NO<sub>x</sub> Allowance Transfer form. However, if the form is received after the allowance transfer deadline to transfer allowances usable for compliance in the prior ozone season, the Administrator will not record the transfer until after the Administrator has completed compliance determinations for that ozone season. The Administrator will notify you within five business days after it has recorded the allowance transfer. It will notify you within ten business days if it does not record the transfer.

#### **4.9 What is the annual compliance certification?**

A compliance certification report must be submitted annually, by November 30. The report will need to contain unit identification information, and may include serial numbers of allowances that are to be used for compliance for each unit and, for units sharing a stack, the percentage of allowances to be deducted from each unit's compliance account. Your AAR must also certify that each NO<sub>x</sub> Budget unit was operated in compliance with the NO<sub>x</sub> Budget Trading Program, including the following:

- Whether the unit had sufficient allowances in its compliance account to equal or exceed its NO<sub>x</sub> emissions
- Whether the monitoring plan is accurate and complete
- Whether all of the emissions were monitored or accounted for through missing data procedures, including whether conditional data were used and whether the status of all conditional data has been resolved
- Whether the facts underlying the basis for certification for any monitor or excepted methodology have changed, and if a change has occurred, a description of the change and information describing how emissions were determined when a change created the need to recertify a monitor

#### **4.10 May I get credit for early emission reductions?**

You may get credit for emission reductions in the 1999, 2000, 2001 and 2002 control periods if you follow certain procedures. During the initial two years of the NO<sub>x</sub> trading program, the Department is making additional allowances available to sources through a compliance supplement pool.



**Table 4-8: Section 126 Rule Compliance Supplement Pool**

State	Size of Pool (Tons)	State	Size of Pool (Tons)
DC	0	NJ	1,550
DE	168	NY	1,379
IN	2,454	OH	22,301
KY	7,314	PA	15,763
MD	3,882	VA	5,504
MI	9,398	WV	16,709
NC	10,737	<b>Total</b>	<b>97,159</b>

**» How do I apply for early reduction credits?**

For any unit, your AAR must submit a request for early reduction credits to the Department by February 1, 2003.

You may apply for early reduction credits by submitting a request (from the AAR) to the Department. This request must be submitted in accordance with certain requirements for Chapter 123 and non-123 sources as described below.

**Non-123 Units.** You must monitor and report your NO<sub>x</sub> emissions in accordance with Chapter 145, including Part 75, Subpart H, starting in the 2000 control period and for each control period for which you request early reduction credits. In addition, your unit must be in full compliance with any applicable State and Federal NO<sub>x</sub> emission control requirements during 2000 through 2002. For each control period for which you request early reduction credits, you must reduce the NO<sub>x</sub> emission rate of your unit to less than **both** 0.25 lb/mmBtu **and** 80% of the unit's NO<sub>x</sub> emission rate in the 2000 control period.

**Chapter 123 Units.** Sources participating in the Chapter 123 NO<sub>x</sub> Budget Program that are also subject to the Chapter 145 program may carry their 2001 and 2002 banked allowances over to the NO<sub>x</sub> Budget Trading Program as early reduction credits, within the size constraints of the State's compliance supplement pool which is at a minimum 12,611 allowances (see 145.43(a)-(b)). The available pool may be up to 15,763 allowances depending on the extent sources subscribe to the innovative technology and early control installation pools that each contain 1576 allowances. You must have monitored in accordance with Part 75 (other than Subpart H) beginning in 2002 and must have been in compliance with the OTC Guidance for Implementation of Emission Monitoring Requirements for the NO<sub>x</sub> Budget Program (January 28, 1997) for 2000 and 2001. Chapter 123 sources may also install SCR, or SNCR and qualify to bank 1999-2000 allowances from the early control installation pool of 1576 allowances (see 145.43(c)(1-5)). Any Chapter 145 source operator may also apply for allowances from the innovative technology pool of 1576 allowances (see 145.43(d)(1-7)).

***» Are there restrictions on my use of early reduction credits?***

You may use early reduction credits as you would any other allowance for the purpose of compliance during the 2003 and 2004 control periods. However, the Administrator will retire all remaining compliance supplement pool allowances from the NATS after it completes the 2004 ozone season compliance determination process.

**4.11 Overview of trading program deadlines and data processing**

The following table provides a brief overview of the various processing deadlines critical to the operation of the trading program.

Table 4-9: Trading Program Deadlines for a Typical Year

<b>Date</b>	<b>Event</b>
May 1	Beginning of emissions reporting period
July 30	Second quarter emissions report due to ETS
September 30	End of 3rd quarter for emissions reporting
October 30	3rd quarter emissions report due to ETS with cumulative seasonal total emissions
November 30	<ul style="list-style-type: none"><li>• Annual compliance certification report due to the Department, and deadline for allowance transfers to a compliance or overdraft account for current year compliance purposes (deadline is midnight of next business day if November 30th is not a business day)</li><li>• Beginning of freeze on transfers of current and past year allowances into and out of compliance accounts</li></ul>
March 30 (approximate date)	<ul style="list-style-type: none"><li>• Administrator deducts penalty allowances from source's new allocation, if necessary</li><li>• Administrator provides compliance results, allocations and flow control ratio to AARs</li><li>• Administrator lifts transfer freeze</li></ul>

## **Section 5 Existing Source Permit Requirements**

### **5.1 Do I need a permit?**

As the owner or operator of an affected source, you must have either a Title V permit or a federally-enforceable State operating permit (FESOP). Title V of the Clean Air Act requires that all major stationary sources obtain operating permits. Therefore, most affected sources will have an existing Title V permit. However, being subject to the NO<sub>x</sub> Budget Program does not by itself create the obligation to apply for a Title V operating permit.

Your permit will include all of the applicable standard requirements of the NO<sub>x</sub> Budget Trading Program. In addition to serving as a permit application, plan approvals are necessary for new sources to receive initial allocations.

### **5.2 Do I need to apply for changes to my Permit?**

Generally, if you are an existing permitted source the Department will initiate the process to amend your permit which should include:

- Identification of your source, including the ORIS code assigned by the Energy Information Agency (EIA). If you do not have an ORIS code for reporting to EIA, use the plant ID you use for the Acid Rain Program or the OTC NO<sub>x</sub> Budget Program (if applicable), or contact the Clean Air Markets Division to obtain an appropriate plant ID to use for this trading program.
- Your initial allowance allocation
- Identification of each NO<sub>x</sub> Budget unit at your source and whether the unit is affected as a core source or an individual opt-in unit
- The standard requirements regarding permitting, monitoring, NO<sub>x</sub> emissions/allowances, excess emissions, recordkeeping, reporting, liability, etc.
- Note that the permit automatically incorporates the definitions in § 145.2 and every allocation, transfer, or deduction of allowances.

## **Section 6: Emissions Monitoring, Reporting and Recordkeeping Requirements**

**After reading Section 6, you should know what monitoring options you have, how to certify and then quality assure your monitors, and how to report your monitoring data.**

Because you need to account for all of a unit's NO<sub>x</sub> emissions to reconcile your emissions with your allowances, you must monitor NO<sub>x</sub> mass emissions for all unit operating time (including periods such as startup or shutdown). If your monitors are not working properly, you will have to use substitute emissions data based on specific missing data routines.

In addition, you must monitor for heat input to determine allowance allocations. You should note that EPA and the Department are considering changing to output-based allocations in future allocation periods. If this allocation approach applies, you will have to monitor output (that is, electrical generation or thermal generation such as steam or hot water). Before implementing any output-based monitoring requirements, the Department will have to propose regulations, receive public comments, and then issue final regulations.

Chapter 145 requires monitoring to begin in 2002 using 40 CFR part 75 while Chapter 123 also remains in effect for the 2002 compliance period. On its face this would, for those sources using non-part 75 monitors to comply with Chapter 123, require that two separate monitoring systems be maintained for the 2002 compliance period. Because Part 75 monitoring satisfies the Chapter 123 requirements, sources that have been using non-Part 75 monitoring systems to comply with Chapter 123 may rely on their compliance with the 145 requirements to meet the 123 monitoring and reporting requirements.

Although Chapter 145 contains some basic explanation of what and how you must monitor and then report your emissions, most of the substantive monitoring and reporting requirements for the NO<sub>x</sub> Budget Trading Program are found in 40 CFR Part 75. Part 75 contains all of the monitoring requirements for the Acid Rain Program, and also contains a specific subpart (Subpart H) to address NO<sub>x</sub> mass monitoring for NO<sub>x</sub> trading programs.

**NOTE! EPA has developed a number of compliance aids to implement Part 75 monitoring requirements -- see Appendix A to this Overview for a list of resources.**

To ensure that all participants in the trading program account for their emissions in the same manner, the Part 75 monitoring and reporting requirements are extremely detailed. In addition, EPA has developed a number of policies to retain consistent implementation; these policies are found in the Acid Rain Program Policy Manual that is available on the Clean Air Market Division's (CAMD's) web site. The following section provides a general overview of what monitoring and reporting requirements apply, but you will need to review carefully the Part 75 requirements and existing guidance materials to successfully implement your monitoring and reporting for the trading program, especially if your units are not affected under the Acid Rain Program.

This section addresses the following steps in the monitoring and reporting process:

- Section 6.1: Monitoring Options
- Section 6.2: Monitoring Approval Process
- Section 6.3: Quality Assurance (QA)
- Section 6.4: Reporting Your Emissions and QA Data
- Section 6.5: Changes to Your Monitoring

## 6.1 Monitoring options

### 6.1.1 Do my monitoring options depend on what type of unit I have?

Yes. You first must determine what type of unit you have based on the fuel(s) combusted in the unit. Use the following table to classify your unit for purposes of determining the appropriate monitoring under Part 75. For further clarification, see the definitions of coal-fired, gas-fired and oil-fired in 40 CFR 72.2, and the provisions for units that combust other solid fuels in § 75.71(f).

**NOTE! Do not use the following factors or the Part 72 definitions to determine whether you are a fossil fuel-fired unit for trading program applicability purposes. The Chapter 145 applicability criteria differ from Part 72 on how you account for non-fossil fuel consumption.**

**Table 6-1: Part 75 Unit Type Definition**

If your unit combusts...	Then your unit is classified as a...
Any coal, any coal-derived fuel (other than coal-derived gaseous fuel that meets a “very low sulfur fuel” definition in Part 72), or any other solid fuel. See the definition of coal-derived fuel in Section 72.2 (includes coal refuse).	Coal-fired/Other Solid Fuel-fired Unit
Oil only	Oil-fired Unit
Natural gas/other gaseous fuel for: (i) at least 90% of average annual heat input based on a 3-year period, and (ii) at least 85% in each of the 3 years	Gas-fired Unit
A combination of oil and gas with sufficient heat input from oil so that the gas-fired unit status does not apply	Oil-fired Unit

Next, you need to consider how much you operate a unit and how much you emit from a unit. The following two special situations affect which monitoring method you may use:

- **Peaking Units.** An oil or gas-fired unit with an average capacity factor  $\leq 10$  percent for the previous three years and no more than 20 percent in any of those three years may qualify as a peaking unit. There are special provisions for qualifying initially based on projected capacity factors in future years. See the § 72.2 definition for a further discussion of which units qualify as peaking units.
- **Low Mass Emissions (LME) Units.** For an oil or gas-fired unit affected under the Acid Rain Program, an LME unit is one with annual SO<sub>2</sub> emissions  $\leq 25$  tons and annual NO<sub>x</sub> emissions  $\leq 50$  tons. If your oil or gas-fired unit is not subject to the Acid Rain Program, the unit may qualify so long as the annual NO<sub>x</sub> emissions are  $\leq 50$  tons (or if the unit is reporting only on an ozone season basis, if NO<sub>x</sub> emissions are  $\leq 25$  tons for the ozone season). See §§ 75.19, 75.71(e), and 75.74(c)(10) for a further discussion of how to qualify and what is required to demonstrate that a unit continues to qualify as an LME unit. Note that the criteria for LME units are not the same as (and are less stringent than) the criteria for qualifying as a low-permit-limit unit. Further, LME units are subject to the NO<sub>x</sub> Budget Trading Program requirements, while low-permit limit units are exempt from most of the requirements.

### **6.1.2 Based on my fuels, capacity factors, and emissions, what basic monitoring options apply to my units?**

For any unit, the basic monitoring approach for the NO<sub>x</sub> Budget Trading Program is to use continuous emission monitoring systems (CEMS) to record and report your NO<sub>x</sub> emissions and heat input rate data. There are two basic CEMS options:

- Use NO<sub>x</sub>-diluent CEMS, which consists of a NO<sub>x</sub> pollutant concentration monitor and a diluent (O<sub>2</sub> or CO<sub>2</sub>) monitor, to calculate a NO<sub>x</sub> emissions rate in lb/mmBtu. Then use a flow monitor and diluent monitor to calculate heat input rate in mmBtu/hr. You determine NO<sub>x</sub> mass emissions in lb/hr by multiplying these two calculated values.
- A NO<sub>x</sub> concentration/flow methodology. For this option, you use a NO<sub>x</sub> pollutant concentration monitor to obtain NO<sub>x</sub> in parts per million (ppm), convert the ppm value to a lb/standard cubic foot (scf) equivalent using a known constant, and then use a flow monitor to obtain flow rate volume in scf/hr. You then multiply the converted ppm value times the flow rate to obtain NO<sub>x</sub> mass emissions in lb/hr.

Part 75 also allows you to petition EPA for approval of an alternative monitoring system that meets certain performance-based criteria (see Subpart E of Part 75). You should note, however, that since promulgating Part 75 in 1993, EPA has not approved any alternative monitoring systems under Subpart E.

One reason for the inactivity under the Subpart E alternative monitoring provisions is that Part 75 already includes other cost-effective alternatives to CEMS for particular types of units. You may be able to use one of the following additional monitoring methods depending on the characteristics of your unit:

- A second “excepted method” under Appendix E to Part 75 for ***oil and gas-fired peaking units***. This method allows you to calculate NO<sub>x</sub> emission rate from curves correlating NO<sub>x</sub> emission rates and heat input rates. An “excepted method” for heat input used in lieu of a stack flow monitor and diluent monitor under Appendix D to Part 75 for ***oil and gas-fired units***. This method allows you to monitor heat input rate based on fuel flow rates measured with fuel flowmeter(s) and fuel gross calorific value (GCV) sampling data. Note that in many cases, you can rely on GCV sampling data from your fuel supplier if you receive pipeline natural gas or other oil/gaseous fuels in discrete shipments.
- Simplified, conservative heat input and NO<sub>x</sub> emission rate estimates (see § 75.19) that certain ***oil and gas-fired units with low mass emissions*** can use to calculate NO<sub>x</sub> mass emissions.

**Table 6-2: Part 75 Subpart H Monitoring Options**

<b>For this type of unit...</b>	<b>You may determine NO<sub>x</sub> mass (lb/hr) using...</b>	<b>And determine heat input rate (mmBtu/hr) using...</b>
Any Unit  ( <b>Note:</b> These are <b>required</b> methods for Coal-fired Units or any units combusting other solid fuels)	<ul style="list-style-type: none"> <li>• NO<sub>x</sub> emission rate (in lb/mmBtu from a NO<sub>x</sub> pollutant concentration monitor and an O<sub>2</sub> or CO<sub>2</sub> diluent monitor), <b>multiplied by</b></li> <li>• Heat input rate (in mmBtu/hr from a flow monitor and an O<sub>2</sub> or CO<sub>2</sub> diluent monitor)</li> </ul>	<ul style="list-style-type: none"> <li>• Flow monitor and an O<sub>2</sub> or CO<sub>2</sub> diluent monitor for heat input rate</li> </ul>
	<ul style="list-style-type: none"> <li>• NO<sub>x</sub> emission concentration (in ppm from a NO<sub>x</sub> pollutant concentration monitor), converted to lb/scf with a conversion factor, <b>multiplied by</b></li> <li>• Flow rate (in scf/hr from a flow monitor)</li> </ul>	<ul style="list-style-type: none"> <li>• Same as above, or, if applicable (i.e., for oil and gas units), Appendix D fuel flowmeter(s) and fuel GCV sampling</li> </ul>
Oil-fired or Gas-fired Unit	<ul style="list-style-type: none"> <li>• NO<sub>x</sub> emission rate (from a NO<sub>x</sub> pollutant concentration monitor and an O<sub>2</sub> or CO<sub>2</sub> diluent monitor), <b>multiplied by</b></li> <li>• Heat input rate (from Appendix D fuel flowmeter(s) and fuel GCV sampling)</li> </ul>	<ul style="list-style-type: none"> <li>• Appendix D fuel flowmeter(s) and fuel GCV sampling</li> </ul>
Oil-fired or Gas-fired Peaking Unit	<ul style="list-style-type: none"> <li>• NO<sub>x</sub> emission rate (from Appendix E correlation curves), <b>multiplied by</b></li> <li>• Heat input rate (from Appendix D fuel flowmeter(s) and fuel GCV sampling)</li> </ul>	<ul style="list-style-type: none"> <li>• Appendix D fuel flowmeter(s) and fuel GCV sampling</li> </ul>
Oil-fired or Gas-fired LME Unit	<ul style="list-style-type: none"> <li>• NO<sub>x</sub> emission rate (from either a generic or a fuel/unit-specific default value), <b>multiplied by</b></li> <li>• Either maximum rated hourly heat input (in mmBtu) or hourly heat input calculated from a long term fuel flow method (including data on volume, specific gravity, and GCV of fuel(s) combusted)</li> </ul>	<ul style="list-style-type: none"> <li>• Maximum rated hourly heat input, or</li> <li>• Heat input calculated from a long term fuel flow method (including data on volume, specific gravity, and GCV of fuel(s) combusted)</li> </ul>

For each monitoring option, a key component of your overall monitoring system will be a data acquisition and handling system (DAHS). The DAHS electronically records (as applicable) your measured NO<sub>x</sub> concentrations, diluent gas concentrations and flow rates, and automatically calculates and records your NO<sub>x</sub> emission rates, heat input rates, and NO<sub>x</sub> mass emissions. While the DAHS for most options will require customized software, EPA has developed the Monitoring Data Checking (MDC) software, which is available free of charge. You can use one function of MDC to satisfy the DAHS requirements for the LME estimate-based methodology.

Remember, you must monitor to determine NO<sub>x</sub> mass emissions (in lb/hr) for compliance purposes and to determine heat input rate (in mmBtu/hr) for allowance allocation purposes. In most cases, you will use heat input rate monitoring as part of determining both of these values; but for the NO<sub>x</sub> concentration/flow CEMS methodology, the NO<sub>x</sub> mass and heat input rate monitoring will be separate.

### 6.1.3 *What is moisture monitoring and when is it necessary?*

You will need to monitor for moisture if a correction is needed for the stack gas moisture content. If moisture monitoring is necessary, Part 75 provides several options for conducting the monitoring. The following table identifies when moisture monitoring is necessary and what options are allowed.

**Table 6-3: Moisture Monitoring Options**

If you are measuring any of the following...	Then use one of the following moisture monitoring options...
<ul style="list-style-type: none"> <li>• NO<sub>x</sub> emission rate (lb/mmBtu) using a NO<sub>x</sub> diluent CEMS and your NO<sub>x</sub> pollutant concentration monitor and your diluent monitor measure on a different moisture basis (i.e., wet O<sub>2</sub> or CO<sub>2</sub> diluent and dry NO<sub>x</sub> concentration, or vice versa)</li> <li>• NO<sub>x</sub> mass emissions using the concentration flow methodology and the NO<sub>x</sub> concentration is measured on a dry basis (note: flow is always measured wet)</li> <li>• Heat input using a flow monitor and O<sub>2</sub> or CO<sub>2</sub> diluent monitor and using Equation F-16, F-17, or F-18 in Appendix F of Part 75 (note that in F-17, the diluent monitor measures on a wet basis but moisture correction is still required)</li> </ul>	<ul style="list-style-type: none"> <li>• Continuous moisture sensor</li> <li>• O<sub>2</sub> analyzer(s) capable of measuring on both a wet and dry basis</li> <li>• Stack temperature sensor and a moisture look-up table -- saturated gas streams only (psychrometric chart)</li> <li>• Fuel-specific default values for coal and wood fuels</li> </ul> <p><b>Note:</b> For each option (except for the default values), you must define a moisture monitoring system in the monitoring plan.</p>

### 6.1.4 *What if my unit has multiple stacks or shares a stack with other units?*

If your unit emits through multiple stacks or shares one or more stacks with other units (a “common stack”), you will have to meet fairly complex monitoring options. The following table outlines the various options you have in these circumstances. Note that your available alternatives for a common stack will depend on whether your unit shares a stack with units that are subject to the NO<sub>x</sub> Budget Trading Program.



**Table 6-4: Multiple/Common Stack Monitoring Options**

<b>If you have this unit configuration...</b>	<b>Then your monitoring options are...<sup>1</sup></b>
Multiple stacks (i.e., a single unit that exhausts through two or more stacks)	<ul style="list-style-type: none"> <li>• Install a NO<sub>x</sub>-diluent and flow CEMS in each duct feeding into the stacks</li> <li>• Install a NO<sub>x</sub>-diluent and flow CEMS in each stack (<i>if another unit exhausts to the stack, follow common stack procedures</i>)</li> <li>• For an Appendix D unit, install a NO<sub>x</sub>-diluent CEMS in one duct or stack (<i>note: you must demonstrate that the monitored NO<sub>x</sub> rate is representative for the entire unit</i>) and use Appendix D for the unit's heat input rate</li> </ul>
Common stack with all units in the NO <sub>x</sub> Budget Trading Program (i.e., one stack serving more than one unit)	<ul style="list-style-type: none"> <li>• Install a NO<sub>x</sub>-diluent and flow CEMS in the stack <u>and</u>, for heat input rate, either apportion the common stack value to the individual units or use flow and diluent monitors at each unit</li> <li>• Install NO<sub>x</sub>-diluent and flow CEMS in the stack <u>and</u>, for heat input rate, use Appendix D (if you elect to for eligible units) and flow and diluent monitors in all ducts feeding into the stack for any remaining units</li> <li>• Install NO<sub>x</sub>-diluent and flow CEMS in each duct feeding into the common stack</li> <li>• Install NO<sub>x</sub>-diluent CEMS in each duct feeding into the common stack <u>and</u>, for heat input rate, use Appendix D (if you elect to for eligible units) and flow CEMS in the ducts feeding into the common stack for any remaining units</li> </ul>
Common stack with some units not in the NO <sub>x</sub> Budget Trading Program	<ul style="list-style-type: none"> <li>• Install a NO<sub>x</sub>-diluent and flow CEMS in the stack, a NO<sub>x</sub>-diluent and flow CEMS in the duct from each nonaffected unit, and petition EPA to use a subtractive methodology [<i>for eligible units, you may substitute Appendix D procedures for the flow CEMS in an unaffected unit's duct</i>]</li> <li>• Install NO<sub>x</sub>-diluent CEMS in each duct feeding from an affected unit, <u>and</u>, for heat input rate, use Appendix D (if you elect to for eligible, affected units) and flow CEMS in the ducts feeding from any remaining affected units</li> <li>• Install a NO<sub>x</sub>-diluent CEMS in the common stack, designate all units as affected and use one of the first two options described above for a common stack with only affected units</li> <li>• Install a NO<sub>x</sub>-diluent and flow CEMS in the common stack and use the combined emissions from all units as the emissions from the affected units</li> <li>• Petition EPA for a method to apportion NO<sub>x</sub> mass emissions to each unit</li> </ul>

<sup>1</sup> A NO<sub>x</sub> concentration monitoring system and flow monitoring system may be used in place of a NO<sub>x</sub>-diluent CEMS and flow monitor to determine NO<sub>x</sub> mass emissions. However, if you choose that option, you also will have to meet the special provisions in § 75.72(e) to determine heat input.

For situations or configurations that are more complex than the above examples, you may contact EPA staff for additional guidance.

### **6.1.5 What if my unit is an opt-in unit?**

If you opt a unit into the program, you must follow the same monitoring method requirements that apply to other units. Also, in order to develop a baseline for determining allowance allocations for an opt-in unit, you must commence monitoring by the beginning of the control period (i.e., May 1st) of the year before your unit obtains opt-in status.

### ***6.1.6 May I petition EPA to obtain a variance from a monitoring requirement?***

You may petition EPA to apply for a variance from the monitoring requirements under the program. The requirements for such a petition are provided in § 75.66 and vary, depending on the type of variance you are seeking. For most petitions, you will need to provide identification information for the unit, an explanation of why you are seeking the variance, a detailed description of your proposed alternative, and a discussion of how your alternative will serve the purposes of the requirement. You may contact the Department for additional advice prior to contacting EPA.

## **6.2 Monitoring approval process**

**In general, a monitoring petition must contain:**

- Identification of the plant and unit
- A detailed explanation of why you are suggesting the alternative
- Descriptions and diagrams of your suggested alternative
- A demonstration that your alternative is consistent with the purposes of the requirement
- Any other relevant information required

Once you determine the methodologies you will use to measure emissions (see Tables 6-2 through 6-4), you will need to install and obtain approval for your monitoring. Part 75, Appendix A, Section 1, contains information on where to install each type of monitor, and installation issues are not discussed further in this document. The monitoring certification process consists of the following steps:

- Submit an initial monitoring plan
- Submit a certification test notice
- Conduct certification tests
- Submit a certification application
- Receive an incomplete application notice from the Department, if applicable
- Receive Department approval/disapproval notice

If your unit is in the Acid Rain Program, you should continue to follow the certification process requirements of Part 75. Most Acid Rain units will not be required to implement and certify any additional monitoring in the context of this rule. However, if you have previously filed any petitions on the subject of NO<sub>x</sub> apportionment at a common stack, you must resubmit these petitions to EPA to ensure that the approval applies in the context of Chapter 145. In addition, you must ensure that your DAHS has NO<sub>x</sub> mass capability and if necessary, add and verify the appropriate formulas in your monitoring plan. Also, if you install additional monitors to meet

the requirements of this program, you should follow the specific Chapter 145 certification and recertification procedures discussed in this section.

If your unit is not subject to the Acid Rain Program, you must certify each monitoring system you use to comply with the NO<sub>x</sub> Budget Trading Program through the Department. Based on the certification information you submit, the Department in consultation with EPA will determine whether to approve your monitoring system.

**Table 6-5: Overview of Monitoring System Certification Reporting**

<b>Submit this document/notice...</b>	<b>By this date...</b>
Initial monitoring plan	≥ 45 days prior to beginning of testing
Certification test notice	≥45 days prior to beginning of testing
Certification application	≤45 days after testing is complete

### **6.2.1 Initial monitoring plan**

You must submit your initial monitoring plan at least 45 days before you begin certification testing. Your monitoring plan will contain sufficient information about your monitoring systems or alternatives to demonstrate that all the emissions from the unit are reported correctly. The plan includes basic unit and fuel identifying information and then explains what monitoring components you use within each monitoring system, where they are located, and what emissions formulas you use to calculate emissions. The plan also includes operating information about the unit and each monitor or monitoring system (such as normal range of unit load and details about a monitor's span and range). See § 75.53 for a complete list of monitoring plan elements. You must submit the following monitoring plan information electronically:

- ORIS code and other identification for the unit
- Unit information (e.g., type of unit, type of controls)
- Description of exhaust configuration (e.g., single stack, common stack)
- Monitoring methodology details
- Program identification and information
- Identification/description of monitoring, hardware, and software components
- Formulas for each emissions parameter
- Physical data on the stack height and cross-sectional area of the flue exit

- Methods of calculation and values for each parameter monitored (for example, maximum potential concentration of a pollutant and monitor span values)
- Default values and parameters
- Load level and range of operation information

You must submit the following monitoring plan information in hardcopy or electronically:

- Test strategy, test protocols, and calculations for parameter values and apportionment
- Site location descriptions, including schematics or engineering drawings, for all monitoring components, gas handling systems, and stacks and ducts
- Data flow diagram
- Span and range calculations
- Required technical justifications

**NOTE! See Appendix A for information on how to obtain the EDR v2.1, EDR v2.1 Instructions, and MDC software to assist you in preparing your monitoring plan. OTC NO<sub>x</sub> budget units should use their approved Chapter 123 monitoring plans as a starting point. Modify those plans as necessary to meet the requirements of Chapter 145.**

The detailed requirements for how to report each electronic data item in the monitoring plan are found in the *Electronic Data Reporting Version 2.1* format document (EDR v2.1). You should also consult the latest version of the *EDR Version 2.1 Reporting Instructions*. In addition, CAMD has developed the Monitoring Data Checking (MDC) software to assist you in preparing your electronic monitoring plan information. The software is available from the CAMD web site, free of charge. The EPA strongly recommends that you use the software because it will help you find many potential errors before you submit your monitoring plan and will streamline receipt and review of your monitoring plan by EPA and the Department. The Department will review your monitoring plan and notify you of any errors that are discovered. If there are any errors, the Department will require you to resubmit the plan.

### **6.2.2 Certification test notice**

At least 45 days before you begin certification tests, submit a written notice of the dates you will be conducting initial certification testing. You must submit the notification to CAMD, the appropriate EPA Regional Office, and the Department. If you need to reschedule the test, you may do so by providing written or telephone notice at least seven days before the earlier of the original or the rescheduled beginning test date. For any non-Acid Rain unit, the Department can waive the requirement that you provide them notice of your certification tests (see § 145.73(b)).

### 6.2.3 *Certification testing*

**NOTE! OTC NO<sub>x</sub> budget units that have certified their Chapter 123 systems may not need to recertify all components. You should review the EPA document “OTC Sources under the Federal NO<sub>x</sub> Budget Trading Program: Guidance on Changing Monitoring Methods and Upgrading Monitoring Plans to EDR v2.1” (October 12, 2001).**

The next step to obtain approval of your monitoring methodologies is to conduct the required certification tests for your selected approach. The test procedures that you must follow are set out in Appendix A to Part 75 for continuous emission monitoring systems, Appendix D for fuel flowmeters, Appendix E for NO<sub>x</sub>-heat input correlation testing, and § 75.19 for unit-specific default testing for low mass emissions units. In addition, § 75.20(c)(9) requires you to conduct tests of your data acquisition and handling system (DAHS) to verify proper computation of hourly emission and heat input rates and proper application of missing data substitution and bias adjustment factors. You should refer to those provisions and EPA guidance materials to determine the appropriate technical procedures for conducting the applicable tests. The required certification tests will depend on the types of monitors and are shown in the table below.

**Table 6-6: Monitoring System or Methodology Certification Tests**

<b>To certify this system or methodology...</b>	<b>You will need to perform these tests...</b>
NO <sub>x</sub> -diluent (i.e., NO <sub>x</sub> emission rate in lb/mmBtu)	<ul style="list-style-type: none"> <li>• 7-day calibration error test (both component monitors)</li> <li>• Linearity check (both component monitors)</li> <li>• Relative Accuracy Test Audit (RATA) (lb/mmBtu basis)</li> <li>• Bias test</li> <li>• Cycle time test (both component monitors)</li> <li>• DAHS verification</li> </ul>
NO <sub>x</sub> concentration (i.e., NO <sub>x</sub> in ppm)	<ul style="list-style-type: none"> <li>• 7-day calibration error test</li> <li>• Linearity check</li> <li>• RATA (ppm basis)</li> <li>• Bias test</li> <li>• Cycle time test</li> <li>• DAHS verification</li> </ul>
Flow	<ul style="list-style-type: none"> <li>• 7-day calibration error test</li> <li>• RATA</li> <li>• Bias test</li> <li>• DAHS verification</li> </ul>
Diluent monitor used only for heat input determination	<ul style="list-style-type: none"> <li>• 7-day calibration error test</li> <li>• Linearity check</li> <li>• RATA</li> <li>• Cycle time test</li> <li>• DAHS verification</li> </ul>
Moisture system with wet and dry basis O <sub>2</sub> analyzers(s)	<ul style="list-style-type: none"> <li>• 7-day calibration error test (each analyzer)</li> <li>• Linearity check (each analyzer)</li> <li>• RATA (% H<sub>2</sub>O basis)</li> <li>• Cycle time test (each analyzer)</li> <li>• DAHS verification</li> </ul>
Continuous moisture sensor	<ul style="list-style-type: none"> <li>• RATA</li> </ul>
Continuous moisture system consisting of a temperature sensor and a DAHS with a lookup table	<ul style="list-style-type: none"> <li>• Demonstration that the DAHS applies the correct moisture value from the lookup table for each hour</li> </ul>
Appendix D fuel flowmeter methods for heat input	<ul style="list-style-type: none"> <li>• Fuel flowmeter accuracy tests (some exceptions apply)</li> <li>• DAHS verification</li> </ul>
Appendix E method for NO <sub>x</sub> emission rate	<ul style="list-style-type: none"> <li>• Appendix E correlation testing</li> <li>• DAHS verification</li> </ul>
Fuel-and-unit-specific default NO <sub>x</sub> emission rate for LME units	<ul style="list-style-type: none"> <li>• Appendix E correlation testing, as modified by § 75.19(c)(1)(iv)(A)</li> </ul>

#### **6.2.4 Certification application**

Your certification application should contain a hardcopy application form (EPA 7610-14), an updated electronic monitoring plan, any hardcopy monitoring plan changes, and the hardcopy and electronic results of your certification testing. Submit these documents to CAMD, the EPA Regional Office, and the Department, as follows:

**Table 6-7: Certification Application Reporting**

<b>Send this document...</b>	<b>To...</b>
Hardcopy EPA Form 7610-14	CAMD, EPA Regional Office, The Department
Hardcopy test results	EPA Regional Office, The Department
Electronic test results	CAMD, The Department
Updated electronic monitoring plan	CAMD, The Department
Hardcopy monitoring plan changes	EPA Regional Office, The Department

**» How do I submit certification reports for a low mass emissions unit?**

Because you are not installing CEMS at a low mass emission (LME) unit, the certification process is fairly simple. Your certification application will consist primarily of an up-to-date monitoring plan. The monitoring plan for an LME unit will include historical or projected emissions data and calculations demonstrating that the unit meets the LME unit qualifications. Also, if you wish to use a fuel and unit-specific NO<sub>x</sub> emission rate instead of the generic default rate for a unit with NO<sub>x</sub> controls, the monitoring plan must include the parameters you will monitor (with acceptable operating ranges) to document that the controls continue to operate properly. Your certification application also should include the testing you have performed (or will perform) to determine the default NO<sub>x</sub> emission rate.

The following table summarizes the materials you should submit to the EPA and the Department:

**Table 6-8: Low Mass Emissions Unit Certification Reporting**

<b>Send this document...</b>	<b>To...</b>
Hardcopy form 7610-14 (with AAR signature)	CAMD, EPA Regional Office, The Department
Electronic monitoring plan	CAMD, The Department
Hardcopy monitoring plan changes	CAMD, EPA Regional Office, The Department
Hardcopy test results	CAMD, The Department
Calculations to show that the unit qualifies as an LME unit	CAMD, The Department

The application to use the LME methodology may be submitted at any time. If you do not have certified monitoring equipment already installed, such as when you first certify for the program, you may use the method when you submit your certification application. If you are replacing existing monitoring equipment, you may only begin using the methodology on the first operating hour following the start of the next calendar year (or ozone season).

**» *How are my data treated while my certification (or recertification) application is pending?***

Chapter 145 provides a period of provisional certification while your certification (or recertification -- see Section 6.5, below) application is pending so that you may rely on the data from your monitoring systems during this period. Your data will be considered valid quality-assured data:

- Beginning at the time at which you complete your certification (or recertification) tests, *and then continuing . . .*
- For a period not to exceed 120 days after the Department receives a complete certification (or recertification) application; *provided that . . .*
- You operate the monitoring system in accordance with all applicable Part 75 requirements (including QA requirements -- see Section 6.3, below); *and provided further that . . .*
- The Department does not issue a notice of disapproval of your application.

Especially for recertification, you will want to begin collecting valid data as quickly as possible to limit the use of conservative estimates to calculate emissions during the period you do not have a certified monitoring system in place. In recognition of this concern, Chapter 145 has established conditional data validation procedures so that you can start the provisional recertification period even before completing all of the necessary recertification tests. You can also use these data validation procedures during the initial certification process if necessary. You should review the specific requirements in § 75.20(b)(3) to understand these conditional data validation procedures.

### **6.2.5 *DEP approval***

Within 120 days of receiving a complete application, the Department will let you know if your certification application has been approved or disapproved. If the Department finds that your application is incomplete, the Department will notify you of the missing items and you will have a reasonable amount of time to submit the missing information.

## **6.3 *Quality assurance (QA)***

You must perform ongoing quality assurance testing on your monitors to verify that the data you report are accurate. If your unit is in the Acid Rain Program, or if you choose to report on an annual basis for a non-Acid Rain unit, you must follow all applicable Acid Rain Program (Part 75) quality assurance procedures. These are found in Appendix B of Part 75 and are summarized in the following table.



**Table 6-9: QA Requirements for Units Reporting on an Annual Basis**

<b>On this equipment...</b>	<b>Perform these QA tests...</b>	<b>With these qualifications and exceptions....</b>
Each required CEMS	Daily calibration tests	N/A
Flow monitor	Daily interference checks	N/A
Each required gas monitor	Quarterly linearity checks	<ul style="list-style-type: none"> <li>Required only in “QA operating quarters” (<math>\geq 168</math> unit operating hours), but no less than once a year</li> <li>168 operating hour grace period available</li> <li>Not required if <math>\text{NO}_x</math> span <math>\leq 30</math> ppm</li> </ul>
Flow monitor	Quarterly flow-to-load ratio tests	Complex configurations may be exempted by petition under § 75.66
Differential pressure-type flow monitor	Quarterly leak checks	<ul style="list-style-type: none"> <li>Required only in QA operating quarters</li> <li>168 operating hour grace period available</li> </ul>
Fuel flowmeter	<ul style="list-style-type: none"> <li>Fuel flowmeter accuracy test every four “fuel flowmeter QA operating quarters” (fuel measured by flowmeter is combusted <math>\geq 168</math> unit operating hours)</li> <li>Visual inspections (if applicable) every 3 years</li> <li>Quarterly fuel flow-to-load ratio test</li> </ul>	Fuel flow-to-load test is optional -- may be used to extend interval between flowmeter accuracy tests to up to 20 quarters
<ul style="list-style-type: none"> <li><math>\text{NO}_x</math>-diluent CEMS</li> <li><math>\text{NO}_x</math> concentration CEMS</li> <li>Flow monitor</li> <li>Moisture monitor</li> <li>Diluent monitor used only for heat input rate</li> </ul>	<ul style="list-style-type: none"> <li>Semiannual or annual relative accuracy test audit (RATA)</li> <li>Bias test (<math>\text{NO}_x</math> and flow systems, only)</li> </ul>	Depending on % relative accuracy obtained in previous test, a RATA is required either semiannually (every two “QA operating quarters”) or annually (every four “QA operating quarters”), not to exceed 8 calendar quarters

If your unit is not an Acid Rain unit and you choose not to report on an annual basis, then you must meet the specific quality assurance procedures of Part 75 Subpart H. You will have to conduct some Subpart H quality assurance testing prior to the beginning of the ozone season (before May 1) and other testing during the ozone season (May 1 through September 30). These separate requirements are summarized in the following table.

**Table 6-10: QA Requirements for Units Reporting on an Ozone Season Basis**

<b>For this equipment...</b>	<b>Perform this QA test...</b>	<b>At these times...</b>	<b>With these qualifications and exceptions...</b>
Each required CEMS	Daily calibrations (outside ozone season)	From the date and hour of any RATA or linearity check passed in the “pre-ozone season period” (i.e., from 10/1 of previous year through 4/30 of current year)	N/A
	Daily calibrations (inside ozone season)	Throughout the ozone season (5/1 - 9/30)	N/A
Flow monitor	Daily interference checks (outside ozone season)	From the date and hour of any flow RATA passed in the pre-ozone season period	N/A
	Daily interference checks (inside ozone season)	Throughout the ozone season	N/A
Each required gas monitor	Linearity check (outside ozone season)	During the pre-ozone season period	If the test is not completed by 4/30, a 168 operating hour grace period is allowed if a linearity check was passed in the previous year and if unit operated for < 336 hours in last ozone season
	Linearity check (inside ozone season)	In 2 <sup>nd</sup> and 3 <sup>rd</sup> quarters	<ul style="list-style-type: none"> <li>• The linearity check is required only in QA operating quarters</li> <li>• No grace periods allowed for these checks</li> </ul>
<ul style="list-style-type: none"> <li>• NO<sub>x</sub>-diluent CEMS</li> <li>• NO<sub>x</sub> concentration CEMS</li> <li>• Flow monitor</li> <li>• Moisture monitor</li> <li>• Diluent monitor used only for heat input rate</li> </ul>	<ul style="list-style-type: none"> <li>• RATA (outside ozone season)</li> <li>• Bias test (for NO<sub>x</sub> and flow systems, only) (outside ozone season)</li> </ul>	Pre-ozone season period	<ul style="list-style-type: none"> <li>• If you qualify for annual RATA frequency, you can use this RATA to QA data for entire current ozone season</li> <li>• If you qualify for semiannual RATA, you can use this RATA to QA data either for entire current ozone season (if performed in the current year) or through 6/30 of current year (if performed in prior year)</li> <li>• If RATA is not completed by 4/30, a 720 operating hour grace period applies if a RATA was passed in the previous year and if unit operated for &lt; 336 hours in previous ozone season</li> </ul>

**Table 6-10: QA Requirements for Units Reporting on an Ozone Season Basis con't**

<b>For this equipment...</b>	<b>Perform this QA test...</b>	<b>At these times...</b>	<b>With these qualifications and exceptions...</b>
	<ul style="list-style-type: none"> <li>• RATA (inside ozone season)</li> <li>• Bias test (for NO<sub>x</sub> and flow systems, only) (inside ozone season)</li> </ul>	In 2 <sup>nd</sup> and 3 <sup>rd</sup> quarters	<ul style="list-style-type: none"> <li>• Required only as necessary, based on the pre-ozone season RATA status described immediately above</li> <li>• You can use this ozone season RATA to QA data in the next ozone season, if you qualify for annual RATA frequency and you perform daily calibrations (and interference checks if applicable) from 10/1 of current year through 4/30 of the next year</li> </ul>
Flow –monitor	Flow-to-load ratio test	In 2 <sup>nd</sup> and 3 <sup>rd</sup> quarters	Complex configurations may be exempted by petition under § 75.66
DP-type flow monitor	Leak check	In 2 <sup>nd</sup> and 3 <sup>rd</sup> quarters	Required only in “QA operating quarters” (≥168 unit operating hours)
Fuel flowmeter	Fuel flowmeter accuracy tests	Every four “fuel flowmeter QA operating quarters” (fuel measured by flowmeter is combusted ≥168 unit operating hours)	For orifice, nozzle and venturi-type flowmeters, visual inspections are also required every 3 years
Fuel flowmeter	Fuel flow-to-load ratio test	In 2 <sup>nd</sup> and 3 <sup>rd</sup> quarters	Optional test you can use to extend deadline for next flowmeter accuracy test

**» Do I have to submit notice of QA testing?**

In some cases, you will need to inform CAMD, your EPA Regional Office, and the Department that you will be conducting quality assurance testing. This notification is required prior to a semiannual or annual RATA (and prior to retesting under 40 CFR Part 75 Appendix E section 2.2). Include in your notice the test dates for the routine RATAs required under Appendix B to Part 75. CAMD, your EPA Regional Office, and/or the Department can issue a waiver from these notice requirements -- so you should confirm which office(s) actually require notice prior to submitting a notice for your unit(s). In addition, upon request, you must submit the hardcopy results of these tests to your EPA Regional Office and the Department.

**NOTE! CAMD has waived the requirement to notify the Division of QA RATA testing (see Question 14.84 in the Acid Rain Program Policy Manual)**

Finally, when retesting is required for exceeding certain operating parameters under Section 2.3 of Appendix E, this is not considered to be routine QA testing. Follow the recertification procedures (discussed under Section 6.5 of this Overview) for that type of retesting.

**Table 6-11: Periodic Quality Assurance RATA Notification Requirements**

<b>If you are submitting...</b>	<b>Then it is due...</b>	<b>In this form...</b>	<b>To this office...</b>
Notice of semiannual or annual RATA, or Appendix E periodic retesting	≥ 21 days prior to beginning of test, <b>or</b>	Written (mail or fax) (or e-mail with agency's consent)	CAMD, EPA Regional Office, the Department
	≥ 24 hours prior to beginning of rescheduled test	Same as above, plus by telephone or any other means acceptable to applicable agency	
Periodic QA RATA results	Later of ≤ 45 days after completing tests <b>or</b> ≤ 15 days after receiving request from Regional Office or The Department	Written hardcopy report	EPA Regional Office, the Department

**» What if my monitors aren't working properly?**

If your monitors are not working properly and the readings are unreliable (i.e., when the monitors fail to pass quality assurance tests), you will need to use missing data substitution procedures so that you will have values to report in your quarterly emissions report for the hours in which your monitors are providing bad data (see Section 6.4, below, for information on how to comply with the quarterly emissions reporting requirements). The missing data substitution procedures you use will depend on your monitoring data availability and how many hours for which you have data since initial certification. Complete tables on applicable missing data procedures are located in § 75.33 (see Tables 1 and 2).

#### **6.4 Quarterly emissions and QA reporting**

You must report the emissions for NO<sub>x</sub> Budget Trading Program units using a standard electronic data reporting (EDR) format. EDR version 2.1 contains all of the data items that must be reported electronically in your quarterly reports. In addition, the *EDR Version 2.1 Reporting Instructions* provide guidance for reporting in the EDR format.

The EDR format contains various “record types” that contain fields for reporting individual data elements. You must place each data field in the data file location specified in EDR v2.1. Table 6-12, below, contains a list of the record types a non-Acid Rain unit subject to the NO<sub>x</sub> Budget Trading Program might be required to submit. Not all of the record types in Table 6-12 will apply to every unit in the program. If your unit is in the Acid Rain Program, your quarterly emissions reports would need to contain the information required above, plus any other information required under the Acid Rain Program.

**Table 6-12: EDR Record Types for NO<sub>x</sub> Mass Reporting**

<b>Record Type Numbers</b>	<b>Information Contained in the Record Type</b>
100, 101, 102	Facility Information
201, 210, 211, 212, 220, 230, 231, 260, 261, 262	Monitoring Data, including: <ul style="list-style-type: none"><li>• Pollutant and diluent gas concentrations</li><li>• Moisture data</li><li>• Volumetric flow</li><li>• Daily quality assurance data and results and reference method backup quality assurance data</li></ul>
300, 302, 303, 305, 307, 320, 323, 324, 325, 328, 360	Unit Data, including: <ul style="list-style-type: none"><li>• Unit operating and cumulative emissions data</li><li>• NO<sub>x</sub> emissions data</li><li>• Low mass emissions unit data</li></ul>
503, 504, 505, 506, 507, 508, 510, 520, 530, 531, 535, 536, 540, 550, 556, 560, 585, 586, 587	Monitoring Plan Information
600, 601, 602, 603, 605, 606, 610, 611, 614, 615, 616, 621, 623, 624, 627, 628, 629, 630, 640, 641, 645, 650, 651, 652, 653, 660, 695, 696, 697, 698, 699	Certification (and Ongoing Periodic QA) Test Data and Results, including (as applicable): <ul style="list-style-type: none"><li>• 7-day calibration error, linearity, leak, flow-to-load, RATA/bias, and cycle time tests</li><li>• RATA support information (if you use Reference Methods 2F, 2G or 2H)</li><li>• On-line/off-line calibration demonstration</li><li>• Miscellaneous quality assurance activities</li><li>• Fuel flowmeter accuracy checks and quarterly fuel flow-to-load analyses</li><li>• Alternative monitoring petition data</li><li>• Low mass emissions certification data</li><li>• Appendix E/unit-specific default emission rate test data</li><li>• Quality assurance extensions/exemptions claims</li></ul>
910, 920, 940, 941, 999	Compliance Certification Data

You will note that the quarterly report includes compliance certification elements. These elements are different than the annual compliance certification report that you submit to reconcile emissions and allowances in your allowance accounts (see Section 4.10, above). At a minimum, the quarterly report submission will include a compliance certification that states that:

- The unit's emissions were correctly and fully monitored in accordance with applicable requirements, including quality assurance of the data
- For a unit with add-on NO<sub>x</sub> emission controls, the controls were operated within the appropriate parameters and that for any hours in which data substitution procedures were used, the data substitutions do not systematically underestimate NO<sub>x</sub> emissions

- For units reporting only on a control period basis, missing data substituted NO<sub>x</sub> values are calculated using only values from the control period and do not systematically underestimate NO<sub>x</sub> emissions

Finally, you should note that you do not have to include in your quarterly report all of the items that you must record during an applicable quarter. Items that you will continue to record every quarter but do not have to submit in your quarterly report to EPA include (see § 75.73(f)(1)(ii)):

- Descriptions of adjustments, corrective action, and maintenance
- Information incompatible with electronic reporting (such as lab analyses)
- For units with NO<sub>x</sub> add-on emission controls that do not elect to use the approved site-specific parametric monitoring procedures for calculation of substitute data, the information in § 75.58(b)(3)
- Causes of any missing data periods and the actions taken to cure such causes (EDR v2.1 does have a record type for this information if you want to report it)
- Records of polynomial coefficients, K-factors and mathematical algorithms for flow and moisture monitors
- Daily fuel sampling information for units using Appendix D
- Transmitter or transducer accuracy test information
- Stratification test results
- Data and results of relative accuracy test audits (RATAs) that are aborted or invalidated and data and results of linearity checks that are aborted or invalidated due to operational problems with the unit
- Supplementary RATA information for gas RATAs (and for flow RATAs if you use the standard Reference Method 2)

***» Am I required to submit a quarterly report for data outside of the ozone season?***

**NOTE! Evaluate carefully the different QA requirements for annual versus seasonal reporting before deciding on a reporting approach -- see Section 6.3 of this Overview.**

For a unit that is subject to the Acid Rain Program, you must continue to report for each quarter of the year, and you must report the particular data elements required under Subpart H in each quarterly report. For a unit that is not in the Acid Rain Program, you can elect to report either on a year-round or ozone season-only basis. If you elect to report on an ozone season basis for this type of unit, you will submit only the second and third quarter reports, and the second quarter report will include data only from May and June (not April).

**» *How do I submit quarterly reports for my monitoring data?***

**You will have to use EPA-developed software to submit your quarterly reports. You will be able to download the software from CAMD's web site; also see App. A to this Overview for further information.**

You must submit your emissions reports to the Emission Tracking System (ETS) on EPA's mainframe computer. You will have to submit these reports by computer modem. EPA has developed software that you can use to facilitate this submission process. Once you begin to report under this trading program, EPA will assign you an ETS analyst that will be your point of contact for ETS submission questions.

The EDR v2.1 specifies the required format for your quarterly electronic reports, and it is important for you to ensure that all data are properly formatted in each of the applicable fields within each EDR record type. You should refer to the reporting instructions that EPA has developed for EDR v2.1 to answer specific questions you may have about formatting and preparing your electronic reports. See especially Appendix C to the instructions which provides more detailed information for preparing EDR v2.1 submittals.

You will submit your reports during the 30-day period following each calendar quarter (e.g., you must submit January through March data by April 30th). If you are a non-Acid Rain unit and have chosen to report only for the ozone season, you will submit reports only for the second and third quarters by July 30th and October 30th, respectively.

**» *Does EPA provide any verification that the Agency has received my report?***

EPA will process your quarterly report through a series of rigorous quality assurance checks. These checks verify that your submitted data are both accurate and in the correct EDR v2.1 format. EPA will return a report card that contains an overview of the reported emissions values and any problems identified in the report. Sources using ETS-PC to electronically submit reports to the EPA receive "instant feedback" containing the results from EPA's automated review.

**» *Can I resubmit my file?***

**For EPA review and resubmissions of reports, EPA has developed the Quarterly Report Review Process guidance for the OTC NO<sub>x</sub> Budget Program and will develop comparable guidance for this trading program in the future. See: [www.epa.gov/acidrain/otc/qtrrev.htm](http://www.epa.gov/acidrain/otc/qtrrev.htm)**

During the 30-day quarterly report submission period following the end of each quarterly reporting period, you can revise and resubmit your report as necessary prior to the quarterly report deadline. EPA will provide you with an immediate response in the form of a feedback report indicating whether your submission contains any errors. Most errors can be corrected within the submission period, provided EPA receives your report prior to the end of this 30-day window. However, even if your submission is received or rejected toward the end of this period,

EPA will indicate that you have 30 days from the date of the feedback report to correct and resubmit your report.

If you discover a problem after the 30-day period following a calendar quarter, you must contact your EPA assigned analyst before you attempt to resubmit a report.

## **6.5 Changes to your monitoring**

Changes to your monitoring may require an update to your monitoring plan, recertification, or both.

### ***» How do I update my monitoring plan?***

You will have to update your monitoring plan if you make any replacement, modification or other change in your approved monitoring systems or to your flue gas handling system if the change affects information reported in your monitoring plan. For instance, because you report monitoring component serial numbers, a change to the serial numbers will require a monitoring plan update.

For electronic portions of your monitoring plan, the update will occur in your quarterly report, or, if applicable, as part of the recertification application associated with the change(s) to your monitoring or flue gas handling system. Send electronic monitoring plan updates to CAMD and the Department. If the changes also affect the hardcopy portions of your monitoring plan, then you will need to submit the revised hardcopy portions of your plan to the applicable EPA Regional Office and to the Department. Submit the hardcopy update with any required recertification application, or, if no recertification application is required, within 30 days of the event that triggered the monitoring plan change.

### ***» How do I know if I need to recertify my monitors?***

**If you are uncertain about whether a particular change requires recertification, ask your EPA Department Regional Office contact listed in Appendix A to this Overview.**

You must recertify affected monitoring systems whenever you make a replacement, modification, or other change to a monitoring system that could significantly affect the ability of the system to accurately measure or record the monitored parameters. Also, you must recertify affected monitoring systems if you change the flue gas handling system or unit operation so that there is a significant change in the unit's flow or emission concentration profile. Examples of situations that would require recertification are:

- Replacement of an analyzer
- Replacement of a CEMS
- Change in location or orientation of a sampling probe or site



- Fuel flowmeter replacement
- Changes in unit configuration
- Exceedance of Appendix E operating parameters

» *How do I submit recertification reports?*

If you need to recertify any of your systems, you must submit a recertification test notice and subsequently a recertification application. The recertification test notification consists of notification of the dates of the recertification testing. After you have completed the recertification testing, you will need to submit a recertification application, which consists of a hardcopy application form (EPA 7610-14), an updated monitoring plan, and the recertification test results. Within 120 days of receipt, the Department will let you know if your recertification application has been approved or disapproved. If the Department finds that your application is incomplete, you will be given notice of the missing items and you will have a reasonable amount of time to submit the missing information.

**Table 6-13: Recertification Reporting**

Send this document/notice...	By this date...
Recertification test notification	$\geq 45$ days prior to beginning testing (if all tests required), <b>or</b> $\geq 7$ days prior to beginning of testing (if only some tests required), <b>or</b> $\leq 2$ business days after testing is scheduled, in an emergency situation
Recertification application	$\leq 45$ days after testing is complete

- **Recertification test notification:** If you need to conduct all of the same certification tests for recertification as you did for initial certification, then you must provide written notice at least 45 days in advance. If you need to reschedule the test, you may do so by providing written or telephone notice at least seven days before the earlier of the original or rescheduled beginning test date.

If only some certification tests are required for recertification, you need only provide at least seven days prior notice, in writing or by telephone. If you need to reschedule the tests, provide at least two business days notice before the earlier of the original or rescheduled beginning test date.

Finally, if you need to recertify a monitoring system because of an uncontrollable equipment failure that results in lost data, submit an “emergency” notice within two business days from when you schedule the tests.

In any case, submit the notice to CAMD, your EPA Regional Office, and the Department. CAMD, your EPA Regional Office, and/or the Department can issue a waiver from this notification requirement -- so you should confirm which office(s) actually require notice prior to submitting a notice for your unit(s).

- **Recertification application:** The recertification application should contain a hardcopy application form (EPA 7610-14), an updated monitoring plan (including any hardcopy monitoring plan changes), and the results of your recertification testing. You will need to submit these documents to CAMD, your EPA Regional Office, and the Department, as follows:

**Table 6-14: Recertification Application Reporting**

<b>Send this document...</b>	<b>To...</b>
Hardcopy form 7610-14	CAMD, EPA Regional Office, The Department
Hardcopy test results	EPA Regional Office, The Department
Electronic test results	CAMD, The Department
Updated electronic monitoring plan	CAMD, The Department
Hardcopy monitoring plan changes	EPA Regional Office, The Department

***» How do I obtain approval to conduct only certain tests for recertification?***

Section 75.66(h) contains the specific elements for a petition to conduct only certain tests for recertification of a monitoring system. The petition must include all of the following:

- Identification of the applicable monitoring system(s)
- A description of the changes to the system
- An explanation of why you are making the changes
- A description of the potential effects of the changes on the system's ability to measure, record and report emissions

## Section 7: Other Questions and Answers

After reading Section 7, you should know how to determine self-compliance and how the regulation affects your existing air permits.

### 7.1 How might I conduct a self-audit?

You may want to conduct a self-audit to determine your compliance status for this regulation. You will want to ensure that you have met all the reporting, recordkeeping, and permitting requirements. For sources that are subject to either the 25-ton or retired unit exemption, you will want to ensure that you are complying with the criteria for these exemptions. To assist you with this self-audit, Table 7-1 provides a checklist you may find helpful.

**Table 7-1: Example Self-audit Checklist**

Requirement	YES	NO	N/A
<b>Applicability: Am I subject to this regulation? (see Section 3)</b>			
1. Do I own or operate a large EGU? (i.e. serves generator > 25 MWe)			
2. Do I own or operate a large non-EGU? (i.e. > 250 mmBtu)			
3. Is my unit a fossil-fuel fired unit? (i.e., burns > 50% fossil fuel)			
4. If I own or operate a large fossil-fuel fired EGU or non-EGU, am I considered to be an “existing” unit (i.e., began operation before May 1, 1997)?			
5. If I own or operate a large fossil-fuel fired EGU or non-EGU am I considered to be a “new” unit (i.e., began operation between May 1, 1997 and May 1, 2003)?			
<b>Emission Limits/Allowance Allocations:</b>			
1. Have I submitted my general account application, if needed? (see § 145.51)			
2. Have I submitted an account certificate of representation?			
3. Is my control technology sufficient to reduce my ozone season NO <sub>x</sub> emissions to my allocation level?			
4. If my control technology is not sufficient to reduce my ozone season NO <sub>x</sub> emissions to my allocation level, do I have (or can I obtain) enough additional NO <sub>x</sub> allowances to ensure compliance for the control period?			
<b>Monitoring: Do I have an adequate method of monitoring my NO<sub>x</sub> emissions? (see Section 6)</b>			
1. Did I use one of the following monitoring options?			
a. Part 75 CEMS			
b. Appendix D (procedures for measuring heat input)			
c. Appendix E (procedures for measuring NO <sub>x</sub> emissions)			
d. Low Mass Emissions (LME) method			
e. Other approved alternative			

**Table 7-1: Example Self-audit Checklist con't**

Requirement	YES	NO	N/A
<b>Reporting/Recordkeeping: Did I submit the required reports to EPA? (see Sections 4 and 6)</b>			
1. Account Certificate of Representation form (for AAR)			
2. Allowance Transfer Forms (as applicable)			
3. Compliance Certification Report (by Nov. 30th after each control period)			
4. Monitoring Plan			
5. Monitoring Certification/Recertification Test			
6. Notices and Applications Petitions for monitoring alternatives/special exception (if applicable)			
7. Monitoring QA Test Notices			
8. Quarterly emission reports (for all four quarters if annual reporter or 2nd/3rd quarters if seasonal reporter)			
<b>Permitting: Did I update the appropriate permits? (see Section 5) (i.e. Title V, FESOP, or Other)</b>			
1. Was my NO <sub>x</sub> Budget Permit application submitted in accordance with Title V or non-Title V regulations, if applicable?			

## 7.2 What are the implications of this regulation for my existing operating permits?

Title V of the Act requires that certain sources obtain operating permits. However, being subject to the Chapter 145 does not by itself create the obligation to apply for a Title V operating permit. Nevertheless, since this regulation covers only large EGUs and non-EGUs, most affected sources will have an existing Title V permit.

The permit requirements for this program are stand-alone, generic requirements that can easily be incorporated into existing operating permits. For Title V sources, this will mean reopening a Title V permit to incorporate the standard requirements for this program.

## 7.3 Are there opportunities for flexibility or waivers?

The cap-and-trade program by its nature is inherently flexible and encourages sources on a regionwide basis to pursue least cost compliance planning. Because of this inherent flexibility, there are no other true “hardship” type of provisions based on economic or technical flexibility concerns. However, the Department has provided exemptions for retired units and units with low permit emission limits. These exemptions will avoid unnecessary impacts upon low (or zero) emitters. In addition, the compliance supplement pool (see Section 4.10) has been incorporated into the regulation to provide some flexibility for those sources that are able to reduce their emissions before the May 1, 2003 deadline, which will generate additional allowances that could be purchased by other facilities that need extra time to comply.

## Section 8: Compliance Assurance Process

**After reading Section 8, you should know how the Department will determine compliance, and what happens if you or the Department discovers noncompliance.**

### 8.1 How will the Department determine compliance?

The Department employs several approaches to monitor compliance with its environmental regulations, including both methods initiated by the Department and by facilities.

- **Inspections.** The Department may conduct periodic inspections at facilities subject to this regulation. Inspections may be initiated by disclosures to the Department, random selection, or by a variety of targeting methods. Inspections may be used to evaluate operations, records, or other information at a facility. For the NO<sub>x</sub> Budget Trading Program, monitoring system inspection audits are an important component of assuring that all sources monitor and account for emissions in a manner consistent with the applicable regulations.
- **Reporting.** The Administrator and the Department will monitor reports submitted by the facility including quarterly emission reports and compliance certification reports. The Department will also monitor the NO<sub>x</sub> allowances held by all facilities in the general, compliance, and overdraft accounts within the NATS. Because you will document compliance with the NO<sub>x</sub> Budget Trading Program primarily by accounting for allowances and emissions, the self-reporting process is the key means by which the Department will evaluate your compliance.
- **Self Disclosure.** You have the primary responsibility for ensuring that your unit(s) remain in continuous compliance. As one tool to help you determine whether a unit is in compliance, Section 7.1 of this Overview includes a self-audit checklist.

### 8.2 If I discover a violation, how can I work with the Department and Administrator to correct it?

The Department encourages self-disclosure of violations and has implemented a policy to encourage voluntary compliance by means of environmental compliance audits and implementation of compliance management systems. See:  
[http://www.dep.state.pa.us/dep/subject/all\\_final\\_technical\\_guidance/policy/012\\_0480\\_001.htm](http://www.dep.state.pa.us/dep/subject/all_final_technical_guidance/policy/012_0480_001.htm).

### 8.3 What if the Department discovers a violation?

The Department uses a variety of methods to determine whether sources are complying, including inspecting facilities, review records and reports, and responding to citizen complaints. However, the primary method of determining compliance for those sources subject to the Chapter 145 rule will be reviewing the compliance certification reports and monitoring the

number of allowances in the general, overdraft and compliance accounts as established in the NO<sub>x</sub> Allowance Tracking System.

If the Department uncovers a violation, the Department may file an enforcement action seeking penalties of up to \$25,000 per violation, per day. The proposed penalty in a given case will depend on many factors, including the number, length, and severity of the violations, the economic benefit obtained by the violator, and its ability to pay. See:

[http://www.dept.state.pa.us/subject/final\\_technical\\_guidance/BAQ/273\\_4130\\_003.pdf](http://www.dept.state.pa.us/subject/final_technical_guidance/BAQ/273_4130_003.pdf). Under the NO<sub>x</sub> Budget Trading Program, owners/operators of a unit that has more emissions than allowances after the “true-up” period following each ozone season will, at a minimum, be subject to the 3:1 allowance surrender for each ton of excess emissions at that unit. These specific allowance penalties are in addition to any penalties that may apply under the Department’s general enforcement authority.

In overview, the Department recognizes that it can achieve the greatest possible environmental protection by encouraging source owners and operators to work with us to discover, disclose, and correct violations. The Department will conduct various activities to determine whether source owners are complying, including inspecting facilities, review records and reports, and responding to citizen complaints. However, the primary method of determining compliance for those sources subject to the Chapter 145 rule will be reviewing the compliance certification.

## Appendix A: Contacts and Resources

### General Information

There are a number of web site resources for obtaining general information about the NO<sub>x</sub> Budget Trading Program, related trading programs, and general EPA policies. The following table identifies some of the main resources you may find help

**Table A-1: General Resource Information**

Resource	Web Address	Description
CAMD Web Site	<a href="http://www.epa.gov/acidrain">http://www.epa.gov/acidrain</a>  (will change to <a href="http://www.epa.gov/airmarkets">www.epa.gov/airmarkets</a> in the future)	Variety of information on the programs for which the Clean Air Markets Division is responsible, including SO <sub>2</sub> and NO <sub>x</sub> trading programs. Includes data, publications, and links to related sites.
Federal NO <sub>x</sub> Budget Trading Program	<a href="http://www.epa.gov/acidrain/modlrule/main.html#126">http://www.epa.gov/acidrain/modlrule/main.html#126</a>	General information on EPA's NO <sub>x</sub> Budget Trading Program in the context of both the SIP Call and the section 126 rule. Includes links to the proposed and final rules including information on allocations, fact sheets, guidance documents, response to comment documents and other analyses and information.
Regional Transport of Ozone Web Site	<a href="http://www.epa.gov/ttn/rto/126/index.html">http://www.epa.gov/ttn/rto/126/index.html</a>	This is the main site for accessing the section 126 proposed and final rules, fact sheets, and links to other related documents and data.
Federal Register Online via GPO Access	<a href="http://www.access.gpo.gov/su_docs/aces/aces140.html">http://www.access.gpo.gov/su_docs/aces/aces140.html</a>	Official Federal Register documents, including the published section 126 regulation (January 18, 2000).
CFR, List of Sections Affected Online via GPO Access	<a href="http://www.access.gpo.gov/nara/lsa/browslsa.html">http://www.access.gpo.gov/nara/lsa/browslsa.html</a>	This site lists CFR sections that have been affected by rules promulgated in the Federal Register since the last official CFR release
EPA Clean Air Technology Center	(919) 541-0800	Resources on emerging and existing air pollution prevention and control technologies
EPA Small Business Assistance Program (SBAP)	<a href="http://www.epa.gov/ttn/sbap">http://www.epa.gov/ttn/sbap</a>	State and local SBAP contacts, SBAP materials, related web sites, meetings and conferences.
Interstate Ozone Transport Regulation	<a href="http://www.pacode.com/secure/data/025/025toc.html">http://www.pacode.com/secure/data/025/025toc.html</a>	Chapter 145 regulation codified
Interstate Ozone Transport Regulation,	<a href="http://www.pabulletin.com/secure/data/vol30/30-39/1632.html">http://www.pabulletin.com/secure/data/vol30/30-39/1632.html</a>	PA Bulletin notice containing the Preamble and regulatory text.

Preamble		
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**Table A-1: General Resource Information con't**

Resource	Web Address	Description
DEP regulatory information, guidance	<a href="http://www.dep.state.pa.us/dep/deputate/airwaste/aq/theme/regulatory.htm">http://www.dep.state.pa.us/dep/deputate/airwaste/aq/theme/regulatory.htm</a>	Links to guidance documents and other resources
DEP Bureau of Air Quality home page	<a href="http://www.dep.state.pa.us/dep/deputate/airwaste/aq/default.htm">http://www.dep.state.pa.us/dep/deputate/airwaste/aq/default.htm</a>	News, information, contacts, etc

You may contact the Department and EPA staff directly regarding specific issues. Use the following list of phone numbers to contact the office that may be able to help you answer specific questions regarding the trading program, monitoring, or other general issues.

Monitoring: Joe Nazarro at (717)-783-9247,

AAR, Allocations, general program issues: Dean Van Orden at (717)-787-1455,

Permits: John Shontz (717)-772-3995.

You may reach EPA Region III at (215) 814-2100.

You may also contact EPA's CAMD staff at (202) 564-9180 regarding allowance transfers and monitoring data issues.

### **Monitoring/Emissions Reporting Information**

EPA has developed a number of implementation assistance resources for the monitoring and emissions reporting requirements you will have to meet. The following table identifies some specific resources that are available on the CAMD web site. For additional resources, see the main web site page for Part 75 monitoring and reporting at: <http://www.epa.gov/acidrain/so2emis.html>.

**Table A-2: Monitoring and Emissions Reporting Resources**

Resource	Web Address	Description
Acid Rain Program Policy Manual	<a href="http://www.epa.gov/acidrain/cems/polman/polman.html">http://www.epa.gov/acidrain/cems/polman/polman.html</a>	Includes answers to hundreds of questions on a range of Part 75 topics. EPA updates the manual on a periodic basis.
EDR Version 2.1 Formats and Instructions	<a href="http://www.epa.gov/acidrain/so2emis.html">http://www.epa.gov/acidrain/so2emis.html</a>	Access the formats for reporting all electronic data, and detailed instructions on how to format your data correctly. As a starting point, see especially Appendix C to the EDR instructions, which provides additional overview-level information on how to submit your electronic reports.



**Table A-2: Monitoring and Emissions Reporting Resources con't**

<b>Resource</b>	<b>Web Address</b>	<b>Description</b>
Monitoring Data Checking (MDC) Software	<a href="http://www.epa.gov/acidrain/cems/mdc/mdc.htm">http://www.epa.gov/acidrain/cems/mdc/mdc.htm</a>	MDC allows regulated sources and regulatory agencies to enter, analyze, print, and export electronic monitoring plan, certification, and quality assurance data. MDC is an important tool for checking these data elements for errors and inconsistencies.
Emission Tracking System (ETS)	<a href="http://www.epa.gov/acidrain/so2emis.html">http://www.epa.gov/acidrain/so2emis.html</a>	EPA posts all ETS-related information at this site, including ETS user bulletins, EPA-developed report submission software, and procedures for reviewing and processing quarterly reports.
Acid Rain CEM Contact List	<a href="http://www.epa.gov/acidrain/cems/contact.html">http://www.epa.gov/acidrain/cems/contact.html</a>	This list is arranged by State within each EPA Region, and includes the EPA Headquarters, EPA Regional Office, State agency and, if applicable, local agency contact for any Part 75 monitoring questions you have.

## Appendix B: Forms Information

There are a variety of forms that will be used by affected sources to comply with the regulation and to participate in the trading program. At the time this overview was published, most of the necessary forms for this program were not available for distribution. However, prior to program implementation, the necessary forms will be posted on EPA's web page at <http://www.epa.gov/acidrain/forms.html>. The forms fall into the following major program areas:

- Allowance trading
- Monitoring and emissions reporting
- Permitting

### Allowance Trading

The trading forms that you will be using will be similar to those currently on the web page for the OTC NO<sub>x</sub> Budget Trading Program. These include the Annual Reconciliation Form (for compliance certification), the Account Certificate of Representation Form (to designate an AAR), the General Account Form, the Allowance Transfer Form, and the ERC Request Form. You can download these forms in a WordPerfect or Adobe Acrobat (.pdf) file format from: <http://www.epa.gov/acidrain/forms.html>.

**Monitoring and Emissions Reporting Forms** You will use the same monitoring and emission reporting forms already established under Part 75 and used for the Acid Rain Program and the OTC NO<sub>x</sub> Budget Program. Use the EDR v2.1 reporting format for most of your monitoring/emissions reports, including most (or all) of your monitoring plan, much of your certification/recertification application, and your quarterly reports. You can download the EDR v2.1 reporting formats and accompanying instructions from: <http://www.epa.gov/acidrain/so2emis.html>.

In addition to the EDR formats, EPA has developed forms for certain other monitoring-related reports:

- **Certification/recertification applications.** The required hardcopy form (7610-14) for these applications is available on the CAMD web site. In addition, remember that much of this information will be included in your EDR submittal.
- **Test notices.** Although there is no required form for a test notice, EPA has developed an optional form that is available as part of the existing Monitoring Plan file.