Ozone Early Action Plan
Northern Shenandoah Valley

June 12, 2003

Mr. John M. Daniel, Director
Air Division
Virginia Department of Environmental Quality
629 East Main Street, 8th Floor
Richmond, VA 23219

RE: Ozone Early Action Plan for the Northern Shenandoah Valley
June 16th Submittal to USEPA

Dear Mr. Daniel:

Enclosed is the listing of potential local emissions control strategies under consideration for the Northern Shenandoah Valley Ozone Early Action Plan (EAP). These potential strategies have been prepared in accordance with the April 4, 2003 memorandum clarifying submittal requirements signed by Ms. Lydia N. Wegman, Director of the Air Quality Strategies and Standards Division of USEPA. This submittal is intended to fulfill the June 16, 2003 milestone requirement as outlined in the Early Action Compact for the Northern Shenandoah Valley.

The enclosed listing of control strategies has been developed with the assistance of a diverse group of stakeholders, as well as the public. The Northern Shenandoah Valley Air Quality Improvement Task Force was formed in November 2002 and includes a full range of stakeholders from the region. Task Force members include representatives from local governments, the local economic development commission, regional planning commission, area businesses and the environmental community, as well as state and federal agencies. A brief summary of public involvement and organizational activities that have taken place is included in Attachment A. (A more thorough discussion of public and stakeholder involvement will be included in the June 30, 2003 bi-annual progress report.)

The Winchester-Frederick County Economic Development Commission has taken the lead in organizing EAP efforts, with the assistance of Wilbur Smith Associates, a transportation and air quality planning consulting firm. We are working closely with Air Division staff from VDEQ, as well as coordinating with the neighboring EAC area in the Eastern Panhandle of West Virginia. We have also made contact with other EAC areas outside the state to ensure that we are considering a full range of potential emission control strategies.

45 E. Boscawen Street ■ Winchester, VA 22601
phone: 540-665-0973 ■ *fax* 540-722-0604

The Northern Shenandoah Valley Air Quality Improvement Task Force has identified a number of realistic preliminary strategies and initiatives to reduce emissions in the area and to contribute to the attainment of the 8-hour ozone standard by 2007. We have carefully considered each of the following components recommended by USEPA:

- Local control measures that can be reasonably implemented in each area, including resource and political constraints;
- Proposed date of implementation for control measures;
- Identification of the pollutant(s) reduced by each control measure;
- Identification of the source category(ies) of each pollutant.

We will continue to discuss and refine the list of potential local control strategies through regular meetings of the Air Quality Improvement Task Force and through continued engagement of the public. Our goal is to develop an effective Early Action Plan that has the support of the community.

If you have any questions regarding our submittal, please contact Mr. Patrick Barker, Executive Director of the Winchester-Frederick County Economic Development Commission at (540) 665-0973, or Ms. Carla Berroyer of Wilbur Smith Associates at (501) 922-4554.

Sincerely,

The Honorable Larry Omps
Mayor, Common Council
City of Winchester

The Honorable Richard Shickle
Chairman of Board of Supervisors
Frederick County, VA

45 E. Boscawen Street ■ Winchester, VA 22601
phone: 540-665-0973 ■ *fax* 540-722-0604

Early Action Compact Milestone - June 16, 2003
List of Emission Reduction Strategies Under Consideration

Northern Shenandoah Valley Ozone Early Action Plan

Based on stakeholder consultation and taking into consideration available resources and political constraints, the following control measures under consideration can be reasonably implemented. It is anticipated these measures under consideration will assist Winchester – Frederick County in achieving and/or maintaining the 8-hour ozone standard by 2007.

Measure Under Consideration	Description of Measure	Pollutants Reduced	Source Category	Proposed Date for Implementation
VDEQ VOC Regulations				
Petroleum Liquid Storage	State Rule 4-37 to control emissions from bulk terminals and bulk gasoline plants	VOC	Area	
Cutback Asphalt	State Rule 4-10 to limit the use or application of liquefied cutback asphalt in paving and maintenance operations on highways, parking lots and driveways	VOC	Area	
Consumer Products Rule	Regulates approximately 80 consumer product categories and uses more stringent VOC content limits than the current federal rule	VOC	Area	
OTC Portable Fuel Container Rule	Specifies performance standards for portable fuel containers and/or spouts, which reduce emissions from storage, transport, and refueling activities	VOC	Area	June 2005
OTC Architectural/Industrial Maintenance Coatings Rule	Requires reformulated coatings to meet lower VOC content limits than the current federal rule	VOC	Area	June 2005
OTC Mobile Equipment Repair and Refinishing Rule	Requires lower VOC contents for paints and use of improved transfer efficiency application and cleaning equipment	VOC	Area	June 2005
OTC Solvent Cleaning Operations Rule	Establishes hardware and operating requirements for vapor cleaning machines used to clean metal parts. Volatility restrictions for cold cleaning solvents.	*VOC*	Area	June 2005

Measure Under Consideration	Description of Measure	Pollutants Reduced	Source Category	Proposed Date for Implementation
Episodic Measures				
Ozone Action Days	Establish an Ozone Action Days Program for the area Appoint a Program Coordinator Discourages unnecessary trips, promotes transit usage, and other actions to reduce emissions on high ozone days	VOC, NOx, PM	Multiple Sources	June 2004
Local Government Episodic Control	Develop program similar to existing VDOT program on a local level	VOC, NOx, PM	Multiple Sources	June 2004
Public Information and Education				
Public Awareness Program	Establish a program to educate the public regarding the health effects of air pollution and actions they can take to help reduce it	VOC, NOx, PM	Multiple Sources	June 2004
School-Based Public Awareness Programs	Establish a program for use in local schools to educate children regarding air pollution as well as their parents	VOC, NOx, PM	Multiple Sources	September 2004
Employer-Based Programs	Establish a program for area employers to use with their employees to reduce vehicle trips and/or emissions on Ozone Action Days	VOC, NOx, PM	Multiple Sources	September 2005
Ridesharing/Carpooling				
Enhance and/or Expand existing NSVRC Ridesharing Program	Increase rideshare promotion efforts for the Valley Commuter Assistance Program through the Governor's Congestion Relief Program for Northern Virginia	VOC, NOx, PM	Mobile	2005
Park and Ride Lots	Work with local businesses and VDOT to secure additional locations for Park and Ride facilities	VOC, NOx, PM	Mobile	2006
Parking Measures				
HOV Parking	Establish a program preferential parking for multi-occupant vehicles	VOC, NOx, PM	Mobile	2005
Variable Parking Charges	Establish variable parking charges by either peak period or Ozone Action Days	VOC, NOx, PM	Mobile	January 2005

Measure Under Consideration	Description of Measure	Pollutants Reduced	Source Category	Proposed Date for Implementation
Bicycle/Pedestrian Measures				
Education and Promotion Campaign	Establish a program to promote bicycling and walking as alternatives to short single occupant trips	VOC, NOx	Mobile	June 2004
Bicycle and Pedestrian Accommodation	Adopt a policy of accommodating bicycle and pedestrian usage in street design and modernization Develop a regional bicycle plan Provide bicycle racks to promote usage Build additional bicycle paths and/or lanes Investigate improving pedestrian facilities	VOC, NOx	Mobile	June 2004 January 2005 January 2005
Employer-Based Programs				
Employer Programs	Develop and distribute brochures encouraging employer practices aimed at reducing emissions and automobile trips	VOC, NOx	Mobile	September 2004
Peak Hour Congestion Reduction	Work with area employers to promote use of flex time, compressed work week, and staggered work hours Encourage and/or provide incentives to employers to allow telecommuting	VOC, NOx, PM	Mobile	June 2004 June 2004
Ozone Action Days	Develop an employer-based program of strategies for Ozone Action Days	VOC, NOx	Multiple Sources	June 2004
Ridesharing/Vanpooling/ Telecommuting	Encourage employers to offer incentives for utilizing carpooling, vanpooling and/or transit for the work commute Encourage adoption of the parking cash-out program	VOC, NOx	Mobile	
Heavy Vehicle Measures				
Engine Idling Restrictions	Adopt truck and school bus engine idling restrictions	VOC, NOx, PM	Mobile	January 2005
Speed Limit Enforcement	Increase speed limit enforcement on Ozone Action Days	VOC, NOx	Mobile	June 2004
School Bus and heavy duty fleets Retrofit	Retrofit school buses and heavy duty diesel fleets	VOC, NOx, PM	Mobile	Phase in beginning in 2005

Measure Under Consideration	Description of Measure	Pollutants Reduced	Source Category	Proposed Date for Implementation
Heavy Vehicle Measures (cont)				
Voluntary Partnership with Ground Freight Industry	Initiate a partnership to encourage voluntary emissions reductions with industry.	VOC, NOx, PM	Multiple Sources	June 2004
Reflash Heavy Duty Diesel Truck Computers	Reflash computers with software designed for lower emissions	VOC, NOx, PM	Mobile	June 2004
Electrify Truck Stops	Develop incentives to encourage electrification at truck stops to reduce engine idling	VOC, NOx, PM	Mobile	Phase-in beginning 2005
Area/Stationary Source Measures				
Declare Frederick County an VOC Control Area	Triggers application of Commonwealth's existing source and bulk volatile organic compound control regulations	VOC	Area, Stationary	2005
Ozone Action Days Program for Area Sources	Discourage gasoline powered lawn mowing, leaf blowing etc. on Ozone Action Days Encourage refueling after 6 p.m.	VOC, NOx	Mobile	June 2004
Voluntary Industrial Reductions	Implement reductions through P2, EMS or EE agreements	VOC, NOx, PM	Point	
Open Burning Restrictions	Establish open burning regulations for land clearing activities	VOC, NOx, PM	Area	2005
Local Emission Offset Requirements	Develop emission offset requirements for new industries coming to the area	VOC, NOx, PM	Point	
Intelligent Transportation Systems				
Dynamic Message Signs	Deployment of dynamic message signs in the I-81 corridor and other key locations	VOC, NOx	Mobile	July 2003
VMS Deployment	Installation of video cameras to monitor traffic flow at two locations to reduce incident duration and resulting congestion	VOC, NOx	Mobile	January 2004

Measure Under Consideration	Description of Measure	Pollutants Reduced	Source Category	Proposed Date for Implementation
Land Use Measures				
Mixed Use Development	Develop a plan to encourage mixed use and compact development that is conducive to walking, biking and transit use	VOC, NOx	Mobile	January 2006
Green Space Preservation	Develop a plan to preserve green space within the county and city	VOC, NOx	Area	January 2006
Green Building Initiative	Encourage and promote “green building” practices	VOC, NOx	Multiple Sources	June 2004
Lawn and Garden Equipment				
Replace lawn and garden equipment	Encourage purchase and use of electric equipment through a buy back program	VOC, NOx	Non-road Mobile	June 2004
Reduce emission from lawn and garden equipment used by local and state governments	Develop strategies to reduce emission from lawn and garden equipment. Restrict mowing on predicted code orange and red ozone days	VOC, NOx	Non-road Mobile	June 2004
Replace gasoline golf and turf care equipment	Work with golf course managers to replace gasoline carts with electric carts. Replace high emitter sweepers, turf care equipment and utility vehicles with low emitting equipment.	VOC, NOx	Non-road Mobile	Phase in beginning June 2004
Fuels Measures				
Lower RVP Gasoline	Reduce Reid vapor pressure in gasoline from 9.0 to 7.8 to reduce volatility of evaporation	VOC	Mobile	January 2005
Increase Cetane in Diesel Fuel	Require local diesel fuel fleets to use cetane diesel fuel additive	NOx	Mobile	January 2005

Attachment A

OZONE EARLY ACTION PLAN
DEVELOPMENT TIMEFRAME

Date	Activity
June 19th	EPA Protocol for EACs issued June 19, 2002
June 26th	EDC attended workshop on non-attainment issue by DEQ & VDOT *(Staunton, VA)*
August 23rd	EDC attended workshop on non-attainment issue by DEQ & VDOT *(Winchester, VA)*
September 6th	EDC Commission briefed on issue and supported staff recommendation to further research issue
September 17th	Non-attainment issue briefing with Rezin Inc.
September 24th	EDC attended briefing on non-attainment issue by DEQ & EPA to Shenandoah Valley Manufacturers Association *(Winchester, VA)*
October 4th	EDC Commission updated on non-attainment & ozone flex plan. Staff created a Task Force to assist in the development of plan.
October 7th	Winchester City, Frederick County, and Clarke County representatives meet with DEQ and EPA officials on Ozone Early Action Plan. *(Woodbridge, VA)*
October 16th & 21st	EDC submitted letter on Ozone Early Action Plan to Frederick County and provided of copy of letter to City of Winchester
October 23rd	Upon the invitation by Frederick County administration, the EDC briefed the BOS on the Ozone Early Action Plan.
November 8th	Air Quality Improvement Task Force invitation sent out
November 14th	EPA issued guidance memo on EACs
November 15th	Air Quality Improvement Task Force 1st Meeting
November 15th	Follow-up Materials provided to Task Force members unable to attend
November 20th	First draft of Early Action Compact distributed to task force
November 22nd	Air Quality Improvement Task Force 2nd Meeting
December 2nd	Final draft of Early Action Compact distributed to task force
December 3rd	Early Action Compact submitted to City and County for December 10th and December 11th agenda respectively
December 6th	Early Action Compact distributed to EDC Commission
December 9th	Public Briefing on Early Action Compact
December 10th	Early Action Compact discussed by Winchester City Common Council and referred to special worksession on December 16th

Date	Activity
December 17th	Early Action Compact discussed/approved by Frederick County BOS
December 31st	Early Action Compact signed by City of Winchester and Frederick County
February 4th	Air Quality Improvement Meeting #3
February 11th	Air Quality Improvement Meeting #4
March 4th	Air Quality Improvement Meeting #5
March 26th	Selection of Wilbur Smith Associates to assist in developing EAP
April 10th	Air Quality Improvement Meeting #6
May 7th	Air Quality Improvement Meeting #7
May 22nd	Presentation to Northern Shenandoah Valley Regional Commission
June 4th	Air Quality Improvement Task Force Meeting #8
June 4th	Selection of local control strategies under consideration for 6-16 milestone
June 10th	Winchester Common Council approves June 16th submittal
June 11th	Frederick County Board of Supervisors approves June 16th submittal
June 15	Submission of 6-16 milestone documents to VDEQ

Ozone Early Action Plan

Northern Shenandoah Valley

An Information Publication of the
Northern Shenandoah Valley Air Quality Improvement Task Force

ISSUE

In January 2001, EPA identified Winchester and Frederick County in non-attainment for the new 8-hour ozone emission standard. This new designation places restrictions and requirements on the entire community, governments, businesses and citizens. In November 2002, EPA created guidance for the Ozone Early Action Plan, which is a local drive voluntary air quality improvement alternative for localities facing non-attainment for the new standard. Winchester and Frederick County entered into this alternative in December of 2002. If successful, this plan would cease related federal requirements in 2007, instead of 2031 during traditional non-attainment.

MILESTONES

December 31, 2002	EAC Signed
June 16, 2003	List of Candidate Local Control Measures
June 30, 2003	Progress Report
January 31, 2004	Prelim. EAP Submitted & Local Emission Reduction Strategies Selected
March 31, 2004	Final Revisions to Local Emission Reduction Strategies Completed Submission of Final EAP
December 31, 2004	EAP adopted

POTENTIAL LOCAL CONTROL MEASURES

Local, State and regional sources contribute to the issue of ozone, as such control measures from all levels will be required to make the Early Action Plan a success. One of the first milestones in this process includes compiling a preliminary list of candidate local control measures. Throughout the process, volunteer controls related to Ozone reductions have been stressed as perhaps playing the most significant role in the success of our EAP. Therefore, significant public relations activities are a must. Some measures under consideration by the Task Force include:

Implement an Ozone Action Day Program which would be implemented on days when ozone levels are predicted to approach violation levels. Typically, the programs consist of public outreach through media, Internet and other public service vehicles to encourage a variety of emissions reduction strategies.

Impose Engine Idling Restrictions on heavy duty diesel engines since they are large emitters of NOX (nitrogen oxides) a key component of ozone. Reduction of heavy vehicle NOX emissions will largely be accomplished through national engine and fuel technological improvements.

Promoting Retrofitting Diesel Engines in both public and business vehicles.

Create Land Use Programs which promote transit oriented development and walkable communities.

Promote Bicycling and Walking understanding this activity results in minimum significant reduction.

Encourage Voluntary Measures like no open-field burning, refueling vehicles & mowing lawns at night.

OTHER EARLY ACTION PLANS

Over 35 Early Action Plans have been initiated. Locally, Berkeley & Jefferson Counties, West Virginia, Roanoke MSA, Virginia and Washington County, Maryland all are progressing with the locally driven voluntary Early Action Plan process.

Ozone Early Action Plan

Northern Shenandoah Valley

An Information Publication of the
Northern Shenandoah Valley Air Quality Improvement Task Force

OUR STRATEGIC VISION

Our Mission

The mission of the Northern Shenandoah Valley Air Quality Improvement Task Force (Task Force) is seeking to accelerate the improvement of our community's and region's air quality for long-term vitality and prosperity for the entire community, governments, businesses and citizens alike.

The Task Force will proactively research, write and submit for approval an Early Action Plan, (EAP), for the Winchester-Frederick County community.

Additionally:

The Task Force will solicit the participation and cooperation of surrounding communities in the formulation of the EAP and a broader overall air quality initiative.

The Task Force will be civil in its discussions, remain open to differing views, and strive to balance environmental, business, and civic (i.e. public health) concerns.

The Task Force will actively pursue any and all federal and state programs and grants to help defray the costs to participating communities.

By doing so:

A true regional ozone air quality compact might be realized and future regional air quality initiatives can be explored.

A method of accurate air quality monitoring and continuous air quality improvement can be maintained.

Our community's and the region's character, public health, quality of life, natural environment, economic vitality, and future prosperity can be assured.

TASK FORCE

The Task Force of the Northern Shenandoah Valley Region is a collection of diverse group of stakeholders, including government, business and environment interest.

- Winchester City Common Council
- Frederick County Board of Supervisors
- Winc.-Fred. County Economic Development Commission
- Virginia Dept. of Environmental Quality
- US Environmental Protection Agency
- Winc.-Fred. Chamber of Commerce
- Northern Shenandoah Valley Petroleum Council
- National Stone, Sand and Gravel Association
- Sierra Club - Virginia Chapter
- National Park Service
- Lord Fairfax Environmental Health District
- At-Large Physician
- Virginia Initiative to Save & Improve our Communities
- Clarke County *(Regional Participant)*
- Shenandoah County *(Regional Participant)*
- Berkeley County *(Regional Participant)*
- Winchester City Department of Planning
- Frederick County Planning & Development
- Northern Shenandoah Valley Regional Comm.
- Virginia Dept . of Transportation
- Winchester City Econ. Redevelopment
- Shenandoah Valley Manufacturers Association
- Regional Printing Institute
- Potomac Conservancy
- Piedmont Environmental Council
- Shenandoah National Park
- American Lung Association of Virginia
- Valley Health Systems
- Community Consensus Coalition
- Warren County *(Regional Participant)*
- Jefferson County, WV *(Regional Participant)*




STATE & REGIONAL/NATIONAL OZONE PRECURSOR CONTROL MEASURES THAT SUPPORT THE NORTHERN SHENANDOAH VALLEY OZONE EARLY ACTION PLAN

Emission Control Measure & Description	Program Status *Implemented By:*	*Start Year*	Pollutant Controlled	Emissions Reductions
STATIONARY POINT & AREA SOURCE CONTROLS				
Regional NO_X controls to reduce the transport of ozone ("NO_X SIP Call") **Description:** Emission rate & reduction requirements for large utility and industrial boilers. To be regionally implemented in most eastern states.	Federal rule & State regulation	2004	NO_X	Up to 30,000 tons per ozone season in VA (may vary due to trading)
Lower solvent paints for industrial purposes **Description:** National rule that requires lower solvent (VOC) content in architectural & industrial maintenance coatings.	Federal rule	2000	VOC	20% from uncontrolled levels
Lower solvent consumer products **Description:** National rule that requires lower solvent (VOC) content in a number of consumer products.	Federal rule	2000	VOC	10% from uncontrolled levels
Lower solvent industrial cleaning products **Description:** National rule that requires lower solvent (VOC) content in products used for various metal cleaning operations.	Federal rule	2002	VOC	10% from uncontrolled levels
Lower solvent refinishing products for motor vehicles **Description:** National rule that requires lower solvent (VOC) content in vehicle refinishing paints.	Federal rule	2002	VOC	36% from uncontrolled levels
ON-ROAD MOTOR VEHICLE CONTROLS				
National Low Emission Vehicle (NLEV) standards **Description:** National rule that requires more stringent light-duty vehicle tailpipe standards earlier than 2004	Regional agreement & state rule	1999	VOC & NO_X	70% cleaner than Tier 1 vehicles
Tier 2 motor vehicle emission standards **Description:** More stringent	Federal rule	2004	VOC & NO_X	65% cleaner than NLEV vehicles

DEQ
VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

vehicle tailpipe standards for light duty cars, trucks, & SUVs along with lower fuel sulfur content requirements.				
Heavy-duty diesel Truck engine standards **Description:** More stringent tailpipe standards for heavy-duty diesel truck engines along with lower fuel sulfur content requirements.	Federal rule	2004 and 2007	VOC & NO_X	40% cleaner engines in 2004 90% cleaner engines in 2007
OFF-ROAD VEHICLE & EQUIPMENT CONTROLS				
Phase 1 & 2 engine standards for small gasoline-powered engines **Description:** Emission standards for various small gasoline-powered off-road equipment engines used in lawn & garden, and light construction equipment.	Federal rule	1997 & 2002	VOC	30% in 2005
Engine standards for diesel-powered engines **Description:** Emission standards for various heavy-duty diesel-powered off-road equipment engines used for a variety of purposes such as construction & agriculture.	Federal rule	2002	NO_X	25% reduction in new engines by 2005
Engine standards for gasoline-powered marine engines **Description:** Emission standards for recreational marine vessel gasoline-powered engines.	Federal rule	1998	VOC	25% reduction in new engines by 2005
Engine standards for large gasoline-powered engines **Description:** Emission standards for various large gasoline-powered off-road equipment engines.	Federal rule	2000	VOC & NO_X	20% reduction of both pollutants by 2005
Engine standards for locomotive engines **Description:** Tiered emission standards for new or remanufactured locomotive engines implemented between 2001 & 2005.	Federal rule	2001 to 2005	VOC & NO_X	30% reduction by 2005

DEQ
VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY