

# **Hazardous Air Pollution Prevention (HAP2) Project Final Report to EPA**

**NESCAUM and NEWMOA  
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For the past three years the Northeast Waste Management Officials' Association (NEWMOA) and the Northeast States for Coordinated Air Use Management (NESCAUM) have been working cooperatively on a project to incorporate pollution prevention (P2) into compliance with the national emission standards for hazardous air pollution (NESHAP) control requirements of the Clean Air Act Amendments (CAAA). The hazardous air pollution prevention (HAP2) project is funded by a grant from the U.S. Environmental Protection Agency's (EPA) Environmental Technology Initiative (ETI) program. The goals of the project are to:

- C encourage collaboration of state and federal officials across media programs,
- C reduce regulatory barriers to innovative P2 technologies that control HAP emissions, and
- C promote the markets for technically feasible and cost-effective P2 technologies.

The purpose of this report is to present to EPA the findings of the HAP2 project. Many of the findings present the Northeast states<sup>1</sup> perspective on the limitations of the Title III program, including barriers to P2. The report also contains recommendations to EPA from the Northeast states on the activities EPA should consider to promote P2 in the Title III program. The report begins with a summary of the HAP2 project activities undertaken to meet the project goals. This summary is followed by a discussion of the various regulatory and institutional barriers to P2 that the project participants have identified. These barriers are divided into the following five categories:

- C Limited HAP Emission Reductions in the Northeast,
- C Lack of P2 Focus in the EPA NESHAP Development Process,
- C Inadequate Support of P2 in NESHAP Implementation
- C Difficulties of Integrating MACT with Other Regulatory Programs,
- C Disincentives Created by the Once In, Always In Policy, and
- C Limited Communication Between Air and P2 Programs.

The report also makes recommendations to EPA on methods to reduce each of the identified barriers.

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<sup>1</sup> The Northeast includes the following states: Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island, and Vermont.

## HAP2 Project Summary

The HAP2 project objectives have been met through two primary efforts. First, to encourage collaboration across media programs, the HAP2 project established a standing workgroup that consists of representatives of the pollution prevention and air toxics programs of the Northeastern states. At present, 21 state staff participate in the HAP2 Workgroup. A list of current members of the HAP2 Workgroup is included as Appendix A to this report. In addition to correspondence via conference calls and e-mail, the HAP2 Workgroup has held four meetings: February 1996, November 1996, December 1997, and July 1998. The notes from each of these meetings is included in Appendix B to this report. The HAP2 Workgroup also sponsored a workshop in July 1997, *Integrating Pollution Prevention into Title V Permitting* that was open to all state staff in addition to the HAP2 Workgroup.

The HAP2 project established an Internet listserv, called AirList to promote the sharing of information about the various issues surrounding implementation of the Title III program, including the promotion of a P2 compliance approach. Over 50 state and EPA Region I and II personnel from the air and P2 programs are members of AirList. In addition, the HAP2 project has worked closely with EPA to educate the Northeast states about EPA's Pollution Prevention In [Title V air] Permitting Project (P4) reinvention effort. EPA held a two-day training event for state air permitting personnel in Avon, Connecticut in December 1998.

The second major project effort, production of industry-specific Clean Air Act and Pollution Prevention Opportunities manuals for use by states and industry in the permitting process, was undertaken to meet the goals of reducing regulatory barriers to and promoting markets for P2 technologies. The industry sectors were chosen by the HAP2 Workgroup, and the HAP2 Workgroup was involved in the development and distribution of the manuals, which encouraged collaboration across the participating programs.

### **Identifying Target Sectors**

The project examined TRI data to develop a preliminary list of the individual facilities in each Northeast state in each sector for which a NESHAP would be developed. Using this data to inform the process, the project surveyed the states to determine the sectors of most interest to each state. The results of the state survey were presented at the first HAP2 Workgroup meeting in February 1996, and the HAP2 Workgroup chose three industries for the project to concentrate on: wood furniture, pharmaceuticals, and paper production. The industries were chosen for three reasons: 1) EPA was in the process of developing a NESHAP for the industry (or had just promulgated the NESHAP in the case of wood furniture), 2) pollution prevention was feasible for the industry, and 3) the industry was of interest to four or more of the NEWMOA/NESCAUM member states.

Once the industry sectors were chosen, the project began monitoring EPA's NESHAP development process for the three chosen sectors, paying particular attention to opportunities to

promote P2 in the regulation. When appropriate, the HAP2 Workgroup prepared and submitted comments to EPA from a P2 perspective.

On April 1, 1996 the project sent comments to EPA on their proposed maximum available control technology (MACT) for the paper-making process. These comments are attached as Appendix C to this report. EPA subsequently decided not to regulate paper production, so this industry was no longer appropriate for the project. Fortunately, the project had not begun an in-depth investigation of paper production before EPA made this decision. The HAP2 Workgroup decided to replace paper production with the paper and other web coating source category. The paper and other web coating source category covers many different industry sectors and the HAP2 Workgroup chose to concentrate on the pressure sensitive tapes and labels production process.

In the Fall of 1996 the project began investigating pollution sources and P2 options for the pharmaceutical industry. In May 1997 the HAP2 workgroup decided that the pharmaceutical industry was not appropriate for the project for several reasons:

- pharmaceutical production facilities with significant HAP emissions are located mainly in two Northeast states, with a third state having just two major sources, and therefore overall Northeast state interest was not high;
- the pharmaceutical industry is dominated by large sophisticated companies that were not likely to benefit from the project;
- pharmaceutical formulations and manufacturing processes are highly proprietary, and therefore useful information was difficult to obtain; and
- the manufacture of pharmaceutical products is also regulated by the Food and Drug Administration (FDA). Any changes to the production process, such as substitution of carrier solvents, requires approval from the FDA. Manufacturers reported that they were not likely to alter an already approved and operational process.

However, because a significant amount of effort was invested in researching the pharmaceutical sector, the project prepared comments on the proposed NESHAP for the pharmaceutical industry that were sent to EPA on July 1, 1997. These comments are included as Appendix D to this report. The HAP2 Workgroup was not able to find another NESHAP source category of interest to the Northeast states as a group.

Therefore, manuals were developed for the wood furniture and pressure sensitive tapes and labels industries. The manuals were developed with input from state and EPA staff, as well as industry and vendor representatives. *Wood Furniture: The Clean Air Act and Pollution Prevention Opportunities* was published in September 1997. Over 600 copies were distributed to the state P2 and air programs, and affected industry facilities in the Northeast states, as well as facilities and assistance personnel in other states, and in the EPA. As a direct result of the HAP2 project focus on wood furniture, several Northeast states have developed outreach programs for the facilities in their states. In addition, EPA Region I held a wood coating technology fair in November 1998 to promote new, less polluting technologies and is developing an educational video. The HAP2 project manager has given numerous presentations to state, EPA, and industry

on pollution prevention technologies for the wood furniture industry and will appear in the EPA video.

The manual for the pressure sensitive tapes and labels production will be published after December 1998, so its impact is unknown at this time. However, the HAP2 project has consulted with EPA on its development of the paper and other web coating NESHAP in an effort to promote P2 in the regulation. The Northeast states expressed their concerns about the NESHAP development process to EPA in a letter sent on September 4, 1998. A copy of this letter is included as Appendix E to this report.

In the process of developing expertise in the air emissions, regulations, and P2 opportunities for wood furniture and pressure sensitive tapes and labels manufacturers, the project gained insights into several institutional barriers to P2. The rest of this report focuses on these issues by describing the problems and presenting several recommendations to address them.

## Limited HAP Emission Reductions in the Northeast

Issue: Small Number of Affected Sources As discussed in the previous section, the HAP2 Workgroup was unable to determine a third NESHAP industry category that is of interest to a number of states in the Northeast. This inability to find a third industry appropriate for the project highlights a fundamental problem with implementation of the NESHAP program in the Northeast - the universe of sources subject to NESHAP regulations is relatively small, with many Northeast states having only one or two major sources, if any in a particular NESHAP source category. With only a few affected facilities, HAP emission reductions achieved through the NESHAP program in the Northeast are expected to be minimal.

The relatively small number of affected sources is due to three main factors:

1. The emission thresholds associated with the applicability of the majority of NESHAPs is high (e.g., 10 tons of one HAP or 25 tons of a combination of HAPs).
2. The definition of potential to emit allows sources to obtain a permit to cap their actual emissions below major source thresholds and become a "synthetic minor" source that is exempt from the NESHAP. The potential emissions of a synthetic minor source can be significantly higher than their capped actual emissions. Allowing sources to cap actual emissions at 9.9 tons per year of one HAP and 24.9 tons per year of a combination of HAPs gives many sources an ample margin for expanded production without exceeding the cap. These "synthetic minor" sources have little incentive to explore alternative less-polluting technologies, since they have already avoided all NESHAP requirements.
3. Since the late 1970's the Northeast states have had strong ozone control programs requiring significant VOC reductions. Many VOCs are also HAPs, and therefore many HAP sources have been regulated in the Northeast for many years.

Because the universe of sources subject to the MACT specified in the NESHAPs is generally limited to those with high actual emissions, and because the Northeast states have aggressively regulated these large sources on their own for the past decade or more, the MACT program will not produce significant emission reductions for many source categories in the Northeast states.

Many of the MACT standards are based on the state-of-the-art technologies installed by companies in the Northeast to comply with state-specific VOC control and/or air toxics rules. However, there are some significant exceptions. The MACT standards for some sources, for example the hazardous organic NESHAP (HON) and halogenated solvent cleaner standards, are stricter than the previous rules in some Northeast states, and therefore will promote emission reductions for those source categories in the region.

The MACT program provides a mechanism for states to address emissions from existing sources. The Northeast states support this aspect of the Title III program because all previous federal air program efforts gave states authority to regulate new sources of air emissions only. However, the definition of a new source has included additions to existing production capacity and major reconstruction of existing production, such as would occur during equipment modernization. Therefore, many existing sources have been at least partially regulated in the past.

Recommendations: EPA should increase the opportunities for HAP emission reductions through four efforts:

1. To increase emission reductions in states that do not have risk-based air toxics programs, EPA should develop a facility-specific risk-based program under 112(f) to evaluate residual risk after MACT implementation. The facility-specific program should set standards for use by states that do not have an existing risk-based program, but yet be flexible enough so that existing state air toxics programs that meet acceptable criteria can continue without substantial alteration.
2. Many of the Northeast states have air toxics control programs that are based on the public health risk posed by HAP emissions at specific facilities. These state air toxics control programs address HAP emissions from a much larger number of sources than the MACT program because the emission limits are typically pollutant-specific and toxicity-based, rather than dependent on the facility's potential to emit. The EPA should support the greater HAP emission reductions achieved by these existing state air toxics programs by developing a more efficient, feasible, and streamlined program for equivalency determination under 112(l).
3. To encourage facilities to limit actual HAP emissions, EPA should allow sources out of MACT and Title V, without having to go through the synthetic minor permitting process, if their actual emissions are less than 50 percent of the applicability threshold, even if potential emissions are above the threshold. The 50 percent exemption is current EPA policy and should remain so, or be codified in a rulemaking.
4. EPA should not exempt area/minor New Source Performance Standards (NSPS) sources from requiring Title V permits. EPA should continue to defer Title V permitting of area/minor NSPS sources until states issue Title V permits for major sources. At that time EPA should evaluate the benefits of requiring Title V permits for minor sources.

In addition, EPA should promote the use of P2 by implementing the various recommendations made in the remainder of this report. Generally, P2 will decrease the use of HAPs, thereby reducing the generation of fugitive emissions and often overall emissions as well.

Issue: Significant State Resources Required for NESHAP Implementation For the reasons outlined above, the MACT program will not necessarily promote significant emission reductions in most

source categories in the Northeast states. Therefore, the amount of state resources required to implement the MACT program as it is currently designed does not appear to be an efficient use of increasingly scarce funds. Significant state resources have been expended by the air and P2 programs to understand the new NESHAP requirements, develop implementation materials, and conduct outreach to the affected industry. This level of effort is required even when the state has just one or two affected sources. In addition, the MACT program requires that sources collect, and states receive and review extensive monitoring, recordkeeping, and reporting documents. Many of the Northeast's smaller states believe that inspecting the limited number of regulated sources would be a more efficient use of their resources, rather than reviewing their documentation. The larger states also face increases in recordkeeping and reporting requirements associated with the MACT program and this takes away from more potentially productive uses of their staff time.

Several of the industry sectors that are regulated by the NESHAP program are also subject to other federal air requirements. For instance, gasoline terminals could be subject to Part 63 Subpart R, Part 60 Subparts k, Ka, Kb, and XX, as well as state regulations based on the federal control techniques guidance (CTG). Essentially, each of these rules requires the facilities to undertake similar activities; however, the details differ among these regulations. Monitoring, recordkeeping, and reporting requirements are often slightly different in each of the rules, causing a duplication of effort at both the states and the facilities. States and facilities have to expend a significant amount of time and effort to determine exactly what a given facility is supposed to do to comply with these differing regulatory provisions.

As mentioned above, most of the Northeast states have state air toxics control programs which are designed to protect public health through enforcement of toxicity-based emission limitations for the various HAPs. The state air toxics control programs assess facilities individually and consider characteristics specific to each facility. MACT program implementation does not coordinate well with these established state air toxics programs because the air toxic programs tend to be facility-specific and health-based, whereas the MACT program is technology-based. The Northeast states are concerned that the benefits of state air toxics programs may diminish or disappear with implementation of the MACT program. The existence of the MACT program has created an atmosphere in many of the Northeast states where the air toxics program needs to be defended against charges of duplicating the federal program.

Recommendations: EPA should better coordinate the various air regulations affecting an industry source category so that a single set of monitoring, recordkeeping, and reporting requirements are mandated. In addition, EPA should coordinate with other federal agencies that also require recordkeeping and reporting for an industry sector, such as the FDA for the pharmaceutical industry, to reduce duplicative or conflicting requirements. These coordination efforts could greatly reduce the burden placed on both states and industry.

As discussed above, the state air toxics control programs promote greater HAP reductions than the MACT program, mainly due to the greater number of affected sources and the toxicity-based emission limits. Therefore, EPA should provide an efficient mechanism under 112(l) for state air toxic control programs to be considered equivalent to the federal MACT program. This would

relieve the states of many of the additional burdens imposed by the MACT program while ensuring that HAP reductions meet or exceed those that would be achieved by the MACT program alone.

In addition, EPA should issue a statement affirming that the Title III program is not intended to supersede efforts made by the states to protect public health, and its purpose is to strengthen state efforts, especially in those states that do not have existing air toxics programs. EPA should emphasize that the MACT program does not evaluate risk to public health until after MACT implementation through 112(f). Therefore, state air toxic control programs based on public health risk are a valuable complement to the MACT program and are better capable of addressing local public health risks from facility HAP emissions, particularly emissions from those facilities not subject to a NESHAP requirement.

## Lack of P2 Focus in the EPA NESHAP Development Process

Issue: MACT Determination When EPA develops a NESHAP, it surveys the industry to determine the types of control technologies currently in use and the level of control achieved by sources. EPA then sets MACT, at a minimum as control equivalent to the average of those used by the most tightly controlled 12 percent of facilities. Facilities that utilize less-polluting alternatives and are not in the regulatory system (because they do not meet the emission threshold) might not be included in the survey. In addition, those sources that are surveyed and use alternative technologies are considered as having zero percent control if their process has such low emissions that a control technology is not required. Therefore, in effect, the use of alternative technologies is not included in determining the most tightly controlled 12 percent of facilities. EPA does not calculate the equivalent level of control achieved by the alternative technology when compared to a representative traditional process. By not including alternative technologies in the determination of MACT, EPA might set MACT at a more lenient level than is actually possible and might overestimate the cost of compliance.

Furthermore, MACT represents the control technology utilized at the time when EPA conducts its survey. However, technology constantly evolves. Alternative technologies that were not available when the MACT was set might become feasible afterward. However, MACT does not change to incorporate such technology advances. A facility has little incentive to evaluate and adopt new alternative technologies because they are in compliance with MACT using the old technology. As a result, both pollution prevention and control technology innovation might be slowed as a result of MACT because there is little demand for change.

Recommendations: EPA should include alternative technologies in its determination of MACT. Building P2 into the MACT on the front-end should be easier and more efficient than including a stand alone P2 option as an after thought. EPA could calculate the equivalent level of control achieved by the alternative technology when compared to a representative traditional process and use this percent control in its determination of the most tightly controlled 12 percent of facilities. Communications with industry and the states should enable EPA to develop an agreeable “representative” traditional process upon which to base the comparison. EPA should actively seek companies that are using alternative technologies to include in its MACT determination. In addition to surveying states (including both air and P2 programs) to find out about companies using alternative technologies, the Section 114 Information Request packages should be modified to

solicit useful information about technologies that do not rely on active controls to achieve emission reductions. Finally, EPA should alter its “Once In, Always In” policy, as discussed below, to encourage facilities to continuously evaluate alternative technologies.

## Inadequate Support of P2 in NESHAP Implementation

Issue: Difficult to Understand Alternative Compliance Methods When a NESHAP contains regulatory provisions that do not rely on the use of an active control technology, the compliance method is often not clear and can be confusing to both industry and states regulators. Industry and regulators tend to be more familiar with control technology approaches. Further, the alternative (P2) option often contains burdensome administrative requirements. Therefore, the P2 option in a NESHAP tends to be underutilized. For example, the emissions averaging provision in the hazardous organic NESHAP (HON) could promote pollution prevention. However, sources report that they have found that the recordkeeping and reporting requirements are complex and onerous, and therefore do not use the option.

Recommendations: EPA should strive to develop MACT based on cost effective prevention-oriented alternative technology whenever possible. This is particularly important for industry sectors where alternative technologies are currently not widely used, but are newly available when the NESHAP is being developed, because under the current process MACT would be based on the active control technologies if they are widely used, or on no control if they are not.

EPA should ensure that an understandable P2 option is included in each MACT standard. The monitoring, recordkeeping, and reporting burdens for the P2 option in each MACT should not be any more complex than for other compliance methods, and ideally should be less burdensome. EPA should state its preference for compliance through the P2 option in the preamble to the regulation. EPA should develop implementation guidance specifically for the P2 option and reiterate the preference for P2 throughout all implementation guidance that is developed.

Issue: Coating Facilities’ Emissions Can Increase The way MACT is expressed in most coating NESHAPs - percent control or pounds of HAP per pound of solids - does not ensure that emission reductions are achieved at a particular facility. In fact, if production increases, emissions can increase since there is no limit on the total amount of HAP that can be emitted. In theory, under MACT a facility applying coatings can increase the number of coatings applied to a single item, increasing emissions on a per-product basis.

Recommendations: MACT combined with an overall emissions limit on a facility-specific basis would ensure that emissions do not increase over time. An emissions cap, otherwise known as a plantwide applicability limit (PAL) can promote P2 when production needs increase. To stay below permitted emission levels, the facility must alter its production process in order to increase production. Although it may not be feasible to incorporate provisions for an emissions cap in a MACT standard, EPA could develop policy and guidance for the states to help them consider and implement PALs on a source-by-source basis. To accomplish this, EPA should include methods to address HAPs in the Pollution Prevention in Permitting Program (P4) initiative. EPA should then expand the utilization of P4 permits through an aggressive training program targeting state Title V permitting programs followed by ongoing EPA support of state P4 efforts.

## Difficulties Integrating MACT With Other Regulatory Programs

Issue: MACT Does Not Consider Other Environmental Impacts Pollution prevention approaches can have substantial “other” non-HAP benefits that are not considered when MACT is determined. Currently, EPA does not weigh these impacts in its evaluation of control and P2 options for MACT. Control technologies generate wastes that are regulated under other EPA programs. For example, incineration generates NO<sub>x</sub> and CO - air pollutants that are regulated under Title I. In addition, combustion generates CO<sub>2</sub>, a “greenhouse gas” whose emissions will likely be regulated in the future. Carbon adsorption generates significant quantities of hazardous waste and/or wastewater. In addition, all control technologies require energy to operate and utilities themselves are a major source of air pollution. Finally, there are workplace safety concerns and the increased risk of accidental release to the environment when hazardous chemicals are used. Once a facility purchases and installs pollution control equipment, that sunk cost creates a disincentive to examine alternative, less-polluting chemicals and/or technologies.

Recommendations: EPA should develop a holistic view of all the various federal requirements affecting a given industry sector to ensure that regulations developed under Title III do not increase emissions and wastes covered by other programs. Often, pollution prevention approaches will emerge as the most appropriate compliance option when multi-chemical, multi-media effects are evaluated. EPA should make sure that MACT is developed such that P2 and recycling methods, already available when the NESHAP is developed can meet the MACT. For example, solvent recovery can have many benefits when compared to incineration if all these issues are considered when evaluating these options. However, solvent recovery often cannot meet the high control level of incineration and therefore may not meet MACT if MACT is developed purely based on HAP emission reduction.

EPA should review the CAAA language to see if alternative interpretations can be made to enable consideration of non-HAP emissions and wastes when setting MACT. If EPA concludes that they cannot consider secondary impacts when MACT determinations are made, EPA has already developed a model for how to consider these issues during rule implementation: the environmentally beneficial provision in the best available control technology (BACT) determination process. EPA should allow states, with EPA approval to consider impacts on the generation of other regulated wastes and energy consumption when writing Title V permits that include a MACT standard just as they can when the source is not covered by MACT.

Consideration of other emissions and media can raise concerns that the effectiveness of the MACT program to protect public health would be reduced. However, if EPA develops a facility-specific residual risk program under 112(f), public health concerns should be adequately addressed.

## Disincentives Created by the Once In, Always In Policy

Issue: Disincentive to Investigate Alternative Technologies EPA has a policy that once a source is subject to MACT, it is always subject to MACT, no matter how the facility alters its operations in the future (short of ceasing production of the regulated product). Generally, the regulations under a NESHAP require significant amounts of monitoring, recordkeeping, and reporting activities. The

requirement that a facility must maintain this high level of effort, regardless of emission levels, is a disincentive for facilities to evaluate alternative technologies after the compliance date has passed.

Admittedly, this policy provides an incentive to adopt pollution prevention technologies prior to the compliance date. However, this incentive would be even greater if the “synthetic minor” caps were not available. In many cases suitable alternative technologies are not available prior to the compliance date. As mentioned previously, technology is constantly evolving and appropriate alternatives can be developed well after the compliance date. Of course, nothing prevents a source from implementing P2 after the compliance date. However, once a facility purchases and installs pollution control equipment, that sunk cost creates a disincentive to examine production with alternative, less-polluting chemicals and/or technologies. In addition, once a facility receives permits for the use of active control devices, they are usually reluctant to change a manufacturing process and have to go through the permitting process again.

Recommendations: Facilities that are able to reduce *potential* emissions to levels substantially below major source thresholds (i.e., below 2 tons of a single HAP or 5 tons of a combination of HAPs) *without the use of a control technology* should be exempted from NESHAP requirements, even if the reductions occur after the compliance date. As previously stated, technological advances can occur after the compliance date for a particular NESHAP. Therefore, facilities may not have implemented the new technology (and subsequently reduce emissions below major source levels) prior to the compliance date. Reducing monitoring, recordkeeping, and reporting burdens can be a strong motivator for companies to implement alternative technologies, second only to financial benefits in most surveys. Providing a P2 exemption to the “Once in, Always in” policy could provide an incentive for companies to continuously investigate the feasibility of P2 technologies, even after the compliance date has passed. Alteration of this policy will also ensure that demand for change continues beyond the compliance date and stimulates technological advances.

Some states have enforceability concerns regarding altering the “once in, always in” policy. However, emission reductions achieved through the use of P2 technologies are typically permanent and non-reversible. When a facility retrofits its plant and trains its employees to implement a new technology, it is not likely to revert back to an old method of production. When exempting a facility from the MACT program, states could require facilities to notify them when production changes occur that have the potential to increase emissions. Another consideration is that active control technologies do not *consistently* perform at high levels, and therefore, actual emissions can be higher over time than those specified by the MACT. Emission reductions created by P2 technologies are constant and verifiable upon inspection. Inspections are also the only way to ensure that facilities using active control technologies are not exceeding their permitted emission levels.

For facilities that cannot lower emissions enough to get completely out of MACT, EPA, and the states should provide other incentives for companies to implement P2 after the compliance date. Examples of incentives include a lower monitoring, recordkeeping, and reporting burden, expedited processing of permits, and lower permit fees.

## Limited Coordination of Air and P2 Program Activities

Issues: Coordination of Air and P2 Program Activities Generally, in the Northeast states and at EPA the air quality programs have not actively coordinated their efforts with the P2 programs. In the Northeast states, air programs informally educate P2 staff on regulatory requirements as needed, and state air staff have spoken at outreach workshops organized by the P2 programs. However, the air quality programs have not utilized the technical resources of the P2 programs to any significant extent. Publications developed by air programs for distribution to industry (e.g. fact sheets, permit packages, guidance documents) are rarely developed in consultation with P2 programs, and therefore often do not contain the up-front information about P2 options and resources that would actively encourage P2. Air programs rarely undertake planning efforts in conjunction with the P2 program so that the P2 program can gain expertise in sectors of importance to the air program.

Recommendations: P2 can lower the resource burden imposed on state air programs by the MACT program by getting as many sources out of the program as possible prior to the compliance date. For example, in Colorado all five of their halogenated solvent degreaser sources were able to substitute non-regulated solvents before the compliance date, so the state does not have to implement the rule, develop guidance materials, or write permits for that sector.

EPA should facilitate an improvement in communications between the P2 and air quality programs within EPA, and within and among the states. There are several areas where EPA support of states would enable the up-front resources necessary to integrate pollution prevention into state quality air programs. Many of these recommendations could also apply to EPA.

- C Air quality programs should promote greater involvement of the P2 program personnel in air program outreach planning, including development of fact sheets, brochures, implementation materials, permit packages, and cover letters.
- C Air programs should take better advantage of the P2 program technical resources. For example, P2 programs can access a vast network of P2 professionals throughout the U.S. (and beyond) to obtain appropriate information on innovative technologies. P2 programs should be consulted as early as possible in the permitting process.
- C The Air and P2 programs should undertake joint planning to target an industry of concern to the air program (e.g. a new MACT standard industry) and stimulate the P2 program to gain expertise in sectors of importance to the air program.
- C The Small Business Assistance Programs established by the Clean Air Act should coordinate with the P2 program to ensure that P2 is the foremost compliance message distributed to facilities. In addition, air and P2 programs should coordinate with Small Business Development Centers to help them understand the benefits of P2 so they can distribute that message to the businesses they assist.
- C For P2 to be most effective facilities need to consider alternative technologies before new production lines and/or facilities are designed with control technologies. Therefore, air and P2

programs could collaborate with state economic development and local building departments to distribute P2 information to help ensure that P2 is evaluated up-front by businesses locating and/or expanding operations in the state.

- C Title V permits issued by the air programs require renewal every five years. Other air permits also require periodic renewal. P2 and air programs should work together to develop a system whereby the P2 program is notified of the companies whose permits are up for renewal approximately 18 months in advance of the renewal date. With such notification, the P2 program could research P2 for the industry category, contact individual facilities to offer P2 assistance, and advise the air programs on appropriate technologies and permit conditions to promote P2.

## Summary

Through the HAP2 project, the Northeast states have been investigating the Title III program to determine barriers to P2 and also to develop ideas for promoting P2. The findings of the HAP2 Workgroup are presented in this report. The Northeast states would appreciate the opportunity to enter into a dialogue with EPA to discuss the various issues raised and the recommendations presented in this final project report.