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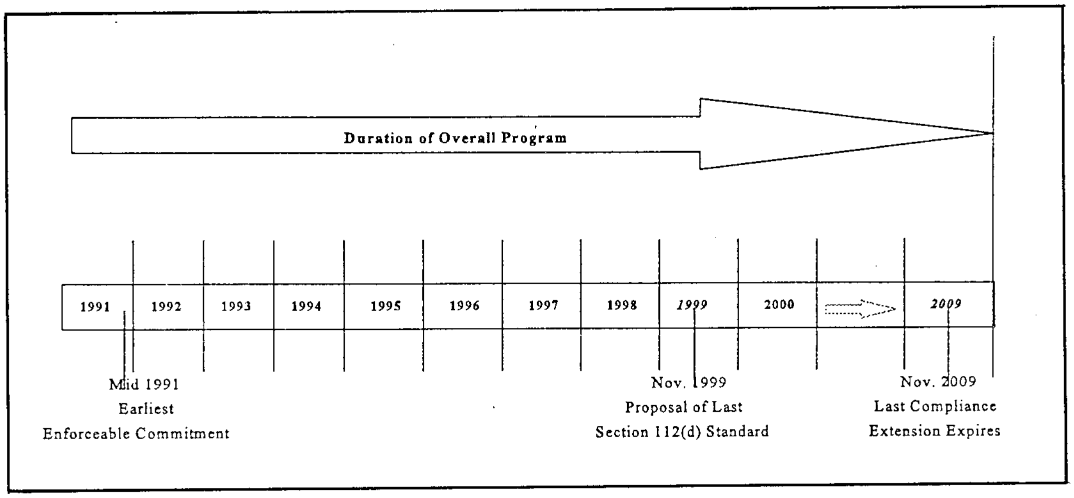
**January 1995**

# How To Obtain a Compliance Extension by Participating in the Early Reductions Program

## A Step-By-Step Procedure

by Loran Liu, David Reed, Andrew E. Isbel, and Bernard A. Donahue



The Clean Air Act Amendments of 1990 (CAAA-90) mandate new, more complex air pollution regulations. Army installations find themselves in a unique position relative to these requirements since they must develop compliance strategies that help them meet air pollution requirements and allow them to meet vital mission objectives.

To make better progress in reducing air pollution, Congress designated 189 hazardous air pollutants (HAPs) in CAAA-90 and directed the U.S. Environmental Protection Agency (USEPA) to set emission control standards for source categories to control the HAPS by the year 2000. In addition to the mandated chemical list, the amendments made other significant changes. One such change was the institution of the Early Reductions Program, which includes a provision for compliance extensions. Since the burden of requesting an extension falls on the source, a clearly stated procedure is needed to help Army installation managers determine when and how to successfully apply for a compliance extension for early reduction of HAPs. This document provides a step-by-step process for submitting an early reductions application to help Army installation personnel successfully implement the Early Reductions Program.

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The Clean Air Act Amendments of 1990 (CAAA-90) mandate new, more complex air pollution regulations. Army installations find themselves in a unique position relative to these requirements since they must develop compliance strategies that help them meet air pollution requirements and allow them to meet vital mission objectives.

To make better progress in reducing air pollution, Congress designated 189 hazardous air pollutants (HAPs) in CAAA-90 and directed the U.S. Environmental Protection Agency (USEPA) to set emission control standards for source categories to control the HAPS by the year 2000. In addition to the mandated chemical list, the amendments made other significant changes. One such change was the institution of the Early Reductions Program, which includes a provision for compliance extensions. Since the burden of requesting an extension falls on the source, a clearly stated procedure is needed to help Army installation managers determine when and how to successfully apply for a compliance extension for early reduction of HAPs. This document provides a step-by-step process for submitting an early reductions application or an enforceable commitment to help Army installation personnel successfully implement the Early Reductions Program.

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# Foreword

This study was conducted for U.S. Army Center for Public Works (USACPW) under Project 4A162720A896, "Environmental Quality Technology"; Work Unit PC-UL3, "Assessment, Prioritization, and Modeling of Army Sources of Toxic Air Pollutants." The technical monitor was Malcolm McLeod, CECPW-FU-S.

The work was performed by the Pollution Prevention Division (EP) of the Environmental Sustainment Laboratory (EL), U.S. Army Construction Engineering Research Laboratories (USACERL). Dr. Edgar Smith is Acting Chief, CECER-EP, and William Goran is Chief, CECER-EL. The USACERL technical editor was William J. Wolfe, Information Management Office.

LTC David J. Rehbein is Commander and Acting Director of USACERL, and Dr. Michael J. O'Connor is Technical Director.

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# 1 Introduction

## Background

The Clean Air Act Amendments of 1990 (CAAA-90) mandate new, more complex air pollution regulations. Army installations find themselves in a unique position relative to these requirements since they must develop compliance strategies that help them meet air pollution requirements and allow them to meet vital mission objectives.

Before the passage of CAAA-90, hazardous air pollutants were identified and regulated by Section 112 of the Clean Air Act (CAA) called the *National Emission Standards for Hazardous Air Pollutants* (NESHAP) program. Under this program, only eight hazardous air pollutants (HAPs) became subject to regulation. To make better progress in reducing air pollution, Congress designated 189 HAPs in the CAAA-90 and directed the U.S. Environmental Protection Agency (USEPA) to set emission control standards for source categories to control the HAPS by the year 2000. In addition to the mandated chemical list, other significant changes were made to Section 112.

The institution of the Early Reductions Program was one such change. This program attempts to meet the Congressional intent of quickly lowering HAP emissions by using incentives rather than regulation, a strategy that effectively enables Army installations to gain cost-effective emission reductions. The Early Reductions Program is planned to have an overall duration of about 18 years starting in 1991 (Figure 1):

> The last compliance extension for the last Section 112(d) standard promulgated under Title III of the Act will expire by November of 2009 (if all standards are promulgated by the year 2000), thus formally ending the effects of the Early Reductions Program. Initially, the Program will be administered by the USEPA Regional Offices. Then, as the individual permitting programs of the States are approved under Title V, the respective States will take over the administration of the program (40 CFR 61).

An important aspect of the Early Reductions Program is its provision for compliance extensions. In December 1992, the USEPA adopted regulations establishing the requirements and procedures to obtain compliance extensions for early reductions of HAPs under subpart D of 40 CFR 63 (57 FR 61970). These regulations also provide a structured procedure for reviewing agencies to follow in the evaluation process.

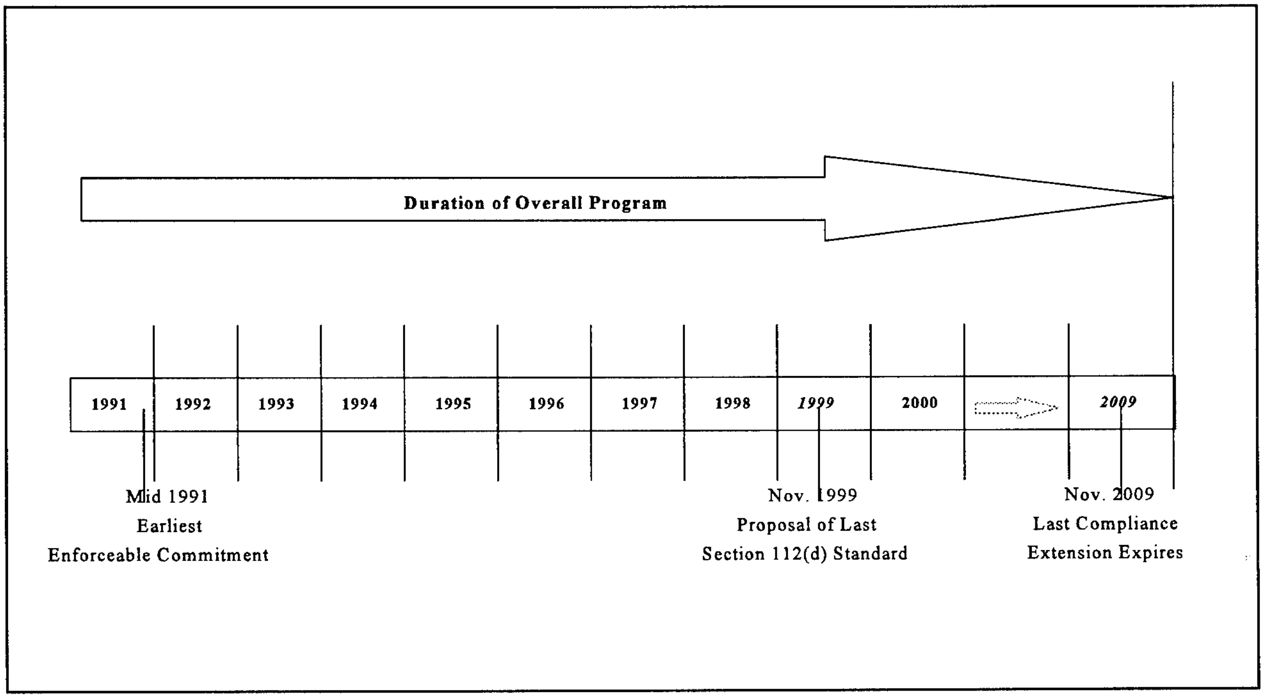

Figure 1. Duration of the Early Reductions Program (EPA-450/3-91-013).

Under these regulations, sources may participate in the program in two ways:

1. Sources that reduce their base year HAP emissions by 90 percent for gaseous pollutants, or 95 percent for particulate emissions (90/95 percent), adjusted for high-risk pollutant weighing factors, before a proposal of applicable HAP standards, may be granted 6 additional years to comply with the standard.
2. Sources that cannot achieve reductions before the proposal of an applicable standard must submit an enforceable commitment and achieve reductions before 1 January 1994 (Figure 2).

Section 63.70 of the Early Reductions Program rules state that this program only applies to sources that request a voluntary application for a compliance extension of HAP standards. In fact, this may also apply to state or local agencies given authority by the USEPA to operate a permit program under Title V of the CAA. Since the burden of requesting an extension falls on the source, a clearly stated procedure is needed to help Army installation managers determine when and how to successfully apply for a compliance extension for early reduction of HAPs.

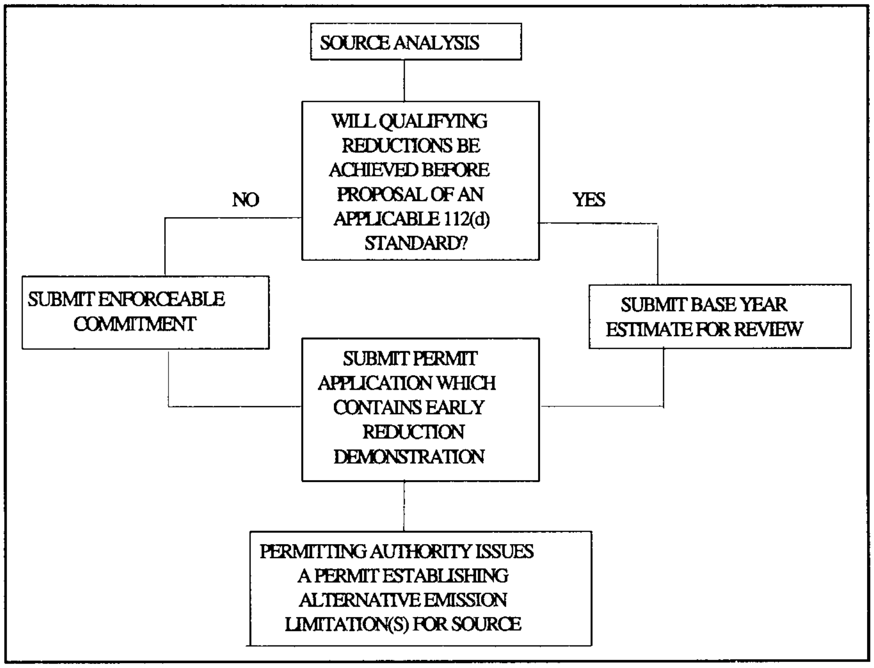

**Figure 2. Overview of the early reductions program.**

## Objective

The purpose of this study is to provide a step-by-step process for submitting an early reductions application or an enforceable commitment to help Army installation personnel successfully implement the Early Reductions Program.

## Approach

A literature survey was done to gather information about the Early Reductions Program. Technical information, primarily from 40 CFR 63 and EPA-450/3-91-013, was used to develop a step-by-step process for submitting an early reductions application or an enforceable commitment.

## Scope

It is not the intent of this document to specify a single acceptable method for implementing this program. The USEPA recognizes that there may be many ways of showing that hazardous air pollutants have been controlled sufficiently to qualify for a compliance extension. This document focuses on the basic process a source must follow to qualify for a compliance extension.

## Mode of Technology Transfer

It is anticipated that this information will be distributed and maintained by the U.S. Army Center for Public Works (USACPW), Fort Belvoir, VA.

# 2 Qualifying for a Compliance Extension

Owners and operators of HAP sources who choose to demonstrate early reduction must achieve reductions before the USEPA proposes an applicable HAP standard.* The source must prove that it has achieved a 90/95 percent overall reduction in base year HAP emissions. Greater actual reductions may be required based on high-risk pollutant-weighing factors. The following information will describe the basic steps in demonstrating early reduction.

## Step 1: Identify the Source

The first step in demonstrating early reductions is to identify and define the source. Due to the wide variety of source categories that will be subject to a HAP standard, each source may be defined differently. The USEPA has adopted a very flexible definition of "source." As promulgated in 40 CFR 63 (which governs compliance extensions), the term "source" has four definitions.

### *Definition 1*

"A building, structure, facility or installation identified as a source by the EPA" (McCoy 1993).

### *Definition 2*

"All portions of an entire contiguous plant site (Figure 3) under common ownership or control that emit HAPs" (McCoy 1993).

***Key Point 1.*** If the entire plant site is designated as the source and demonstrates a 90/95 percent reduction, then the plant would receive a compliance extension of 6 years from all applicable HAP standards.

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* This deadline date is literally defined as the date that the USEPA administrator signs the proposed rule. In practice, and as the term is used in this report, it refers to the date the USEPA publishes the proposed rule in the Federal register. This is an important distinction since early reductions must be submitted prior to a NESHAP standard proposal to obtain a compliance extension.

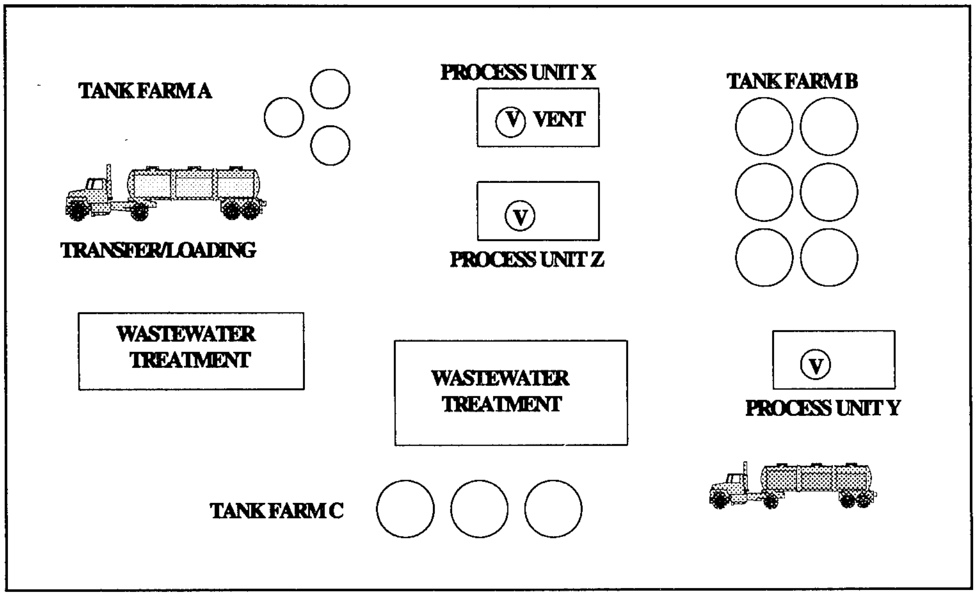

Figure 3. Simple plant schematic.

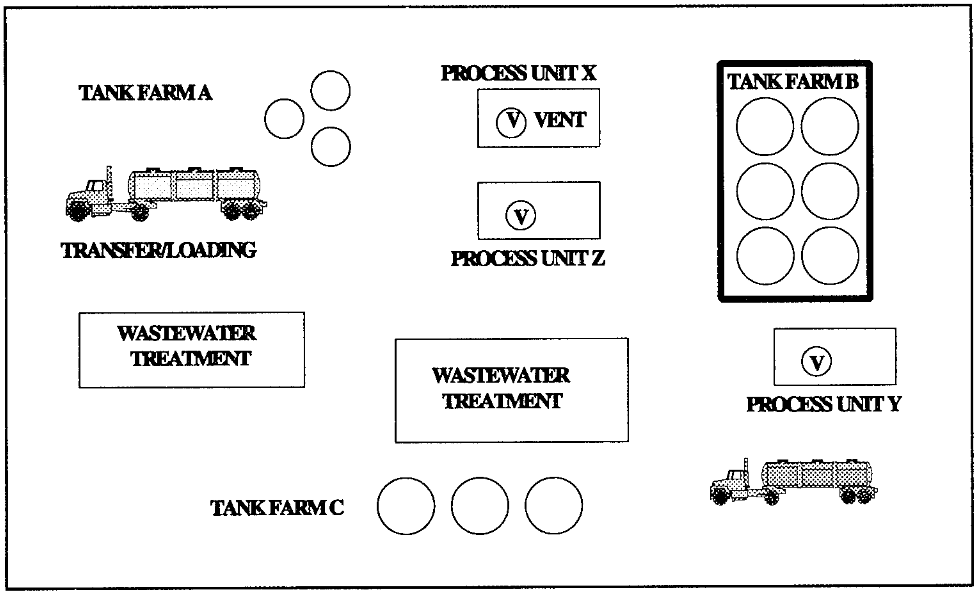

Figure 4. Plant schematic designating a functional source.

***Key Point 2.*** A source may also be less than an entire plant. However, sources so designated would be the only ones eligible for compliance extensions. This definition can be used when defining a group of emission points related to each other by function or geographical location (Figure 4). If an emission point in a group of emission points is shut down, that reduction can be credited towards the 90 percent, provided the shutdown is permanent.

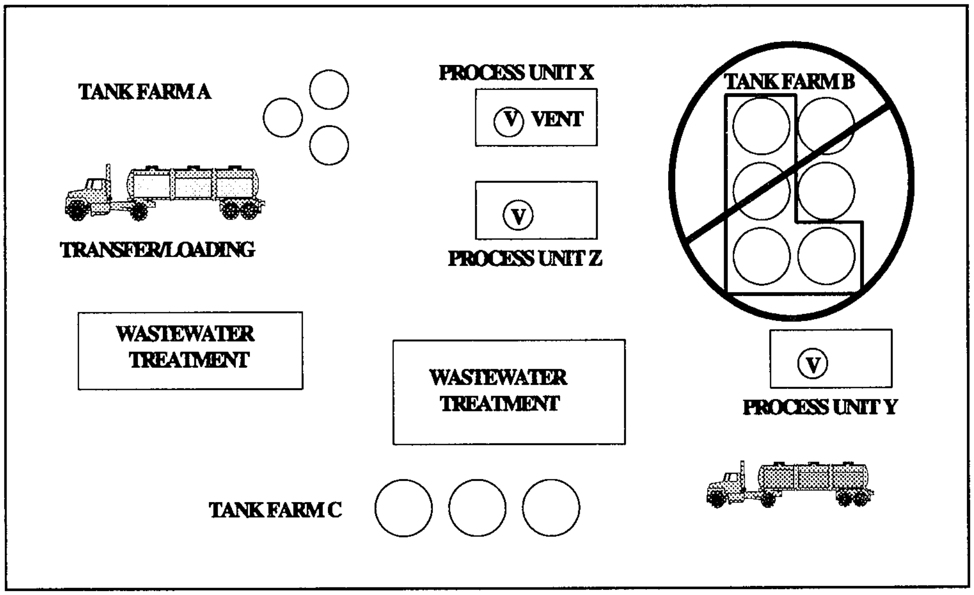

Figure 5. Plant schematic designating a potentially unacceptable source.

### *Definition 3*

> Any portion of an entire contiguous plant site under common ownership or control that emits hazardous air pollutants and can be identified as a facility, building, structure, or installation for the purposes of establishing MACT standards under section 112(d) of the Act (McCoy 1993).

***Key Point 1.*** The applicant cannot identify a source and then subdivide a group of functionally similar points. This is usually done to exclude already controlled points (Figure 5).

***Key Point 2.*** It is not acceptable to aggregate several unrelated tanks, process vents, wastewater treatment units, etc. simply because they are all within close proximity, unless they are enclosed (Figure 6). "For example, metal parts coating operation consisting of degreasers, painting lines, and paint strippers within a single enclosed structure could collectively be considered a source" (EPA-450/3-91-013).

It is also possible to identify a process or production as a source (Figure 7). In cases where a particular component of the plant is shared by multiple process units, that component could be included as part of a single process unit or as a separate source. A 90 percent aggregate overall reduction is the only reduction required (that is, a 90 percent reduction in each component is not necessary).

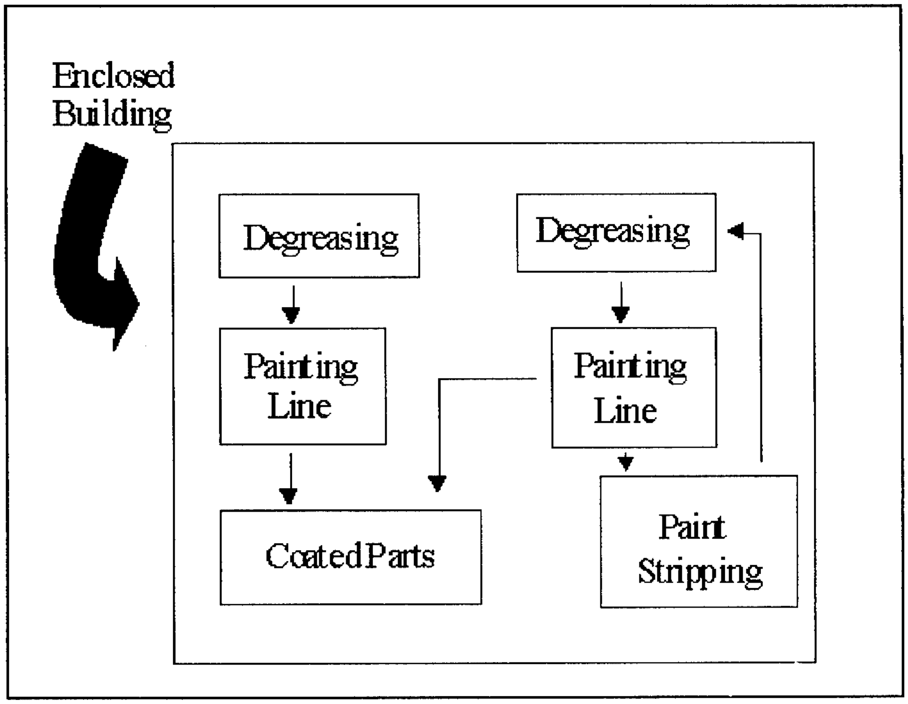

Figure 6. Enclosed building source.

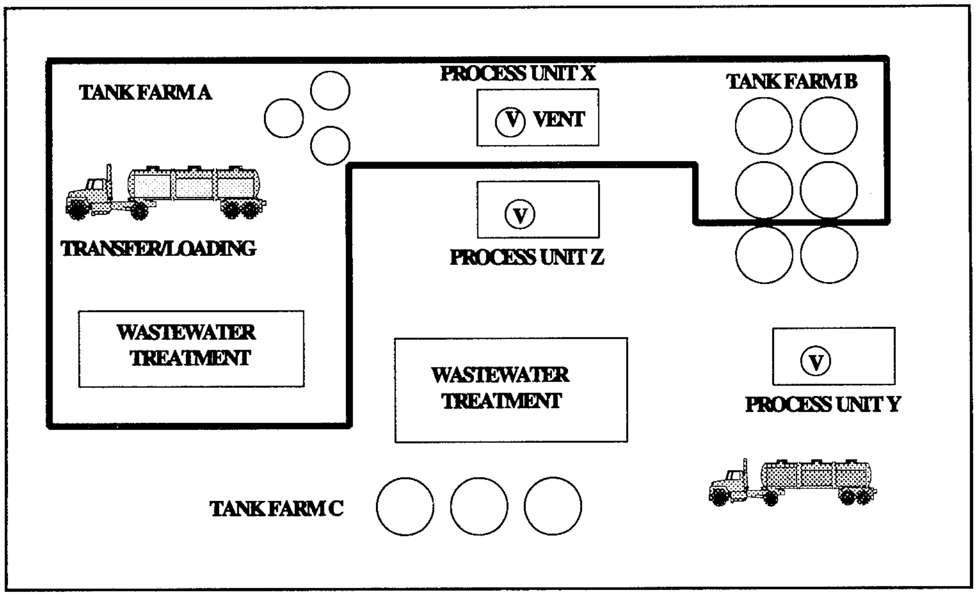

Figure 7. Plant schematic designating a production or process source (outlined area designates all equipment associated with the production of chemical X).

### *Definition 4*

Any individual emission point or combination of emission points within a contiguous plant site under common control, provided that emission reduction from such point or aggregation of points constitutes a *significant* reduction of hazardous air pollutant emissions of the entire contiguous plant site (McCoy 1993).

***Key Point 1.*** A significant amount of emissions of HAPs from a source was determined by the USEPA to be 5 tons per year (tpy) if baseline HAP emissions in the base year for the entire contiguous facility are less than or equal to 25 tpy.*

***Key Point 2.*** A significant amount of emissions of HAPs from a source was determined by the USEPA to be 10 tpy if baseline HAP emissions in the base year from the entire contiguous facility are greater than 25 tpy.

## Step 2: Provide Source Identifying Information

After identifying the specific definition for the source, the applicant must provide sufficient evidence to justify the selection. These four items will provide adequate information when identifying the source.

1. A description of the source and a site plan of the entire contiguous plant. The site plan should identify the parts of the site that constitute the source.
2. A description of the type of activity that produces hazardous air pollutant emissions from the source.
3. A complete list of all HAP emission points within the source, including identification numbers and descriptive titles (Table 1).
4. A statement that shows that the source conforms to one of the allowable definitions.

**Table 1. List of high-risk pollutants and weighting factors.**

| CAS Number | Pollutant | Weighting Factor |
|---|---|---|
| 53963 | 2-Acetylaminofluorene | 100 |
| 107028 | Acrolein | 100 |
| 79061 | Acrylamide | 10 |
| 79107 | Acrylic acid | 10 |
| 107131 | Acrylonitrile | 10 |
| 0 | Arsenic Compounds | 100 |
| 1332214 | Asbestos | 100 |
| 71432 | Benzene | 10 |
| 92875 | Benzidine | 1000 |

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* 1 ton = 453.6 kg.

| CAS Number | Pollutant | Weighting Factor |
|---|---|---|
| 0 | Beryllium compounds | 10 |
| 5428811 | Bis(chloromethyl)ether | 1000 |
| 106990 | 1,3-Butadiene | 10 |
| 0 | Cadmium compounds | 10 |
| 577492 | Chlordane | 100 |
| 532274 | 2-Chloroacetophenone | 100 |
| 107302 | Chloromethyl methyl ether | 10 |
| 0 | Chromium compounds | 100 |
| 0 | Coke oven emissions | 10 |
| 334883 | Diazomethane | 10 |
| 132649 | Dibenzofuran | 10 |
| 96128 | 1,2-Dibromo-3-chloropropane | 10 |
| 111444 | Dichloroethyl ether | 10 |
| 79447 | Dimethylcarbamoyl chloride | 100 |
| 122667 | 1,2-Diphenylhydrazine | 10 |
| 106934 | Ethylene dibromide | 10 |
| 75218 | Ethylene oxide | 10 |
| 151564 | Ethylenimine (aziridine) | 100 |
| 76448 | Heptachlor | 100 |
| 118741 | Hexachlorobenzene | 100 |
| 77474 | Hexachlorocyclopentadiene | 10 |
| 302012 | Hydrazine | 100 |
| 0 | Manganese compounds | 10 |
| 0 | Mercury compounds | 100 |
| 60344 | Methyl hydrazine | 10 |
| 624839 | Methyl isocyanate | 10 |
| 101688 | Methylene diphenyl diisocyanate (MDI) | 10 |
| 0 | Nickel compounds | 10 |
| 62759 | N-Nitrosodimethylamine | 100 |
| 684935 | N-Nitroso-N-methylurea | 1000 |
| 56382 | Parathion | 10 |
| 75445 | Phosgene | 10 |
| 7803512 | Phosphine | 10 |
| 7723140 | Phosphorus | 10 |
| 75558 | 1,2-Propyleninmine | 100 |
| 1746016 | 2,3,7,8-Tetrachlorodibenzo-p-dioxin | 100000 |
| 8001352 | Toxphene (chlorinated camphene) | 100 |
| 75014 | Vinyl chloride | 10 |

## Step 3: Select the Base Year

The base year selected must be 1987 or later; however, a base year of 1985 or 1986 may be approved if emission data for that year was submitted to the USEPA before 15 November 1990, pursuant to an official request for information. Moreover, the applicant must show that the selected base year is not "artificially or substantially greater than emissions in other years prior to implementation of emissions reduction measures" (EPA-450/3-91-013). Therefore, the applicant should compile and present emission data from previous years.

### *Key Point 1*

*Artificially or substantially* greater emissions means abnormally high emissions such as could be caused by equipment malfunctions, accidents, unusually high production or operating rates compared to historical rates, or other unusual circumstances.

### *Key Point 2*

*Malfunction* means any sudden failure of air pollution control equipment or process equipment or of a process to operate in a normal or usual manner. Failures caused entirely or in part by poor maintenance, careless operation, or any other preventable upset condition or preventable equipment breakdown shall not be considered malfunctions (McCoy 1993).

In addition, the emissions reported for base year and post-reduction conditions may not exceed allowable emission levels specified in any applicable law, regulation, or permit condition.

## Step 4: Calculate the Base Year Emissions

When calculating the base year emissions, the data must be in the form of an annual emission rate (tons per year) and can only include "actual emissions." Actual emissions are defined as:

> The *actual rate of emissions* of a pollutant, but does not include excess emissions from a malfunction, or startups and shutdowns associated with a malfunction. Actual emissions shall be calculated using the source's actual operating rates, and types of materials processed, stored, or combusted during the selected time period (EPA-450/3-91-013).

Although malfunctions will not be considered actual emissions, emissions resulting from failure of equipment due to poor maintenance or carelessness of operation will be considered as actual emissions. The total base year emissions of all HAPs from the source will be calculated by summing the data from the individual emission point(s) in the source.

## Step 5: Adjust Total Base Year Emissions if High-Risk HAPs Are Present

If traces of high-risk HAPs are present in a source's emissions, the applicant must account for their presence. The total base year emissions for the source can be adjusted by multiplying each HAP by the appropriate weighting factor (Table 1) and summing the results. Any changes to this table will be published in the *Federal Register*. All HAPs not included in the high-risk list are assigned a weighting factor of 1. (Table 2 is a sample table).

## Step 6: Demonstrate 90/95 Reduction in HAPs Emissions

After the base year emission data has been collected, the applicant must demonstrate that the post-control emission data show that HAP emissions have been reduced by 90/95 percent. For example, if a source emits 1000 tons of HAPs in the base year, then

**Table 2. Sample table of emission points with base year emissions calculated.**

| Description | Emission Point | Permit No. | HAP | CAS No. | Weighting Factor | Base Year Emissions (lb/yr) | Weighted Emissions |
|---|---|---|---|---|---|---|---|
| Air oxidation | PV-1 | NC2346R1 | Benzene | 71432 | 10 | 55.09 | 550.90 |
| Carbon dioxide vent | PV-2 | NC2258R4 | Ethylene Oxide | 75218 | 10 | 0.20 | 2.00 |
| Rail car loading | | NC2346R1 | Paraxylene | 106423 | 1 | 2.09 | 2.09 |
| Storage tank | S-1 | NC2346R1 | Ethylbenzene | 95476 | 1 | 4.01 | 4.01 |
| | S-1 | NC2346R1 | Methanol | 100414 | 1 | 15.92 | 15.92 |
| MC drying tower WW | WW-1 | | Methyl Chloride | 67561 | 1 | 108.50 | 108.5 |
| | WW-1 | | | 74873 | 1 | 39.40 | 39.40 |
| | | | | | Total | 225.21 | 722.82 |

it must reduce its emissions to 100 tons or less in the post-control year. Moreover, if the emissions were particulate HAPs, the reduction would have to be 95 percent; the emissions would have to be reduced to 50 tons or less in the post-control year.

The early reduction provisions in the CAA do not distinguish between reductions achieved voluntarily and those that result from other regulatory requirements. Therefore, HAP emission reductions required by State, local, and even Federal regulations qualify toward the early reduction goal if the reduction was achieved after the base year. To provide sufficient post-reduction information, the following should be submitted:

1. A description of all reductions and/or control measures used to achieve the required emission reduction for each emission point in the source.
2. Supply data of actual emissions of all HAPs from each emission point in the following employment of reduction measures.
3. Sums of individual emission data to calculate total post-reduction emissions of all HAPs.
4. Proof that reductions took place prior to proposal of an applicable HAP standard.
5. An accounting of all emissions increases within the plant site that are a result of emission reductions within the early reductions source.

## Step 7: If *High-Risk HAPs* Are Present in Emissions, Demonstrate a 90/95 Percent Reduction in Adjusted HAP Emissions

A source that emits high-risk HAPs is required to show a 90/95 percent reduction in total HAP emissions, and a second 90/95 percent reduction in total weighted emissions adjusted for high-risk pollutants (Table 3). The following equation demonstrates the percent reduction for total weighted emissions adjusted for high-risk pollutants:

$$\% \text{ Reduction} = \frac{\sum (M_i F_i) - \sum (MC_i F_i)}{\sum (M_i F_i)} \times 100 \qquad \text{[Eq 1]}$$

where:

$M_i$ = mass of base year emissions of pollutant i
$MC_i$ = mass of post-reduction emissions of pollutant i
$F_i$ = weighting factor for pollutant i.

The following example shows how to use Equation 1 to calculate the percent reduction of total weighted emissions under the conditions listed in Table 3.

Table 3. Sample conditions to calculate percent reduction of total weighted emissions.

| Source Emissions Data | Toluene and Benzene (Gaseous HAPs) |
|---|---|
| Base year emissions | 180 tpy of toluene<br>20 tpy of benzene |
| Base year total | 200 tpy |
| Post-reduction emissions | 4 tpy of benzene<br>16 tpy of toluene |
| Post-reduction total | 20 tpy (a 90 percent reduction in total emissions) |

Note that the source has achieved the required percent reduction of 90 percent for total emissions; however, the *total weighted emissions* are also required to meet the 90 percent reduction. Equation 1 is used to calculate the percent reduction for total weighted emissions:

$$\%\,\text{Reduction} = \frac{[(180\times 1)+(20\times 10)]-[(16\times 1)+(4\times 10)]}{[(180\times 1)+(20\times 10)]}\times 100 = 85\,\%\ \text{Reduction}$$

where:

10 = weighing factor for benzene

1 = weighing factor for toluene.

An 85 percent reduction does not demonstrate the necessary 90 percent reduction. In this case, the total post-reduction weighted emissions condition is not satisfied. As a result, the source must continue to reduce its emissions to achieve a 90 percent reduction. (Table 4 is a sample listing of post-reductions.)

## Step 8: If an Emission Point Is Emitting Both Gaseous and Particulate HAPs, Determine a Combined Target Percent Reduction for the Emission Point.

Sources may have emission points that emit both gaseous and particulate HAPs. For these emission points, a weighted-average percent reduction between 90 and 95 percent may be demonstrated. This is an alternative to demonstrating separate 90 and 95 percent reductions for gaseous and particulate HAPs. The following equation is used to calculate the percent reduction required for an emission point that emits both gaseous and particulate HAPs.

Table 4. Sample table of post-reduction emission levels.

| Description | Emission Point | CAS # | Base year Emissions (lbs/yr) | Weighted Emissions | Post-Reduction Emissions Levels of Base Year | Post-Reductions of Weighted Emissions |
|---|---|---|---|---|---|---|
| Air oxidation | PV-1 | 71432 | 55.09 | 550.9 | 6.21 | 54.59 |
| Carbon dioxide vent | PV-2 | 75218 | 0.20 | 2.00 | 0.04 | 0.80 |
| Rail car loading |  | 106423 | 2.09 | 2.09 | 0.59 | 0.76 |
| Storage tank | S-1 | 95476 | 4.01 | 20.80 | 0.2 | 1.80 |
|  | S-1 | 100414 | 15.92 | 15.92 | .95 | 1.64 |
| MC drying tower WW | WW-1 | 67561 | 108.50 | 108.50 | 8.85 | 9.51 |
|  | WW-1 | 74873 | 39.4 | 39.4 | 4.53 | 4.2 |
| Base year: 1988 |  |  | 225.21 | 739.61 | 21.37 | 73.3 |

Note: A 90 percent reduction in HAP emissions is demonstrated in both the base year emissions and the weighted emissions. The (hypothetical) numbers in the last two columns are the emission levels after making emission reductions.

$$\frac{0.9 \sum(M_g) + 0.95 \sum(M_p)}{\sum(M_g) + \sum(M_p)} \times 100 = \text{Required \% Reduction} \qquad \text{[Eq 2]}$$

where:

$M_g$ = the base year mass rate of each gaseous HAP (e.g., kg/yr)
$M_p$ = the base year mass rate of each particulate HAP.

Note that the same required percent reduction calculated will be used for total post-reduction emissions and weighted post-reduction emissions.

## Step 9: Provide Information on the Source Testing Method

The USEPA will generally assume that both base-year and post-reduction data is collected through validated methods of source testing. A validated method is a measurement methodology with a demonstrated precision and bias over the measured concentration of the source's emission. Basis for base year emission estimates must be shown in the application (Table 5). The main validated methods used are:

1. USEPA reference method
2. USEPA conditional method
3. A test method validated by USEPA Method 301
4. Calculations based on engineering principles, emission factors, etc.

A list of validated methods can be obtained from:

Emission Measurement Technical Information Center (MD-19)
U.S. Environmental Protection Agency
Research Triangle Park
North Carolina 27711

However, circumstances may occur where data must be established through methods other than source tests. Calculations based on engineering principles, emission factors, or material balances may be used instead of source tests in such cases, specifically where:

1. There is a lack of a source test method.
2. It is economically or technically infeasible to perform source tests.
3. Calculations are as accurate as source tests.
4. Emissions from an emission point of a source are small compared to the total amount of emissions, i.e., an estimate of the small emission will not have a significant impact.

**Table 5. Sample table: basis for base year emission estimates.**

| Description | Vent ID No. | HAP | Basis | Reason for Not Testing* |
|---|---|---|---|---|
| Air oxidation | PV-1 | Benzene | EPA Methods 2&18 | |
| Carbon dioxide vent | PV-2 | Ethylene Oxide | SCG632-81/calcs | 3,5 |
| Rail car loading | L-1 | Paraxylene | EPA-450/3-91-012a | 3 |
| Storage tank | S-1 | Xylene/Ethylbenzene | EPA-450/3-91-012a | 3 |
| Wastewater | WW-1 | Methanol | EPA-Method 25D/18 | |
| | | Methyl Chloride | EPA-Method 25D/18 | |

* 1 = No applicable EPA reference method
2 = Not technically or economically feasible
3 = Calculation provides comparable accuracy
4 = Base year conditions no longer exist
5 = Emissions small compared to total

5. Base year conditions (applicable to base year) no longer exist and emission data cannot be produced by performing source tests under current conditions and converting test results to reflect base year conditions more accurately than a calculation procedure.

To summarize, information regarding source testing methods for base year emissions and post-reduction emissions should include the supporting basis for each emission number for each emission point:

- For *source test results* submitted as the supporting basis, a description of the test protocol followed, any problems encountered during the testing, and a discussion of the validity of the method for measuring the subject emissions.

- For *calculations* based on emission factors, material balance, or engineering principles and submitted as the supporting basis, a step-by-step description of the calculations, including assumptions used, and a brief rationale for the validity of the calculation method used . . . (EPA-450/3-91-013).

In summary, to demonstrate early reduction, five main sets of information must be provided:

1. Source identifying information
2. Base year emissions
3. Post-reduction emissions
4. Calculations to show that a 90 /95 percent reduction in HAP emissions has been achieved
5. Source testing information.

## Step 10: Submit an Application

Application for a compliance extension will be in the form of a permit application. Most of the time, an application must be submitted before proposal of an applicable HAP standard. Exceptions may be made to this rule in the case of:

- Sources that previously made an enforceable commitment, where the permit application must be received no later than 1 December 1993 (which may be after proposal of an applicable standard.

- Sources which have achieved reductions prior to proposal of an applicable Section 112(d) standard but which are unable to submit a permit application before proposal because a Federal permit program has not been established and the State does not have a permit program approved pursuant to Title V of the CAA (EPA-450/3-91-013).

Due to these exceptions, the deadline for submitting an application has been defined as the later of the following dates:

- The date of proposal of an applicable standard
- 120 days after promulgation* of Part 71 regulations or 120 days after approval of a State permit program under Title V of the CAA, whichever occurs first.

In addition to submitting an application, the appropriate USEPA Regional Office should be notified about the applicants intent to submit a permit application for the early reductions demonstration. This is done so the USEPA can notify the applicant of any pertinent information.

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* "Promulgation" is literally defined as the date that the USEPA administrator signs a final rule. However, in practice (and as the term is used in this report), it refers to the date the USEPA publishes a final rule in the Federal Register.

# 3 Summary

This study has provided a step-by-step process for submitting an early reductions application or an enforceable commitment to help Army installation personnel successfully implement the Early Reductions Program. These instructions focus on the basic process to be followed and information to be included to qualify for a compliance extension. The USEPA recognizes that there are multiple ways of showing that hazardous air pollutants have been controlled; therefore, this document does not provide all the specifics needed for every particular situation.

# References

40 CFR 61 *National Emissions Standards for Hazardous Air Pollutants.*

*Enabling Document for Regulations Governing Compliance Extensions for Early Reductions of Hazardous Air Pollutants*, EPA-450/3-91-013 (U.S. Environmental Protection Agency [USEPA], Office of Air Quality, Planning, and Standards, July 1991).

McCoy and Associates, Inc., "Regulations Finally Promulgated For HAP Early Reduction Compliance Extensions," *Air Pollution Consultant* (March/April 1993).

PL 101-549, 104 stat 2399, referred to here as the *Clean Act Amendments of 1990 (CAAA-90).*

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