



NORTHEAST STATES FOR COORDINATED AIR USE MANAGEMENT (NESCAUM)

MEMBERS:

CONNECTICUT BUREAU OF AIR MANAGEMENT
MAINE BUREAU OF AIR QUALITY CONTROL
MASSACHUSETTS DIVISION OF AIR QUALITY CONTROL
NEW HAMPSHIRE AIR RESOURCES DIVISION

NEW JERSEY OFFICE OF ENERGY
NEW YORK DIVISION OF AIR RESOURCES
RHODE ISLAND DIVISION OF AIR AND HAZARDOUS MATERIALS
VERMONT AIR POLLUTION CONTROL DIVISION

NESCAUM Recommendation on Gasoline Refueling October 1988

Gasoline Refueling Emissions

Gasoline refueling emissions contribute significantly to the ozone nonattainment problem and to public exposure to benzene, toluene, xylene, and other toxic air pollutants. Hydrocarbon emissions released during vehicle refueling represent one of the largest sources of uncontrolled ozone precursor emissions. In addition, gasoline evaporative emissions are the largest recognized area source of benzene emissions.

California estimates that 8 to 60 excess lifetime cancer cases may result from exposure to benzene during refueling of vehicles at service stations. In neighborhoods near service stations, they estimate that 2.3 to 17 excess lifetime cancer cases would occur from exposure to benzene released during automobile refueling. Based on these findings, California has required that Stage II vapor recovery be implemented statewide, including in ozone attainment areas.

Stage II is an Effective Control Measure

If properly enforced, Stage II vapor recovery can reduce the hydrocarbons emitted during gasoline refueling by more than 90%. Stage II vapor recovery can be implemented in a relatively short period of time, as demonstrated by New Jersey, New York City and its surrounding counties, California, and St. Louis. Stage II vapor recovery systems have been in place in California for more than ten years. The third generation of Stage II vapor recovery technology is very effective and enjoys high public acceptance.

Stage II and Other Gasoline Marketing Strategies

Stage II vapor recovery will still result in significant hydrocarbon and toxic air pollutant emission reductions even if gasoline volatility is limited to a Reid Vapor Pressure (RVP) of 9.0 pounds per square inch (psi). The NESCAUM Directors believe that limiting gasoline RVP to 9.0 psi in the Northeast beginning in the Spring of 1989 is reasonable. The NESCAUM Directors strongly support a national program to limit gasoline RVP to 9.0 psi as soon as practicable.

The NESCAUM Directors also strongly support a proposed federal requirement for equipping new vehicles with expanded evaporative on-board canisters to reduce gasoline refueling emissions. This strategy would be effective in reducing gasoline refueling emissions nationwide. However, it will take approximately fifteen years for on-board controls to become fully effective based on the normal rate of vehicle turnover. The NESCAUM Directors prefer on-board vapor recovery as a long-term gasoline refueling control option. The NESCAUM Directors strongly believe that, in the interim, Stage II systems must be used to reduce this source of uncontrolled emissions in order to reduce exposures to ozone and hazardous air pollutants.

Recommended Actions

Gasoline refueling emissions significantly contribute to ozone nonattainment and also contribute to unacceptable exposures of highly toxic air pollutants. Because Stage II vapor recovery is a cost effective control measure that has been implemented successfully in other states, the NESCAUM Directors agree to develop and seek proposal of regulations in their states to fully implement Stage II vapor recovery in the Northeast by the end of 1992.

This recommendation was approved by the NESCAUM Board of Directors on October 11, 1988.