

**Testimony of
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on behalf of the
State and Territorial Air Pollution Program Administrators (STAPPA)
and the
Association of Local Air Pollution Control Officials (ALAPCO)
on Clean Air Act Implementation:
Experience of State and Local Regulators
before the
House Energy and Commerce Committee
Subcommittee on Energy and Air Quality**

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Good afternoon, Mr. Chairman and members of the Subcommittee. I am Arthur Williams, Director of the Air Pollution Control District of Jefferson County, Kentucky. I am testifying today on behalf of STAPPA – the State and Territorial Air Pollution Program Administrators – and ALAPCO – the Association of Local Air Pollution Control Officials, of which I currently serve as Immediate Past President. STAPPA and ALAPCO are the national associations of air quality officials in 54 states and territories and over 165 major metropolitan areas across the country. The members of STAPPA and ALAPCO have primary responsibility under the Clean Air Act for implementing our nation’s air pollution control laws and regulations and, moreover, for achieving and sustaining clean, healthful air for our citizens. Accordingly, we are pleased to have this opportunity to provide our perspectives regarding implementation of the Clean Air Act.

On November 15, 1990, when President Bush signed into law the Clean Air Act Amendments of 1990, he put in place a precedent-setting statute that completely revamped our nation’s approach to improving air quality and declared it a “true red-letter day for all Americans.” At the time, STAPPA and ALAPCO endorsed the statute as an

earnest commitment to environmental protection and believed that the comprehensive air pollution control strategy established in the Act provided state and local regulators with the tools we needed to make meaningful strides toward achieving our clean air goals. Eleven and a half years later, our associations believe our assessment was accurate and that the Act has served as the firm foundation for many success stories over the past decade.

Prior to the 1990 amendments, our country spent decades struggling with a ubiquitous, perilous and seemingly unrelenting air pollution problem. About 100 areas across the country, home to about 130 million people, exceeded the national health-based standard for ozone; over 40 areas, with a combined population of over 55 million, violated the standard for carbon monoxide; 85 areas, in which 25 million people resided, violated the coarse particulate matter (PM₁₀) standard; billions of pounds of toxic chemicals were emitted into our air every year; millions of tons of sulfur dioxide (SO₂) emissions contributed to acid rain; and our production of ozone-depleting substances was leading us directly toward devastating damage to our stratospheric ozone layer.

Clearly, we were in need of a fresh start and a clear direction and we got them. The 1990 amendments homed in on the crux of our air pollution problems and framed a comprehensive strategy for attaining the health-based National Ambient Air Quality Standards (NAAQS), cleaning up mobile sources and their fuels, decreasing toxic air pollution, reducing acid rain and protecting the stratospheric ozone layer. As a result, Americans today are breathing cleaner air and reaping the benefits of a cleaner environment.

More than two-thirds of the cities that in 1990 violated health-based national standards for at least one of the six criteria pollutants now comply with those standards; about 1.5 million tons of industrial toxic air pollutants are expected to be eliminated annually due to rules issued since 1990; rainfall in the eastern United States is 25 percent less acidic, due to reductions in SO₂ emissions on the order of 6.7 million tons per year; and we have stopped production in the U.S. of the most harmful ozone-depleting substances. What is more, we have achieved these milestones while, at the same time, experiencing strong economic growth. In fact, since 1970, when the first Clean Air Act was enacted, Gross Domestic Product has increased by 158 percent, vehicle miles traveled by 143 percent, energy consumption by 45 percent and U.S. population by 36 percent. Further, it is estimated that by 2010, implementation of the Clean Air Act will prevent 23,000 incidences of premature mortality, 67,000 cases of acute and chronic bronchitis, 1.7 million asthma attacks, 4.1 million lost work days and 31 million days on which activity is restricted.

Notwithstanding this impressive progress associated with implementation of the Clean Air Act – progress that federal, state and local governments have achieved together – our nation continues to face air quality and public health challenges of substantial proportions. In addition, while we continue to maintain that the Clean Air Act, in general, offers a solid and viable framework for our efforts, the benefit of almost 12 years of hindsight allows us to pinpoint those aspects of the statute and the national clean air program that we believe can be improved or augmented. I would like to elaborate on

several of the key challenges that remain and a few areas where enhancements can be made.

Fine Particulate Matter and Eight-Hour Ozone Standards

Perhaps the most complex air quality problem we face is achievement and maintenance of the health-based NAAQS for particulate matter and ozone.

In 1997, EPA established a new standard for fine particulate matter (PM_{2.5}). Although we are still working to complete the data-gathering efforts necessary to determine which areas of the country violate the PM_{2.5} standard, one thing is very clear: PM_{2.5} poses the greatest health risk of any air pollutant, resulting in as many as 30,000 premature deaths each year. Additionally, fine particles are responsible for a variety of adverse health impacts, including aggravation of existing respiratory and cardiovascular disease, damage to lung tissue, impaired breathing and respiratory symptoms, irregular heart beat, heart attacks and lung cancer.

Fine particles are not only emitted into the atmosphere directly from combustion processes, they are also formed secondarily in the atmosphere from such precursor emissions as oxides of nitrogen (NO_x), SO₂ and ammonia; in addition to their adverse health consequences, fine particles also contribute to regional haze. Based on preliminary air quality monitoring data, it appears that PM_{2.5} concentrations in 250 counties in the U.S. – located primarily in the East and in California – exceed the health-based standard.

Overall, progress in attaining clean air has been slowest with respect to ground-level ozone. In the southern and north central regions of the U.S., ozone levels have actually increased in the past 10 years, and in 29 national parks, ozone levels have risen by more than 4 percent. A significant factor in this trend is the increase we have experienced in NO_x emissions, which are not only a precursor to ozone, but also a contributor to such public health and welfare threats as acid rain, eutrophication of water bodies, regional haze and, as I just mentioned, secondary PM_{2.5}. Over the past 30 years or so, NO_x emissions have increased by almost 20 percent, largely due to emissions from nonroad engines and power plants. Current data show that more than 300 counties measure exceedances of the eight-hour ozone standard.

In 1997, EPA revised the health-based standard for ozone by establishing an eight-hour standard, representing greater protection of public health. Litigation over both the new PM_{2.5} standard and the revised ozone standard has delayed their implementation; however, the courts have now cleared the way for EPA, states and localities to move forward. Not only do STAPPA and ALAPCO urge swift action by EPA in establishing implementation strategies for PM_{2.5} and eight-hour ozone, we also urge timely and effective control programs for sources that contribute significantly to these air quality problems, including power plants and nonroad heavy-duty diesels.

Power Plants

Electric utilities are one of the most significant sources of harmful air emissions in the U.S., responsible for 64 percent of annual SO₂ emissions, which contribute to acid rain and the formation of PM_{2.5}, and 26 percent of NO_x emissions.

In addition, electric utilities are responsible for 37 percent of U.S. carbon dioxide emissions and emit upwards of 67 hazardous air pollutants (HAPs) – including nickel, arsenic and dioxins – in substantial quantities. In fact, power plants are the major emitter of hydrochloric acid, which is the HAP emitted in the greatest quantity in the U.S, and are also responsible for more than one-third of anthropogenic mercury emissions. The persistent and bioaccumulative nature of mercury makes it of particular concern relative to aquatic ecosystems, where it can contaminate aquatic life and pose a serious threat to humans who consume the contaminated species. Based on just such a threat, over 40 U.S. states and territories have issued fish consumption advisories for mercury for some or all water bodies in their jurisdictions.

The magnitude of emissions from power plants, and the serious public health and welfare implications these emissions have, make controlling electric utilities a top priority. Fortunately, there are tremendous opportunities for doing so in a very cost-effective manner. Our nation's electricity generation infrastructure is aged, comprised of many 30-, 40- and 50-year-old plants that continue to operate without modern pollution control technology. Among the most important steps Congress can take to address air pollution is to establish a comprehensive national multi-pollutant approach for cleaning up outdated power plants and ensuring that new plants are dramatically cleaner.

STAPPA and ALAPCO endorse the concept of a comprehensive strategy for reducing emissions from electric utilities and, to that end, recently adopted a set of principles upon which we believe a viable multi-pollutant approach should be based. Our associations believe that such an approach should address all significant emissions from

electric power generation and, if properly structured, can increase and accelerate protection of public health and the environment, reduce pollution more cost-effectively than incremental approaches and offer greater certainty to both industry and regulators.

In our principles, STAPPA and ALAPCO call for an integrated approach based on an expeditious schedule that allows us to reduce emissions as rapidly as we can. Such an approach – which should supplement, and not supplant, provisions of the existing Clean Air Act – should include deadlines that are synchronized with other clean air programs. To ensure steady progress toward the final compliance deadline, interim deadlines should be established, with the first interim compliance requirements taking effect quickly.

A viable multi-pollutant approach will also establish the most stringent enforceable national emission reduction goals feasible by capping emissions at levels that reflect the installation of technology no less stringent than best available controls on all existing units nationwide, with existing power plants required to meet a minimum level of control by the final compliance deadline.

STAPPA and ALAPCO also believe that in meeting these emission goals, the regulated community should be afforded flexibility, including an emissions trading mechanism with appropriate limitations and protections against any adverse health or environmental impacts. If emissions allowances are required under a multi-pollutant approach, then they should be allocated equitably, and provisions for allocating to new sources should be established. Further, sources should be encouraged to reduce

emissions as soon as possible and, to the extent early reduction credits are provided for, the use of such credits should be appropriately limited.

On the matter of New Source Review (NSR), STAPPA and ALAPCO believe firmly that power plants – both new and existing – must continue to be subject to NSR requirements. Although I will elaborate on STAPPA and ALAPCO’s perspectives on NSR and NSR reforms, in general, later in my testimony, I would like to offer the following regarding our views with respect to NSR for power plants.

Current NSR requirements for new sources should remain intact, including, among others, those related to the installation of control technology (i.e., the Lowest Achievable Emission Rate in nonattainment areas and Best Available Control Technology in attainment areas), the acquisition of offsets in nonattainment areas and the protection of air quality increments to guard against adverse local air quality impacts in attainment areas. Further, while certain NSR reforms for existing sources are definitely in order, such sources making major modifications to existing units should be required to install the best available controls on affected units at the time of the modification, acquire any emissions allowances required to address emission increases and ensure against adverse local health or environmental impacts.

In addition, a multi-pollutant approach to reducing emissions from power generation should strongly encourage the most efficient use of any fuel used as input to electric generation or process energy sources, as well as energy efficiency, energy conservation and renewable electric energy. Further, it should support efforts to develop

and deploy consistent approaches for distributed resources to mitigate the impacts of small units not otherwise covered by a national multi-pollutant strategy.

Finally, a viable multi-pollutant strategy will ensure that regions, states and localities retain their authority to adopt and/or implement measures – including local offset requirements – that are more stringent than those of the federal government.

As our nation approaches the issue of a multi-pollutant strategy for one of our most significant sources of air emissions, we must do so in a way that institutes an appropriately rigorous emissions reduction scheme on a timely schedule and compels the use of state-of-the-art technology, commensurate not only with the substantial contribution of power plants to our nation's continuing air quality and public health challenges, but also with the level of reductions we will garner from new regulatory programs addressing other big-emitting sources, like passenger cars and heavy-duty diesel engines.

Nonroad Heavy-Duty Diesel Engine and Fuels

With respect to the regulation of mobile sources and their fuels, we have achieved great progress over the past decade. Perhaps most laudable are two landmark rulemakings issued by EPA in recent years. In December of 1999, the agency promulgated Tier 2 motor vehicle emission standards and a national low-sulfur gasoline program. The following December, the agency issued a rule (the 2007 Diesel Rule) establishing tighter engine standards for onroad heavy-duty diesels, such as big diesel trucks, and a commensurately stringent cap on sulfur in onroad diesel fuel.

Notwithstanding these truly remarkable accomplishments that will yield tremendous public health and environmental benefit across the entire country, we still have more work to do in reducing emissions from mobile sources and fuels. First and foremost in this regard is the rigorous control of emissions from the last really big mobile source category remaining: nonroad heavy-duty diesel engines (HDDEs), including construction (e.g., bulldozers and excavators), industrial (e.g., portable generators, airport service equipment and forklifts) and agricultural (e.g., tractors, combines and irrigation pumps) equipment.

Nonroad HDDEs are huge contributors to elevated levels of ozone and PM_{2.5} – representing a substantial and growing share of the emissions inventories for both NO_x and PM – thus posing a substantial threat to public health, including, among other things, premature mortality from exposure to PM_{2.5}, as I discussed earlier. In fact, the aggregate NO_x and PM emissions from nonroad HDDEs exceed those from all of the nation’s highway diesel engines. In addition, the Clean Air Scientific Advisory Committee has concluded that diesel exhaust is a likely human carcinogen at environmental levels of exposure, further heightening the need to take swift and aggressive action to control emissions from nonroad HDDEs. Given the limited authority states and localities have to regulate heavy-duty engines and their fuels, rigorous new federal standards for nonroad HDDEs and nonroad diesel fuel – equivalent to those for onroad HDDEs and fuels and in the same timeframes – are imperative.

STAPPA and ALAPCO have been advocating such new nonroad standards for several years. Specifically, our recommendations are based on several key principles that include the following: 1) availability of 15-ppm low-sulfur nonroad diesel fuel beginning in June 2006, subject to the same flexibilities and schedules provided under the onroad low-sulfur diesel fuel program; 2) promulgation of Tier 3 nonroad HDDE standards for PM (for all horsepower engines covered by the rule), based on emission reductions of 90+ percent (similar to the PM reductions achieved by the onroad heavy-duty diesel rule) to be fully applicable in 2007; 3) promulgation of Tier 4 nonroad HDDE standards for NO_x (for 50 to 750 hp engines), based on emission reductions of 95+ percent (similar to the reductions achieved by the onroad heavy-duty diesel rule), to be phased in between 2007 and 2010; and 4) a strong program to ensure that in-use emissions are not compromised by durability issues, the use of defeat devices or other factors.

Unless emissions from nonroad HDDEs are sharply reduced, it is very likely that many areas of the country will be unable to attain and maintain national health-based air quality standards for ozone and PM. Moreover, a nonroad heavy-duty diesel rule that establishes engine and fuel standards equivalent to those for onroad HDDEs and in the same timeframes will yield enormous public health benefits. EPA must take full advantage of the opportunity to adopt meaningful and timely controls for nonroad HDDEs and their fuels.

Hazardous Air Pollutants

The serious and pervasive public health threat posed nationwide by emissions of hazardous air pollutants (HAPs) is another continuing concern of STAPPA and

ALAPCO. Just last week, EPA released the results of its National-Scale Air Toxics Assessment (NATA), which provides nationwide estimates of exposure and health risks associated with 32 HAPs. According to EPA, more than 200 million people in the U.S. live in areas where the lifetime cancer risk from exposure to HAPs exceeds 1 in 100,000. Moreover, approximately 3 million face a lifetime cancer risk of 1 in 10,000. Considering that EPA has established 1 in 1,000,000 as the generally acceptable level of risk, these estimates not only illustrate the pervasive nature of the threat posed by HAPs, they also speak to the level of effort that will be required to reduce the risk and the high level of priority that should be placed on doing so.

According to EPA's data and information collected by state and local agencies, one of the primary sources of HAPs is motor vehicles, including cars and trucks. EPA has estimated that approximately 50 percent of all national HAP emissions, which do not include diesel exhaust, comes from mobile sources. The agency has further estimated that for more than 100 million people, the combined upper-bound lifetime cancer risk from mobile source air toxics exceeds 1 in 100,000.

In recognition of the health impacts of mobile source air toxics and the limited capacity of states and localities to directly regulate mobile sources and fuels, Congress included in section 202(l) of the 1990 Clean Air Act a requirement for EPA to promulgate regulations to control mobile source emissions of toxic air pollution. Specifically, the Act mandated that "[t]he regulations shall contain standards for such fuels or vehicles, or both, which the Administrator determines reflect the greatest degree of emission reduction achievable through the application of technology which will be

available....The regulations shall, at a minimum, apply to emissions of benzene and formaldehyde.” Unfortunately, EPA’s action relative to this statutory requirement – a December 2000 rulemaking – is deficient. Instead of aggressively addressing mobile source air toxics in a manner consistent with section 202(l) and proportionate to the risk posed, the rule calls for nothing more than the status quo and merely contemplates additional regulation in 2004, if further study warrants it. Clearly, far more is necessary at the federal level to adequately address this critical public health threat.

With respect to industrial sources of toxic air pollution, the Clean Air Act called for EPA to establish technology-based standards for a large number of source categories by November 2000. These standards – known as MACT (Maximum Achievable Control Technology) standards – were to require new sources to apply state-of-the-art technology and existing sources to achieve reductions equal to those achieved by the top performing existing sources. Regrettably, EPA has not fulfilled its obligation; more than 18 months after the statutory deadline, 36 MACT standards covering 62 source categories still have not been established. Under the section 112(j) of the Clean Air Act, state and local air pollution control agencies are obligated to establish MACT on a case-by-case basis for all source categories for which EPA has not set standards. Although the agency has taken regulatory steps to delay this state and local obligation, environmental groups have objected and it is unclear what the section 112(j) case-by-case MACT regulation will ultimately require. More importantly, however, each day that these sources remain uncontrolled, many millions of people continue to be exposed to hazardous pollutants. EPA must do everything in its power to establish these standards as quickly as possible.

In addition to calling for MACT standards, the Clean Air Act calls for Residual Risk standards, to reduce the risks that remain after implementation of the MACT standards. EPA is required to establish Residual Risk standards eight years after the issuance of MACT standards. However, EPA's delay in establishing MACT standards has also delayed establishment of the health-protective Residual Risk standards. To minimize the public's exposure to dangerous toxic air pollution, EPA must work diligently to establish Residual Risk standards as quickly as possible.

New Source Review

The Clean Air Act's NSR program is a fundamental component of our nation's clean air program. For the past 25 years, NSR has been instrumental in achieving millions of tons of emissions reductions that otherwise would not have occurred. Air quality in the U.S. is decidedly better because of this program. However, notwithstanding the pivotal role NSR has played in environmental protection and the fact that for new sources the program is working well, there is broad consensus that the program can be improved with respect to requirements for major modifications to existing sources. Over the past eight years, STAPPA and ALAPCO have worked with EPA and other stakeholders to develop recommendations in this regard. During that time, our associations have gone on record in favor of reforms to the NSR process, and we continue to hold that position.

Although STAPPA and ALAPCO do not believe that the current NSR program is preventing industry from expanding or from increasing efficiency, we do believe that, with respect to major modifications, certain flexibilities should be afforded to sources

that install the best controls. For example, our associations have agreed that sources that install the best available controls today should be afforded a clean unit exemption – that is, an exemption from further NSR for a limited time into the future. Similarly, we have supported a plant-wide applicability limit (PAL), provided it declines over time to a level reflecting installation of best available controls and requires all significant new sources constructing under the PAL to install the best available controls.

In short, STAPPA and ALAPCO support reform, not replacement, of the existing NSR program with two provisos: 1) such reforms should be limited to major modifications and 2) under no circumstances should reforms result in any less protection of the environment than is derived under the current program.

Funding

One final issue on which I would like to touch is federal funding for state and local air pollution control agencies. It is well established that air pollution presents a pervasive national threat to public health and the environment. The health risks are not only significant, we know of no other environmental problem presenting greater risk. Air quality regulators at all levels of government have worked diligently for many years in pursuit of our clean air goals. In spite of the considerable improvements that we have achieved, clean, healthful air nationwide still eludes us.

Over 160 million tons of pollution are still emitted into the air each year. One hundred and twenty one million people live in areas of the country that violate at least one of the six health-based NAAQS, not to mention the many millions of people who are

exposed to toxic air pollutants that cause cancer and other health problems. The magnitude of our air quality problem and the associated health effects make it clear that funding for the control of air pollution should be a top priority. Unfortunately, the reality is that state and local air agencies are underfunded. Although states and localities devote significant resources to their air quality programs, air agencies have been operating for years with inadequate financial support from the federal government. As a result, many of our programs are not as robust as they need to be.

A few years ago, STAPPA and ALAPCO, in cooperation with EPA, conducted a study of air program funding and estimated that federal grants to state and local air pollution control agencies under Section 105 of the Clean Air Act fell short of our needs by nearly \$100 million a year. While we have received modest funding increases in recent years, these increases are simply not enough, especially in light of our expanded responsibilities. Unless our programs receive a substantially greater boost in funding, we will continue to face a serious financial shortfall, which will adversely affect our ability to protect and improve air quality. This shortfall will only become worse as greater demands are placed on our programs. Among the air program priorities for which state and local agencies require additional funding are HAPs; fine particulate matter, especially diesel particulate; compliance; inspections; monitoring; data improvements, including maintaining and improving infrastructures, emission inventories and modeling; haze and visibility monitoring; and outreach to and education of the public and regulated community.

We urge Congress to give careful consideration to our request for a \$25-million increase in FY 2003 federal grants to state and local air agencies under Sections 103 and 105 of the Clean Air Act.

Finally, notwithstanding the pivotal role of state and local air agencies in our nation's air quality program, we cannot do the job alone. A strong and effective EPA that is adequately funded to carry out its responsibilities is essential to state and local efforts. Accordingly, we encourage Congress to ensure that EPA is also well funded, and to consider increasing, rather than decreasing, EPA's budget to allow the agency to carry out such important activities as those related to fine particulate matter; mobile sources; retrofitting diesel school buses; national emission standards, including toxic air pollutant standards; training; health research and risk estimates; and modeling.

Conclusion

Is the Clean Air Act the perfect environmental statute? No. But it has proven to be a good, sound, workable law with the potential to yield clean air in an efficient and cost-effective manner.

As we look back on our implementation of the Clean Air Act over the past 11 and a half years, we can do so with pride for all that we have accomplished. Though challenges still lie ahead, there are many opportunities for rising to these challenges. As we look forward, we should do so in a way that focuses on how we can augment, rather than replace, our current statutory foundation so that the considerable momentum we have created is not disrupted.

Among other things, we can look to and learn from the successes that have resulted from regional initiatives. Beyond the firm foundation provided by strong federal programs, such regional efforts allow for the development of approaches tailored to regional needs.

We can also continue our efforts to identify and implement innovative approaches to addressing air pollution and find ways to capitalize on the flexibilities provided by the law to resolve implementation problems and move ahead. Our past experiences in seeking “common-sense” solutions to difficult issues have demonstrated that the current statute is structured to accommodate change and keep pace with our needs.

Above all, we must remember that the most valuable asset our nation can ever have is a healthy population and a clean environment. In working to achieve our clean air goals, protecting these assets must be our highest priority.