

SOUTHCENTRAL



**WORKING GROUP
FINAL REPORT**

January 10, 2000

Southcentral Pennsylvania Ozone Stakeholder Working Group

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Covener: Commonwealth of Pennsylvania
Tom Ridge, Governor James M. Seif, DEP Secretary

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Environmental information is available electronically via the Internet.
Visit DEP through the Pennsylvania Homepage at www.state.pa.us
or directly at www.dep.state.pa.us (directLINK "Ozone Stakeholders")
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January 10, 2000

The Honorable James M. Seif, Secretary
Department of Environmental Protection
P.O. Box 2063
Harrisburg, PA 17105

Secretary Seif:

We respectfully submit the following report and recommendations of the Southcentral Ozone Stakeholders. We appreciate your support during our deliberations. We particularly recognize the assistance of DEP staff and our consultants, including CDR Associates and the Pechan-Avanti Group.

During the stakeholder process, we learned a great deal about ozone formation and reduction. We hope that you might use our expertise and call on us to assist in promoting and building support for the recommendations.

As part of our effort, we provided information to and sought input from the public. At two points in our deliberation, we held public meetings and gave members of the public opportunities to shape our recommendations. We believe that ongoing public outreach is essential to successful implementation of our report. We stand ready to help with continued efforts at public education about this important issue.

This report provides the results of our efforts, including recommended ozone-reduction measures and supporting information. We commend the Commonwealth for using this stakeholder process to develop ozone-reduction strategies. We look forward to your support for our recommendations.

Sincerely,

The Southcentral Ozone Stakeholders from Cumberland, Dauphin, Lancaster, Lebanon and York Counties



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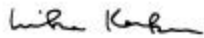
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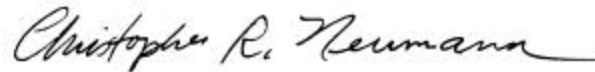
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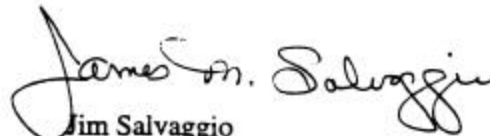
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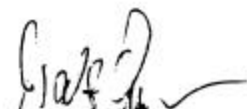


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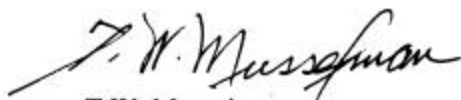
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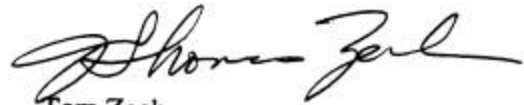
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I. EXECUTIVE SUMMARY

We, the Southcentral Ozone Stakeholders, after deliberating from March through December 1999, recommend that the Pennsylvania Department of Environmental Protection (DEP) continue to take action to reduce emissions of ozone precursors. We do not view our recommendations as isolated strategies from which DEP should pick and choose. Rather, DEP should view the recommendations as a package that relate to and support one another. We support this package because the recommendations represent a fair share of reductions from stationary, area, and mobile sources. We are confident that implementation of these recommendations will lower the ozone levels in the Pennsylvania Southcentral Region and help maintain the region's quality of life.

We recommend the following strategies:

1. EPA's Tier 2 Rule;
2. EPA's Section 110 NO_x SIP Call Rule;
3. Pennsylvania's 126 Petition and other alternatives to the NO_x SIP Call;
4. Decentralized enhanced vehicle emissions testing and vehicle maintenance program;
5. Heavy-duty diesel vehicle testing;
6. Heavy-duty vehicle idling restrictions;
7. Commuter alternatives program and intelligent transportation systems;
8. Rules on solvent use and content;
9. Educational efforts for the ozone strategies;
10. Open burning restrictions;
11. The study of open-market trading;
12. Measures to encourage renewable energy;
13. Encouragement of better land use and development; and
14. Possible future action.

The full text of the recommendations begins on Page 5.

II. CRITERIA FOR EVALUATING OPTIONS

With the help of technical consultants from the Pechan-Avanti Group, we generated a list of about one hundred emission reduction options. (The full list is contained in this report.)

In order to evaluate each option carefully, the Stakeholders developed criteria by which we might judge each option. We looked for options that:

- Are cost-effective (as we compare one strategy to another);
- Are reasonable;
- Are achievable;
- Can gain public acceptance;
- Protect public health and the environment;
- Are effective;

- Are workable and practical;
- Are locally appropriate;
- Have short and/or long-term benefits;
- Yield secondary economic and environmental benefits;
- Address broader issues (land use, transportation, growth, sprawl and sustainability);
- EPA can find a way of approving (“SIP-able”); and
- Address needs of adjacent areas.

We also developed criteria by which to evaluate the final package. Specifically, we were searching for a collection of ozone reduction strategies that:

- Makes meaningful improvements in air quality and quality of life;
- Achieves and maintains the ozone standard;
- Gives downwind communities a fair chance to achieve the standard;
- Is fair and equitable—addresses disproportionate consequences and costs;
- Reflects local values and conditions;
- Is implementable; and
- Takes advantage of opportunities for quick successes to build long-term momentum.

III. BACKGROUND

In March 1999, Gov. Tom Ridge invited key Stakeholders to participate in a consensus-building process to recommend ozone-reduction strategies to DEP. The following background statement was issued by DEP as the process began:

“Ground-level ozone continues to be Pennsylvania's most serious summertime air pollution problem. Children, the elderly and those with heart and respiratory illnesses are most at risk from its effects, but at high concentrations, everyone is at risk. The emissions that form ground-level ozone also endanger the health of our waterways and land.

Many areas of the Commonwealth, including the Southcentral region and the Lehigh Valley/Reading area, consistently measure concentrations of ground-level ozone above the national health-based standard – 0.08 parts per million (ppm) over eight hours.¹ The federal Clean Air Act and the U.S. Environmental Protection Agency require that the health-based standard be met as early as 2005. The strategies necessary to meet and maintain the health-based standard will impact all sectors of society – from local industry and commerce to individuals and their lifestyle choices.

Ground-level ozone problems are not entirely local in nature – the emissions from York impact Lancaster and Reading, just as the emissions from Lancaster and Reading impact the Lehigh Valley, Philadelphia, and in turn, New Jersey. This movement of pollution from town to town and state to state makes achieving the air quality standard more difficult. Since every area has an impact on another, it is critical to develop equitable solutions to ensure that each area is doing its fair share.

Regional problems need regional solutions, and we all have a stake in their success. In recognition of the significant impact potential clean air strategies may have on each area, DEP believes a broad-based, consensus-building Stakeholders Group is the best approach to ensure substantial local input.

Purpose: To recommend local control strategies and solutions to meet and maintain the national health-based standard for ground-level ozone for the benefit of local citizens, the region and the environment.

Two Stakeholders Groups are being convened to address meeting the eight-hour ground-level ozone health-based standard. The first will include Berks, Lehigh and Northampton counties. The second will include Cumberland, Dauphin, Lancaster, Lebanon and York counties.

There are some important strategies that the Stakeholders Group will have to examine, including an auto emissions inspection and maintenance program and the effect of a 22-

¹ In the midst of the Stakeholder process, the Stakeholders learned of the decision of a U. S. District Court of Appeals questioning the validity of EPA's 1997 revised eight-hour ozone standard. A number of relevant legal challenges are pending as of the time of adoption of this report.

state nitrogen oxide (NOx) emissions control program. With these considerations, as well as any solutions proposed by the Stakeholders, the process will be successful in achieving our common goal of clean, healthy air for everyone.

DEP's Role: DEP will participate as an equal Stakeholder in the negotiation. It will not dictate the emission control strategies to be included in the recommendations.

As the Stakeholder Groups make regulatory recommendations, DEP commits to introducing them into the normal process and advocating their validity throughout the process.”

This report contains, in addition to our specific recommendations, the following sections:

- Section IV: The full recommendations;
- Section V: Emission reduction estimates for the recommended strategies;
- Section VI: The full list of options considered;
- Section VII: A description of the air-quality modeling process used; and
- Section VIII: The operating agreements for the Stakeholder Group, including the purpose statement.

IV. RECOMMENDATIONS

1. EPA's Tier 2 Rule

Federal Tier 2 rules have been proposed by EPA, which, when adopted and implemented, will reduce tailpipe emissions from automobiles through on-board technology advancements and will reduce sulfur levels in gasoline to an average 30 parts per million (ppm) sulfur. The final rule is scheduled for adoption in December 1999, to be implemented starting in 2004. The scope of the proposed rule is national. An implemented Tier 2 strategy is necessary for the Southcentral area to achieve the federal health-based standard for ozone.

We generally support the principles of Tier 2, although there are concerns about the timing of the implementation of the fuel requirements, exemptions for small refiners and whether the same sulfur reduction should apply nationwide. Further, concerns were raised regarding legal challenges to the final rule that may result in an altered, stayed or vacated rule.

Therefore, we support the level of emissions reductions that would be achieved in the Mid-Atlantic region by the implementation of the U. S. Environmental Protection Agency's (EPA) proposed National Tier 2 rulemaking. In the event that the National Tier 2 program is either diluted in contrast to its current proposed emission reduction requirements or if the federal government fails to implement the national program, we recommend that DEP work with the Ozone Transport Commission (OTC), other multistate organizations and/or Stakeholder processes to develop a fuel program and a vehicle standard that achieve emissions reductions substantially equivalent to those expected under the Tier 2 proposed rule.

2. EPA's Section 110 NOx SIP Call Rule

The Stakeholders agree with EPA that transported nitrogen oxide (NOx) from fossil fuel-fired power plants and other industrial sources significantly contributes to downwind ozone nonattainment in Pennsylvania. In particular, NOx emissions from west and south of the Commonwealth elevate ozone concentrations to unhealthy levels in many parts of the Commonwealth, including the five-county Southcentral area. Therefore, the Stakeholders endorse the NOx State Implementation Plan (SIP) Call Rule in its present form, which obtains sizable NOx reductions from power plants and other industrial sources in a 22-state region. The NOx SIP Call Rule achieves these reductions through a state-by-state NOx emissions budget during the ozone season, based on an average emissions rate of 0.15 lb/mmBtu for affected sources.

This level of reduction is crucial if the Southcentral area is to attain and maintain the National Ambient Air Quality Standard for Ozone.

The rule also ensures a measure of regional fairness that is important to Pennsylvania's economy. Accordingly, the Stakeholders urge DEP to take all necessary steps to support and

implement the 22-state NO_x SIP Call Rule and an accompanying regional cap and trade program.

3. The Pennsylvania 126 Petition and Other Alternatives to the NO_x SIP Call Rule

We recognize the possibility that legal challenges or other obstacles may prevent or cause unacceptable delay in the implementation of the EPA NO_x SIP Call Rule. Therefore, the Stakeholders recommend that DEP utilize all available legal avenues, including those present through the Section 126 petition process, in an effort to obtain substantially equivalent NO_x emissions reductions from upwind states as those that would have been provided by the NO_x SIP Call Rule. The Stakeholders recommend that DEP act in a timely manner in this regard to hasten the ultimate achievement of these reductions.

4. Decentralized Enhanced Vehicle Emissions Testing and Vehicle Maintenance Program

To attain and maintain the federal health standards, we recommend an annual, decentralized enhanced vehicle emission testing and vehicle maintenance (I/M) program for the five-county area. We believe the program can reduce the precursors of ozone and improve the air quality of the five counties and downwind areas. Most surrounding states have or are planning I/M programs, and other Pennsylvania counties have I/M programs in place.² The program should be the PA 97+ program³, as in operation in Southwestern Pennsylvania. The fee to consumers is to be market based; in the Pittsburgh area, it has averaged \$27.

As turnover brings newer and cleaner cars, equipped with onboard diagnostics, into the five-county fleet, and as EPA refines its regulations and modeling programs, making changes to the MOBILE model, DEP and the Pennsylvania Department of Transportation (PennDOT) should modify the program appropriately. We recommend that the Commonwealth conduct a baseline evaluation of the level of vehicle emissions in the five-county area at the start of the program and periodically evaluate the I/M program against this baseline, disseminate the result and modify the program as needed to ensure its effectiveness. The cost of the I/M program shall be evaluated concurrently and be considered in decisions affecting modifications to the program.

Recognizing the role that new technologies can play in reducing mobile source emissions, we recommend expanding the remote sensing program to identify and require repair of high-emitter vehicles traveling within the I/M testing counties from other Pennsylvania counties. We recommend that DEP work with the PennDOT I/M Working Group to determine the best method of implementing this program.

² Nearby states with I/M programs include CT, DE, MA, MD, NJ, NY, OH and RI. Pennsylvania counties with I/M programs currently in place include a four-county Pittsburgh area and a five-county Philadelphia area.

³ The PA 97+ program covers cars and trucks up to 9,000 lbs. The most recent model year is exempted, as are vehicles more than 25 model-years old, those traveling less than 5,000 miles per year, and antique, classic and collectible vehicles.

We recommend that I/M program include the following:

- An unloaded two-speed test with a tailpipe probe connected to an emissions analyzer to measure pollutants while the vehicle is running;
- A gas cap leak detection check;
- Emission control device anti-tampering examination;
- Technician training;
- Mandatory repair and retesting of failed vehicles by knowledgeable technicians (as properly repaired and maintained vehicles are the keys to achieving any air quality benefits from a vehicle emissions testing program);
- A repair waiver limit no more stringent (i.e., no higher) than the Clean Air Act requires;
- Exemptions for the most recent model year, vehicles more than 25 model-years old, those traveling less than 5,000 miles per year, and antique, classic, and collectible vehicles; and
- An exemption from the tailpipe test for vehicles that contain onboard diagnostic (OBD) equipment that can provide the necessary emission information to testing stations when the following conditions are met:
 - Sufficient number of vehicles are available to allow for cost-effective purchase of testing equipment, as determined by the I/M Working Group;
 - Adequate number of inspection stations can be certified to provide convenient and responsible testing and repair service for vehicle owners;
 - Sufficient safeguards against tampering with the OBD readings are in place; and
 - Complete EPA SIP guidance for implementing and calculating emission reduction credits from OBD testing is formally issued.

We recommend that the Commonwealth investigate existing programs and identify opportunities for public/private partnerships to reduce the impact of the repair costs for low-income drivers. The Commonwealth should make information about such assistance available to low-income drivers. In addition, any increase in the repair waiver threshold from the current level should be phased in gradually, statewide (where there is an I/M program), over a period of years.

Finally, DEP should consider modifying the Pittsburgh-area I/M program to match this one, particularly the accommodation of vehicles with onboard diagnostics, in the interest of maintaining as much uniformity as possible across the state.

5. Heavy-Duty Diesel Vehicle Testing

Fairness in a vehicle emission testing system requires that it not be limited to automobiles. We recommend a statewide emissions testing program for heavy-duty diesel vehicles.

A multistate approach to diesel emission testing stands the greatest chance of meaningfully reducing ozone-producing emissions from heavy-duty vehicles. Therefore, the program should be based on the OTC resolution adopted June 16, 1999, that endorses the testing approach proposed by the Northeast States for Coordinated Air Use Management (NESCAUM). NESCAUM proposed a program based on reciprocal agreements among the OTC states regarding testing protocols and grace periods for repairs. DEP should pursue legislative changes required to implement the program if necessary, and immediately work to draft necessary

regulations. DEP should also work to quantify the emission reductions associated with the program and seek SIP credit from EPA.

We recommend spot-checking heavy-duty diesel vehicles, *not* annual emission testing. Different types of diesel vehicles warrant different testing procedures. Non-passenger trucks registered outside the Commonwealth can be tested through a roadside system at weigh stations or other inspection stations. Passenger buses should be tested differently (so that passengers are not made to wait on the side of the road while the test takes place). Fleets within the Commonwealth can be tested at the truck terminal. Trained and authorized law enforcement officials can help identify and test high emitters.

Therefore, the program should include the following:

1. A testing procedure that permits trained and authorized personnel to stop and test any heavy-duty diesel vehicle, including buses, if visible emissions warrant;
2. A spot test for Pennsylvania-registered heavy-duty diesel vehicle fleets;
3. A roadside test in conjunction with other inspections for any heavy-duty diesel vehicle, regardless of whether registered in Pennsylvania (excluding tour buses and other passenger buses). It should minimize delays and should not contribute to traffic congestion;
4. A deterrent program that has the effect of compelling vehicles owners to make necessary repairs before returning the vehicle to service;
5. A method for individuals to report smoking vehicles; and
6. Allocation of adequate resources to implement this program fully.

We recommend that the Commonwealth periodically evaluate this program, disseminate the results and modify the program as needed, to ensure its effectiveness. As the new diesel engine standard takes effect, we anticipate that emission testing procedures will follow. When tailpipe inspection and onboard diagnostic technology become available and cost-effective, DEP should implement an annual inspection program for heavy-duty diesel vehicles.

6. Heavy-Duty Vehicle Idling Restrictions

All motorists are required to operate their vehicles in a safe and courteous manner. This should be no different for vehicles that sit for extended periods of time and produce unacceptable levels of air and noise pollution. We recommend that DEP work with the General Assembly to establish a law limiting the idling of heavy-duty gasoline and diesel vehicles to short periods of time (such as five minutes). DEP can use current laws and regulations from neighboring states, like New Jersey and New York, as a basis for draft legislation and regulations in Pennsylvania. However, there would be certain cases where these restrictions would not apply. Some include:

- Trucks with sleeper berths in non-residential areas, for drivers sleeping or resting;
- Vehicles that are motionless due to traffic conditions beyond the operator's control;
- Fire, police, and public utility vehicles performing emergency operations;
- Trucks engaged in work activities, such as for farming, mining and landfills, used within the confines of the property;
- An engine used for an auxiliary purpose such as controlling cargo temperature; and

- When the vehicle is being repaired.

The Commonwealth should also explore applying idling restrictions to locomotives.

The Commonwealth should work cooperatively with the trucking, rail and related industries to assure compliance with the restrictions.

Such a law offers several economic, environmental and social benefits such as reduced levels of NOx emissions and particulate matter, reduced engine wear, reduced fuel consumption and noise reduction.

7. Commuter Alternatives Program and Intelligent Transportation Systems

We recognize that reducing ozone-producing emissions from vehicles will require more than changes to automobile and fuel technologies. Reducing mobile emissions requires changing the mix of opportunities for and barriers against single-occupant automobile trips. Providing incentives for carpooling, making mass transit more available, expanding opportunities for telecommuting and alternative work schedules, building bike and pedestrian ways and guaranteeing a ride home for ride sharers are important strategies—because these efforts change individual driving decisions. We hope to reduce vehicle miles traveled and single-occupant-vehicle use for work commuting and shift traffic from peak travel periods (rush hours) into non-peak periods. If successful, roadway congestion will decrease and air quality will improve. We encourage PennDOT and Metropolitan Planning Organizations to utilize intelligent transportation systems including, but not limited to, coordinating signal timing and providing real-time congestion information and to pursue funding for such systems.

Employers, on a voluntary basis, can best implement many of the programs listed above. We recommend that DEP work to promote incentives for voluntary employer efforts at trip reduction. We recommend that DEP and other Commonwealth agencies lead by example.

The Commonwealth of Pennsylvania is one of the largest employers in the Harrisburg area with over 20,000 salaried employees. These employees as a group have a major impact on the transportation system, especially the highway portion of that system during peak commuting times, and on Harrisburg's air quality. In recognition of these facts, DEP has been offering to its employees for a number of years a TransitChek program. Employees who use public transit are reimbursed \$21 per month for their monthly transit pass. This costs DEP about \$100,000 per year from the portion of its budget paid for by the Commonwealth's general fund.

Building upon and expanding this program to all Commonwealth employees in the Harrisburg area would increase the benefits of the commuter alternatives program, and would serve as an example to other employers. The Governor's office should direct all offices and departments in the executive branch and encourage employees of the legislature and courts to institute a Harrisburg Area Commuter Alternatives Program for Commonwealth employees that would include the following elements:

- A TransitChek program to reimburse public transit users for part of the cost of a monthly pass;
- Incentives for users of carpools and van pools including preferential parking and adjusted work hours to coincide with carpool/vanpool schedules;
- A rideshare program and a guaranteed ride home for ride sharers that face unexpected schedule changes;
- Tax reimbursement for transit and vanpool expenses;
- Compressed work weeks to reduce the number of days of commuting between home and office;
- Telecommuting for selected employees whose job responsibilities could be just as effectively conducted at home;
- Meetings held where public transit is available; and
- Encouragement and support of teleconferencing to reduce travel out of the office.

In addition to the above elements, the Governor should make it a policy to locate all new office space in existing urban areas and on existing or planned transit routes.

We recommend that DEP translate the lessons learned from the Commonwealth's efforts into a voluntary program for all other employers in the five-county area. DEP assistance should include promotion, technical assistance and funding.

To enhance the commuter alternative program, we recommend that:

- DEP work with PennDOT to enhance mass transit, consider the cost of additional highway construction as an offset to mass transit expense and to implement other strategies that reduce single-occupant vehicle trips;
- DEP assist Metropolitan Planning Organizations, county planning commissions and other local governments to develop their own employee trip reduction programs;
- DEP work with PennDOT to seek funding for technical assistance through the Congestion Mitigation/Air Quality and Planning funds and through the Growing Greener Program; and
- The DEP Office of Pollution Prevention and Small Business Compliance Assistance encourage implementation of ridesharing, telecommuting, alternative work schedules and other commuter alternatives.

8. Solvents

We recommend that DEP adopt its proposed solvent cleaning operations rule with those suggested revisions from public comments that strengthen the rule and revise it to be more cost effective and efficient in its implementation. Further, we recommend that DEP investigate and propose a rulemaking addressing the prevention of air pollution from architectural coatings and consumer products. This proposed rulemaking may be modeled from the New Jersey Department of Environmental Protection's regulation found in the NJ Administrative Code at Title 7, Chapter 27, Subchapter 23. Research reveals that the materials regulated and the limits imposed in the New Jersey regulation are largely consistent with the State and Territorial Air Pollution Program Administrators/Association of Local Air Pollution Control Officials (STAPPA/ALAPCO) model

rule proposed limits on their identified top ten coating groups for 1997 and with New York Department of Conservation's current regulations on architectural, industrial and maintenance coatings. DEP is directed to investigate other regulations/proposals to canvas the range of possible models. The final objective is to draft a rule that not only receives approval in the Commonwealth but prospectively be adopted on a regional basis such as the Ozone Transport Region.

9. Educational Efforts for the Ozone Strategies

We have gone through a long and intense process of exploring the needs of our communities and the ramifications of the current levels of ozone on them. We have spent a great deal of time understanding why and how each of these strategies will help improve air quality. Each of these strategies will demand strong public involvement and understanding. It is critical that the public and the specific regulated community are fully aware of the goals and how each of these strategies will affect their daily operations. Therefore, we recommend that DEP undertake the following educational efforts, working through the Ozone Action Partnership as well as other mechanisms.

1. Develop an educational program for each of the pollution-reduction strategies that:
 - Identifies what has been done in other areas of the country to address this situation, how was it effective and what were some of the lessons learned at these locations;
 - Is presented in common language (in terms that an average 6th grader could understand);
 - Describes how much pollution is coming from each of the identified sources in terms the general public will understand;
 - Identifies who is affected by each initiative (driving public, public utilities, etc.)
 - Presents the estimated cost for each initiative;
 - Describes the desired actions and NO_x and volatile organic compound (VOC) reductions for each action; and
 - Describes the effects that each initiative will have on the actions and attitudes of the general public (Annual Benchmark Survey be continued and expanded).
2. Support a concerted effort by the state, the Ozone Action Partnership, education systems and local grass roots efforts in producing educational programs.
3. Encourage the Pennsylvania Department of Education's Environmental Education Group to develop a school curriculum that is visual, interactive and fun to demonstrate the effects that sources of air pollution have on our society and explore ways to improve air quality.
4. Create educational materials in joint partnership with the regulating agency and the affected industries to produce literature for the general public and the specific industries.
5. Reach out and provide compliance assistance to those most affected by each initiative.

6. Encourage the use of plain English and question-and-answer format in drafting new regulations and supporting documentation, so long as they remain specific and scientifically accurate.

10. Open Burning

Open burning (uncontrolled or poorly controlled combustion of solid waste, within containers or on the ground) is a recognized source of air pollutants, including ozone precursors. Several viable alternatives to open burning exist and are widely practiced in many localities in Pennsylvania and elsewhere in the country. The Pennsylvania Solid Waste Management Act prohibits burning of solid waste without a permit. To reinforce this, we recommend that DEP do the following:

- Substantially increase its work on community outreach and public education on the adverse health effects of open burning and on preferred alternatives to the practice;
- Provide incentives to municipal and county governments to develop or foster private development for the recycling of wood construction waste and for chipping/composting operations to help process wastes such as scrap wood, brush and leaves;
- Encourage municipal governments to develop ordinances banning the open burning of solid waste;
- Suggest effective education/enforcement strategies to municipal governments in order to effect such a ban;
- Enforce the Solid Waste Management Act prohibition of burning of solid waste, particularly during the ozone season in the five-county Southcentral Region; and
- Seek SIP credit for the reductions attributable to open burning restrictions

11. Recommendation for the Study of Open-Market Trading

The Stakeholders believe that DEP should explore all viable methods for achieving reductions of ozone precursor emissions. To that end, we recommend that the PA DEP closely study the usefulness and real-world effectiveness of open-market trading programs for VOC and NOx emissions from stationary sources, including both major and area sources. An open-market trading program is a market-driven mechanism which allows trading of real, surplus, quantifiable and enforceable emissions reductions between emissions sources to achieve compliance with certain regulations.

We endorse DEP's open-market trading pilot program in Southeastern Pennsylvania as a good tool for determining the effectiveness of this market mechanism and for isolating potential areas of concern. DEP should evaluate the results of the pilot along with open-market trading regimes in other states.

12. Renewable Energy

A significant portion of the ozone problem comes from the combustion of fossil fuels in the Southcentral Region, the rest of the state and in states upwind from us. Pennsylvania's competitive electricity market presents families, community institutions, government organizations and businesses with the opportunity to use the marketplace to promote the development of new renewable energy generation capacity that produces fewer ozone precursors. Developing new renewable resources will be good for Pennsylvania's environment. A commitment to pursuing increased renewable energy capacity will place Pennsylvania at the head of the technological curve as we enter the 21st Century.

In addition to a competitive market for electricity which makes the switch to renewables possible, a number of programs are already in place to support the development of new renewable resources. A total of \$55 million is available for research and development of renewable resources through the Sustainable Development Funds that came out of the settlements in the electric utility restructuring cases concluded last year. An additional \$4 million will be spent statewide on renewable pilot programs. Renewable technologies are ready for deployment, and research into more sources of renewable energy is well underway. A program to build consumer confidence in renewable energy by certifying and verifying supplier claims, the Green-e Program, is already in place and operating in Pennsylvania. Our Stakeholder Group has an opportunity to recommend a long-term solution to the problem that leverages new market opportunities and uses public and private programs already in place.

We recommend that the Commonwealth undertake energy conservation measures in its own operations and encourage the public to do the same. We recommend that the Commonwealth work with the Sustainable Development Funds, the utilities, renewable energy producers, environmental organizations and businesses to educate the public about renewable energy and encourage the voluntary purchase of renewable energy electricity products. In addition, the Commonwealth should adopt a goal of purchasing 10 percent of its electricity demand from renewable resources (solar, wind, fuel cell and low-impact-hydro power) as electricity from renewable sources becomes available.

We believe that the Commonwealth should also encourage the demand for and the development of renewable energy generation in Pennsylvania.

13. Land Use and Development

We have examined the relationship between land use and air quality and arrived at the same conclusion as the Governor's 21st Century Commission—that land use is inextricably linked with the health of all Pennsylvanians. We support the work of the Sound Land Use Advisory Committee and the Commonwealth's efforts to:

- Encourage development in locally designated growth areas or in previously developed areas;
- Recognize the value of farmland and open space;
- Encourage regional cooperation among local governments;
- Recognize private property rights; and
- Understand impact of land use on environmental and community health.

We see an important role for DEP and recommend that it do the following:

1. Work with municipalities to encourage each locality in the five-county area to develop, adopt and implement comprehensive planning measures that:
 - promote strategic infrastructure investment;
 - reduce congestion;
 - promote new development in areas where growth is appropriate; and
 - protect agricultural areas and open space, and, as a secondary effect improve air quality.

This effort includes analysis and forecast of growth over the next 20 years in order to establish realistic growth areas, modifications to comprehensive plans to show the growth areas and then changes to zoning and subdivision ordinances to help implement all of the strategies that form a comprehensive growth management program. The system should be aimed toward a goal of 80 percent of new development units (housing, commercial, industrial) built in designated urban growth areas;

2. Help institute a growth tracking system that measures progress toward the 80 percent goal;
3. Work with other state agencies, including PennDOT, to ensure that state programs and funding priorities support sound land use practices;
4. Encourage use of state programs to promote private sector investment in distressed urban lands in order to redevelop brownfields, provide close-to-home urban employment opportunities and redistribute the benefits of the regional economic growth;
5. Support increases in state, local and private funding to preserve prime agricultural lands and open spaces;
6. Encourage changes at the state level to improve consistency between municipal and county comprehensive plans, between comprehensive plans and zoning, and between comprehensive plans and long-range transportation plans;
7. Work with local governments to coordinate DEP permitting with the locality's land use planning;
8. Help to improve the coordination and consistency between zoning and water/sewer facilities planning and permitting;
9. Link funding decisions to land use and growth management efforts by favoring counties and municipalities that have adopted urban growth boundaries;
10. Take a leadership role to ensure that the Commonwealth's implementation of the 21st Century Commission's recommendations has a positive impact on air quality and on ground-level ozone concentrations; and
11. Encourage ongoing, effective public participation to ensure that growth-management strategies enjoy widespread support among the general public and affected interests.

14. Possible Future Action

We believe our recommendations represent this five-county area's fair share of emission reductions. However, in light of modeling, legal and regulatory uncertainties and the significance of pollutant transport, we recognize that more may need to be done either locally or on a larger regional basis in order to meet federal air quality standards as expeditiously as practicable.

Therefore, we recommend that DEP monitor and evaluate the effectiveness of the above recommendations and consider additional strategies as necessary, including those we did not recommend by consensus (particularly statewide and regional strategies) if necessary to attain air quality standards. We urge DEP to apply the criteria we used in our decision making. We also recommend that DEP continue to be conscientious about obtaining public input into its decision-making.

**V. EMISSION REDUCTION ESTIMATES FOR STRATEGIES LISTED
IN RECOMMENDATION SECTION**

Recommendation Number	Measure Number	Control Measure	VOC	NOX
			2007 Emission Reduction tpd	2007 Emission Reduction tpd
1	46	Tier II Rule	7	22
2	0	NOx SIP Call	0	41
3	0	PA's Section 126 Petition ^a	0	39
4	51	PA 97 + I/M	33	26
5	52	Heavy-duty Diesel Testing	0.7	1.1
6	56b	Heavy-duty Vehicle Idling	0.2	1.2
7	68-72	Commuter Alternatives Program	1	1.4
8	20,36	Solvents	1.7	0
9	--	Additional Education	unknown	unknown
10	45	Open burning restrictions	unknown	unknown
11	86	The study of open-market trading	unknown	unknown
12	88	Renewable Energy	unknown	unknown
13	92,94	Land Use and Growth Management	unknown	unknown
14	--	Possible future action	unknown	unknown
Total reduction^b			43.6	92.7

a Fall Back Measure to NOX SIP Call

b Total Reduction does not include reductions from Section 126 Petitions

	VOC	NOX
2007 South Central Total Emissions Reduction^b	263	227
	43.6	93
% Reduction	17%	41%

VI. EMISSION REDUCTION OPTIONS

Measure Number	Source Category	Control Measure	VOC			NO _x		
			2007 Emissions tpd	2007 Emission Reduction tpd	Cost Per Ton	2007 Emissions tpd	2007 Emission Reduction tpd	Cost Per Ton
0	Utilities + Industrial	Adopt NO _x SIP Call limits	43	0		137	41	
1	Utilities	Lower than NO _x SIP Call limits	0.40	--	--	27.4	7.9	\$3,500-5,700
2		Conservation/energy efficiency						
3		Promote EPA green lights/energy efficiency building programs						
4		Subsidy for high efficiency AC units						
5		Alternative to SIP Call: Plan for Fair Share reductions throughout OTAG area to reduce out-of-state transport						
6		Take care not to substitute one source for another - net gain consideration						
7		Incentives for household energy efficiency projects						
8		Promote/incentives for use of off peak service (households)						
9		Incentives for the development of zero emission generation: solar; hydro; wind; ground source thermo						
10	Industrial	Extend point source threshold to 25 tpy						
11		Lower than NO _x SIP Call limits	42.6			76.2	14.7	\$2,000-5,000
12		Incentives for co-generation						
12SC		Fuel switch to lower polluting fuel during ozone action days (use gas prices as an example)				14.3	10	\$0-7,500
13	Fuel Combustion - Other	New water heater NO _x emission standards	0.04	--	--	0.67	.04	\$0
14		Lower than NO _x SIP Call limits						
15		Promote incentives for waste recycling as raw material substitutes, streamline regulatory approvals						
16		Incentives for electric cogeneration						
17		Emission Reductions from Restaurant Operations	0			0		
18	Chemical & Allied Products	Organic chemical manufacturing						
18SC		Further reductions in VOC emissions via prevention of fugitive emissions and leaks (and reward successful spill prevention)						
19		Flare evaluations						
20	Metals Processing	Degreasing control	5.62	1.35	From savings to a cost of \$1,400	0	--	--
21	Other Industrial Processes	NO _x cement kiln controls	0	--	--	1.02	0.5-0.8	\$1,000-6,500

Measure Number	Source Category	Control Measure	VOC			NO _x		
			2007 Emissions tpd	2007 Emission Reduction tpd	Cost Per Ton	2007 Emissions tpd	2007 Emission Reduction tpd	Cost Per Ton
22		Emission reductions from electronic components manufacturing	0.13	0.1	\$6,000	0	--	--
23		Encourage non-solvent stripping (plastic bead blasting) and cryogenic POTWs	0.03			0	--	--
24	Petroleum & Related	Fugitive sources (further emission reductions)	0			0	--	--
25		Asphalt manufacturing and use	1.65		\$15-30	0.97		
26		Roofing products manufacture	0			0.08		
27	Solvent Utilization	Graphic arts/printing Low VOC inks/RACT to small sources	6.18	1.1	From savings to a cost of \$5,000/ton	0.03	--	--
28		Dry cleaner conversion to non-VOC	0.46	0.41	Unknown	0		
28c		Alternative Motor Vehicle Fuels vs. Tier II Vehicle Emissions Rates						
28SC		Tax credits for small shops (graphic arts and dry cleaning) to convert to low VOC compounds. Credits for new equipment purchase or material conversion						
29		Limits on household painting/waterproofing during O ₃ action periods	10.82			0		
30		Commercial/consumer solvents further reductions	10.58	6.3	Unknown	0	--	--
31		Emission reductions from adhesives (Rule 1168)	0.34	0.03	\$6,830	0	--	--
32		Emission reductions from plastic, rubber, glass coatings (Rule 1145)	0.54	0.32	\$1,110	0	--	--
33		Emission reductions from solvent usage (Rule 442)						
34		Consumer product education labeling program						
35		Public awareness/education programs - area sources						
36		Further emission reductions from architectural coatings (Rule 1113)	10.82	5.4	\$8,000-13,300	0	--	--
37		Emission reductions from pesticide applications	6.75	1.35	\$1,000	0	--	--
38	Storage and Transport	a. Service stations vehicle refueling - Stage II controls b. Install low pressure/vacuum relief valves at gasoline service stations	4.3	3.3 0.7	\$3,000 \$827	0	--	--
39		Further emission reductions from Floating Roof Tanks	0.26	0.19	\$2,500	0	--	--
40		Large AST breathing and controls (> 12,000 gal)						
41		Use DEP size definitions for AST Control Regs.						
42		Better regulations re: truck-tractor trailer servicing terminals and warehouse operations	0.12			0		
43	Waste Disposal	Emission reductions from composting	0			0		
44		Gas collection systems at landfills and combust	0.84	0.59	\$700	0	--	--

Measure Number	Source Category	Control Measure	VOC			NO _x		
			2007 Emissions tpd	2007 Emission Reduction tpd	Cost Per Ton	2007 Emissions tpd	2007 Emission Reduction tpd	Cost Per Ton
		The captured gases						
45		Open burning ban - commercial/industrial/residential	2.90	1.9	Negligible	0.64	0.40	Negligible
	Highway	A. Vehicle Technology						
46		1. Tier 2 emission standards beginning in 2004	82.74	7	\$2,134*	81.92	22	\$2,134*
47		2. Preheat catalyst (cold start emission reductions)						
48		3. Engelhard ozone catalyst						
49		4. Tax support of research into fuel efficient vehicles						
50		5. Tighter truck emission standards	5.12			38.58		
		B. In-Use Vehicles						
51		I/M program	82.74			81.92		
		a. PA 97 with ASM		53			42	
		b. PA 97+		33	\$1,225*		26	\$1,225*
		c. PA 97		28			26	
51a		Delete all waivers from I/M Program						
		a. PA 97 with ASM		1.0	\$786,150*		0.6	\$786,150*
		b. PA 97+		0.4	\$2,515,680*		0.1	\$2,515,680*
		c. PA 97		0.4	\$2,515,680*		0.1	\$2,515,680*
51b		Enhanced vehicle inspection and maintenance program		0.8	\$550,000*		0.7	\$550,000*
		Delete the present < 5,000 mile exemption						
52		Roadside checks for HDV	5.12	0.7	\$2,445*	38.58	1.1	\$2,445*
53		Expand auto testing Statewide (State program)						
54		Remote sensing to identify or remove super emitters		0.2	\$10,000		0	--
55		Accelerated retirement of light-duty vehicles			\$2,500-12,500*			\$2,500-12,500*
56		Accelerated retirement of heavy-duty vehicles						
56b		Diesel truck and bus idling restrictions	5.12	0.2	Small	38.58	1.2	Small
57		Heavy-duty diesel vehicles: early introduction of low-NO _x engines						\$800-2,400
		C. Fuels Options						
58		1. Alternative fuel vehicle incentives						
		a. Light-duty		1.21	\$9,532*		1.17	\$9,532*
		b. Transit fleet		0.05	--		0.28	\$8,100
		c. Heavy-duty diesel trucks		0.15	--		1.07	\$5,761
59		2. Shared clean fuel stations for small fleets						
60		3. Tier 2 sulfur gasoline						
61		4. Cap distillation index (DI), aromatics in fuel	94.9	6.7	\$3,150	95.7	0	--
62		5. Federal Reformulated Gasoline		10-28	\$3,500-9,500*		2.7-5.5	\$3,500-9,500*

Measure Number	Source Category	Control Measure	VOC			NO _x		
			2007 Emissions tpd	2007 Emission Reduction tpd	Cost Per Ton	2007 Emissions tpd	2007 Emission Reduction tpd	Cost Per Ton
63		6. Lower RVP (7.8psi) Gasoline		3.7-9.3	\$2,500-6,200*		0.3-0.8	\$2,500-6,200*
64		7. Lower sulfur gasoline (pre-2004 introduction)						
64SC		Clean diesel fuel (CA reform diesel)	5.12	--	--	38.58	1.54	\$30,000
		D. Transportation System Modifications						
65		1. Increase State gas tax. Market-based transportation pricing		0.01-0.05	\$400,000*		0.01-0.08	\$400,000*
66		2. Technical assistance in fleet scheduling						
67		3. Tax and emission credits to employers who provide transportation/buses to employees		0-0.002	\$10,000-40,000*		0.001-0.003	\$10,000-40,000*
68		4. Tax parking benefits and parking lots		.03-0.1			.05-.14	
68a		Draft Commuter Alternatives Program a. Municipal Plan and Ordinance updates b. Ridesharing c. Biking and Waking incentives/facilities d. Transit, Carpooling Incentives e. Telecommuting f. Staggered/Compressed Work Schedule		1.0	Unknown		1.4	Unknown
69		5. Credit for employer plans to adjust work schedules to reduce peak travel		.02-.08	Savings		.03-.12	Savings
70		6. Incentives for bicycle and pedestrian to work – routes, construction, facilities. Bikepaths/walkways						
70b		7. Incentives for bike to work route: apply scenario based on Portland, Ore. case study		Less than 0.1**	\$47,000 per mile		Less than 0.1**	\$47,000 per mile
71		8. Incentives/support for car and vanpool (promote alternate transport)		0.02-0.32	Savings		0.03-0.45	Savings
72		9. Incentives/support for telecommuting		0.01-0.06	Savings		0.02-0.08	Savings
72a		10. Employer Voluntary adjustment of work schedules						
73		11. Public transit infrastructure		.006	\$200,000		.008	\$200,000
74		12. No new roads		(1.9)	\$82,529,000 loss in Federal funding		(2.7)	\$82,529,000 loss in Federal funding
75		13. Busing/rail program (combine with Measure 73). Upgrade heavy rail and add light rail						
76		14. Increase driver age to 18 and free bus passes to teenagers		0.52			1.0	
77	Off Highway	Credits for replacement of existing pleasure craft engines with new lower polluting engines	7.30			0.19		
78		Container spillage control measures	0.98			0.12		
79		Other spillage control (marine recreation)	7.46			0.36		
80		Catalytic control of VOCs (> 50 hp)	3.35			5.81		
81		Explore farm communities impacts to air pollution from equipment	Gas 4.17 Diesel 1.34			Gas 6.98 Diesel 3.86		

Measure Number	Source Category	Control Measure	VOC			NO _x		
			2007 Emissions tpd	2007 Emission Reduction tpd	Cost Per Ton	2007 Emissions tpd	2007 Emission Reduction tpd	Cost Per Ton
82		Encourage old equipment retirement or relocation to less affected region prior to retirement						
82SC		Subsidize electric lawnmowers	0.98		\$1,200	0.12		
83		Education on proper maintenance and use						
84		Lower sulfur fuel						
85	Other	O ₃ action program						
86		Bank and trading						
87		Innovative permitting						
		A. Plantwide applicability limits mechanism for pre-approved BAT or periodic BAT review						
		B. Allow innovative air control methods for existing sources - voluntary control - biofiltration						
		C. Allow beneficial environmental programs - voluntary clean fleet to offset stationary						
88		Promote renewable energy						
89		Delist low O ₃ forming organics (account for reactivity potential)						
90		Control use of lawn/garden via education or other means	0.98			0.12		
91		Sustainable growth						
92		Brownfields development instead of siting new facilities in greenfield areas		.03	Unknown	.04	Unknown	
93		Consumer product distribution efficiency improvements (wholesale to retail)						
94		Smart growth and development (better planning) through education and outreach initiatives like DEP Growing Greener Initiative to help reduce air emissions. Includes sustainable growth		.064		.097		
95		Limit highway construction and/or maintain during O ₃ action periods.						
98		Subsidies to Promote Tree Planting						

VII. MODELING

The Stakeholders needed to inform their deliberations by estimating the effects on ozone levels of different packages of ozone-reduction measures. Air-quality modeling was conducted during the Stakeholder deliberations to achieve this. Inputs to the modeling process included historical meteorological data, emission estimates and ozone monitoring data, among others.

Grid-based photochemical modeling was performed using the Comprehensive Air Quality Model with Extensions (CAMx). CAMx is a new regional photochemical model containing many advanced features such as grid nesting, sub-grid-scale Plume-In-Grid, and ozone source apportionment algorithms. EPA used CAMx in its NO_x SIP Call photochemical modeling analyses, and it is now being widely used in SIP modeling studies throughout the United States.

CAMx was used to simulate hourly ozone levels across the modeling domain for two meteorological periods, or episodes. Based on observed high one-hour and eight-hour ozone concentrations and availability of data bases to support modeling, the July 14-20,1991 and July 7-18, 1995 Ozone Transport Assessment Group (OTAG) episodes were used. The episodes were multi-day events, with one-hour and eight-hour ozone values above applicable federal ozone ambient air quality standards on several days throughout the Pennsylvania study area, and surrounding regions. In addition, the July 1991 and July 1995 episodes exhibit many of the light and variable wind, hazy and high temperature conditions that are commonly associated with ozone exceedances throughout the eastern United States.

The modeling domain used with CAMx covers the entire 37-State OTAG domain, with the finest resolution (4 kilometer square grids) covering the portions of Pennsylvania, Maryland, New Jersey, Delaware, Virginia and West Virginia that are most likely to influence ozone levels in the Stakeholder area. This allowed consideration of long-range transport with the most detailed resolution of emission sources near the Stakeholder area.

Emission estimates used in the modeling for the Commonwealth of Pennsylvania were from the 1996 DEP-based emission inventory, with projections to 2007 to account for the expected effects of federal and state air pollution regulations over the 1996 to 2007 time period. The inventory for the remaining states is from the Section 110 NO_x SIP Call database.

Emission Reduction Target Runs

We used modeling initially, to estimate emission reduction targets by testing three preliminary emission reduction scenarios and a baseline as follows:

1. Baseline: 2007 emissions, 2007 on-the-books strategies and NO_x SIP Call;
2. NO_x SIP Call with an additional 30 percent reduction in NO_x and 30 percent reduction in VOC;
3. NO_x SIP Call with an additional 40 percent reduction in NO_x, 15 percent reduction in VOC; and
4. NO_x SIP Call with an additional 15 percent reduction in NO_x, 40 percent reduction in VOC.

These reductions were taken from a region including the eastern half of Pennsylvania, plus most of Maryland, also Delaware, New Jersey and New York.

The results of these emission reduction target runs were as follows:

Base Case—NO_x SIP Call

- Fairly low concentrations in Pennsylvania relative to the ambient standard for one-hour average ozone.
- For the eight-hour averages—there is a broad region in eastern and central Pennsylvania above the standard.

For 30/30 run (30 percent reduction in each VOC and NO_x, beyond the SIP Call)

- Eight-hour average—the area that exceeds the standard is smaller, but not significantly changed.

Stringent NO_x-reduction strategy: 40% NO_x/15% VOC

- Ozone levels are improved compared with the 30/30 reduction, but it still leaves some areas in Southeast Pennsylvania above the 84 ppb eight-hour target.

Stringent VOC-reduction strategy (15 NO_x/40 VOC)

- Ozone is higher than in either the 30/30 or 40/15 cases, with larger areas of nonattainment in Southeast Pennsylvania.

Conclusions:

1. Reaching the one-hour standard: the area is very close with baseline 2007 emissions, on-the-book controls and the NO_x SIP Call;
2. The eight-hour standard is difficult to achieve. Eight-hour-standard attainment could require substantial emission reductions;
3. There appears to be more ozone benefit from reductions in NO_x than from VOC; and
4. There is a slight risk of isolated NO_x disbenefits in downwind areas in the higher NO_x reduction strategies.

Modeling Scenarios — Testing Specific Strategies for the June 1995 Episode

To test specific emission reduction strategies, we created three modeling scenarios:

Scenario A

- NO_x SIP Call reductions in Pennsylvania and in upwind states;
- I/M PA 97+ program in the Stakeholder counties; and
- Tier 2 Fuel and Vehicle Standards as currently proposed by EPA.

Scenario B

- Scenario A;
- NO_x reductions beyond the NO_x SIP Call for point sources;

- Low Reid vapor pressure (RVP) gasoline (7.8 RVP) throughout the five-county area; and
- Heavy-duty diesel vehicle emissions testing statewide.

Scenario C

- Scenarios A and B;
- Fixed amount of vehicle miles traveled (VMT) reductions (for all highway vehicle classes) to yield 10 percent NO_x and 10 percent VOC reductions;
- Growth management and brownfields redevelopment; and
- Further solvent VOC reductions.

Modeling Results

The baseline case is 2007 Clean Air Act, without NO_x SIP Call.

Baseline:

- The daily one-hour maximum ozone concentrations show attainment of the one-hour standard throughout the five-county area;
- Peak one-hour levels were 115-124 ppb, just below the one-hour standard;
- Peak concentrations downwind of Baltimore and Philadelphia substantially exceed the one-hour standard; and
- Much of the area exceeds the eight-hour standard for this modeled episode. Ozone concentrations are generally in the 84-100 ppb range, compared with the 84 ppb standard. Occasionally, levels reached concentrations above 100 ppb as an eight-hour average within the Stakeholder area.

Scenario A

- No exceedances of the one-hour standard were observed in the five-county area. However, concentrations downwind of Philadelphia near New York City are just above the standard, but show substantial improvement;
- Ozone increases slightly by going from the baseline to Scenario A (this is a NO_x disbenefit). This occurs in isolated grids, not in areas of peak concentrations, and does not result in standard exceedances;
- The eight-hour standard is met for most of the area in Scenario A, except small areas just above the standard (in the 84-100 ppb range) for several modeled days; and
- The difference between Scenario A and base case eight-hour average ozone is greater than 14 ppb in much of the area.

Scenario B

- Results for the one-hour averages—showed only minor additional reductions;
- For the eight-hour averages—also showed only minor differences in ozone levels between Scenario A and Scenario B; and
- Incremental difference between Scenario A and Scenario B: 2-6 ppb in some areas, but mostly about 2 ppb or less.

Scenario C

- Results for the one-hour averages—showed only minor additional reductions;
- Incremental difference between Scenario A and Scenario C: 2-6 ppb in more areas than Scenario B, but still mostly 2 ppb or less; and
- For the eight-hour averages—showed only minor differences in ozone levels between Scenario A and Scenario C. There is a reduction in the number of grids greater than 84 ppb in Scenario C compared to Scenario B.

VIII. OPERATING AGREEMENTS

The Stakeholders reached agreement to operate according to the following procedures and guidelines.

PURPOSE

To recommend pollution-reduction strategies and solutions that could be implemented in Dauphin, Lebanon, Cumberland, Lancaster, and York counties to meet and maintain the national health-based standard, adopted in 1997, for ground-level ozone for the benefit of their citizens, the region and the environment.

ROLES

Participants

Each member of the Stakeholder Group is expected to:

- (a) regularly attend and prepare for work sessions;
- (b) clearly articulate and represent the interests of his/her group, factually, and for the general understanding of all participants;
- (c) listen to other points of view and try to understand the interests of others;
- (d) openly discuss issues with people who hold diverse views and participate in a cooperative problem solving procedure to resolve differences;
- (e) generate and evaluate options to address the needs expressed by all Stakeholders;
- (f) keep his/her constituent group(s) informed, solicit their input, and ensure that their views are accurately represented in the Stakeholder process; and
- (g) each participant is permitted to send an informed alternate who is current with the group's progress.

Facilitators

The central role of the facilitators is to ensure a successful process and promote consensus building among the participants, not to promote any particular outcome.

Facilitators from CDR Associates will:

- ensure that the process moves as efficiently as possible;
- design work session agendas;
- conduct the meetings;
- enforce ground rules that are accepted by the group;
- communicate with Stakeholders between meetings, as needed;
- ensure that important information is available to the participants in advance of each meeting;
- draft, distribute and revise meeting summaries; and

- delegate any of the above to DEP facilitators, as appropriate.

DEP

DEP has designated representatives who will participate as equal members of the group. Jim Salvaggio will represent DEP. Leif Ericson will represent the DEP Southcentral Regional Office. Wick Havens will coordinate with technical consultants. Christy (Hubley) Young will act as DEP media liaison. Four DEP facilitators who are not in the Air Quality Bureau — Bob France, Andy Hartzell, Alice Kline and Patti Peck-Olenick — will assist the CDR Associates facilitators. Lindy Mendelsohn and Karen Mitchell will supervise the CDR Associates contract and the DEP facilitators. Phyllis Lindsay will provide logistical support to the group.

Technical support

Pechan-Avanti will provide technical support to the group. Additional outside experts may address the group if the group agrees to this at a prior meeting.

CONSENSUS DECISION MAKING

The participants will use a consensus decision making process. Consensus is an agreement that all Stakeholders can support, built by identifying and exploring all parties' interests and by assembling a package agreement that satisfies these interests to the greatest extent possible.

If there are issues the Stakeholders cannot resolve through consensus decision making, the facilitators will summarize the issue and fully document the remaining differences, including the specific concerns of individual Stakeholders. The DEP will use this summary as they advance ozone attainment in line with their mandates and air quality responsibilities.

CONSTITUENTS

Informed constituencies will enhance the prospects for approval of the recommendations. The participants who represent agencies or constituencies will inform their constituents about the issues under discussion. They will represent the interests of their constituent group and bring their constituents' concerns and ideas to the negotiation. Members of the task force may elect to hold regular meetings with their constituent group (a formal caucus), to provide copies of work session summaries to their constituents and request comments, and to communicate informally with their constituents.

REPRESENTATION

To enhance creativity during meetings, individuals who represent agencies or constituencies are not expected to restrict themselves to the prior positions held by their agencies or constituencies. The goal of the Stakeholder Group is to have frank and open discussion of the issues in questions and the options to address the issues. Therefore, ideas raised in the process of the dialogue, prior to agreement by the whole group, are for discussion purposes only and should not be construed

to reflect the position of a Stakeholder or to prematurely commit the group or any one Stakeholder.

SUPPORT

Participants are welcome to bring staff or members from their organization to support the problem solving process. Participants can defer to those individuals when their expertise is required or when requested by the group. The use of support staff must not disrupt deliberations.

OBSERVERS

Meetings will be open to the public. However, in order for the participants to complete their work, discussion and deliberation at work sessions must be focused and manageable. Participation of observers will be at the discretion of the group.

COMMUNICATING WITH THE PUBLIC

Work session summaries will be available to the public upon request. The DEP Newsletter, UPDATE, will list meeting notices and agendas. Information, including meeting summaries, will also be posted on DEP's World Wide Web Public Participation Center: www.dep.state.pa.us.

COMMUNICATING WITH THE MEDIA

Work sessions will be open to the public, including the media. During the sessions, participants should focus their comments on building consensus and searching for solutions, not on influencing the public through the media.

Outside the sessions, each participant is free to speak with the press on behalf of his/her constituency and must make it clear to the press that the comments should not be attributed to the whole group. No participant will speak for the whole group without express authorization by consensus of the group. No participant will characterize the point of view of other representatives. In communicating with the media and the general public, it is important to distinguish preliminary information, concept papers, or proposals from final decisions. Preliminary documents will be marked with "DRAFT" or "FOR DISCUSSION PURPOSES ONLY."

When the group as a whole decides that there is a need to communicate with the press, the members will designate a spokesperson(s) or draft a consensus press release. The group will establish a press relations subcommittee. DEP staff will assist the group to prepare and distribute press releases as requested by the group. Participants can refer members of the press to CDR for questions about the process.

ATTENDANCE

Participating in consensus decision making requires consistent attendance. Stakeholders are not obligated to use the time dedicated to problem solving sessions to backtrack and accommodate those who have not attended a prior meeting. When a participant is unable to attend a meeting, s/he is responsible for staying current with the group's progress. Participants will attempt to inform the facilitators when sending an alternate.

DISCUSSION GUIDELINES

The following guidelines encourage consensus building. Participants will make their best efforts to follow them, and the facilitators will ensure they are followed.

It is crucial that the meetings run efficiently and that everyone has a chance to be heard and to hear others. Therefore:

- avoid side conversations;
- avoid interruptions;
- be brief; and
- begin and end on time.

It is important to give adequate consideration to all options. Therefore:

- avoid judging ideas prematurely;
- look for the need that gives rise to the idea;
- look for ways to improve proposals;
- try to remain open minded; and
- be firm about your goals but flexible about how to get there.

Disagreement is inevitable, but must be focused on the issues involved rather than on one another. Therefore:

- show respect to other participants; and
- avoid behavior that is disruptive to the work of the group.

REVISIONS TO OPERATING AGREEMENTS

Any revision to the operating agreements requires the consensus of the group.

END DATE

The participants will develop an overall schedule for the year. In the interest of reducing the number of meetings, we will move items ahead in the schedule whenever possible.

OZONE STAKEHOLDERS

Fred Anderson, Associated Petroleum Industries
Owen Blevins, Pennsylvania Automotive Association
Jeff Bohn, Pennsylvania Truck Transportation Alliance
Don Bubb, York County Planning Commission
Leif Ericson, PA DEP Southcentral Regional Office
Richard Fillman, Bethlehem Steel Corporation
Michael Fiorentino, Clean Air Council
Paul Hess, Citizens Advisory Council
Anthony Ippolito, SUNOCO, Inc.
Jan Jarrett, Citizens for Pennsylvania's Future
John C. (Jack) Kaufmann, Community Representative
Thomas Keller, PP&L
Mike Kerker, Armstrong World Industries
Jennifer Kready, Community Representative
Tom LeCrone, Community Representative
Kerry Lenahan, Lyondell Chemical
Daniel Lispi, City of Harrisburg
Walt Lyon, Susquehanna Conference
T.W. Musselman, AAA Lancaster County
Chris Neumann, Lancaster County Planning Commission
Mark Richards, Lancaster County Chamber of Commerce
J. Rondeau, UGI Utilities, Inc.
James M. Salvaggio, PA DEP Bureau of Air Quality
Fritz Shaak, Graphic Arts Association
Charles Souders, Warner Lambert
Marcia Spink, U.S. EPA
Kevin Stewart, American Lung Association of Pennsylvania
James W. Szymborski, AICP, Tri-County Regional Planning Commission/HATS MPO
Tom Zech, Alliance of Automotive Service Providers
John Zinkand, Pennsylvania Petroleum Association
Craig Zumbun, South Central Assembly for Effective Governance

FACILITATORS

Mike Hughes
Suzanne Ghais
CDR Associates