April 30, 2001

United States Environmental Protection Agency
Office of Transportation and Air Quality
2000 Traverwood Drive
Ann Arbor, Michigan 48105
Docket No. A-2001-05

Dear Docket:

The Northeast States for Coordinated Air Use Management (NESCAUM) appreciates the opportunity to comment on Infineum Corporation's VEKTRON 6913 gasoline fuel additive test program. NESCAUM is an association of the air pollution control programs in the eight states of Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island, and Vermont.

Emissions of NOx and HC pollution from automobiles are a major concern to the state environmental agencies. Automobiles emit one third of all ozone forming NOx and HC pollution in the region. All of the Northeast states, with the exception of Vermont, are in nonattainment of the National Ambient Air Quality Standards (NAAQS) for ozone. In addition, automobile HC tailpipe and evaporative emissions result in elevated levels of benzene, 1-3 butadiene, acrolein, and other hazardous air pollutants. Currently all areas in the region exceed state health benchmarks for benzene, 1-3 butadiene, and formaldehyde.

In order to reduce the public health risk posed by NOx, HC, and toxic emissions from automobiles, air quality officials over the last decade have undertaken a number of state initiatives to reduce pollution from cars. These include: adoption of the California Low Emission Vehicle program, implementation of inspection and maintenance programs, introduction of reformulated gasoline, and alternative fuels programs. Because of these efforts, the states have substantial experience in evaluating and implementing clean fuels programs. We are pleased to provide comments on the Infineum test program and ask that you consider our comments detailed below.

Test Program and Results

EPA's Federal Register Notice on Infineum's Vektron detergent additive requested comment on aspects of the testing program designed by Infineum. The Northeast states have several comments on the test program designed and undertaken by Infineum. First, Infineum designed a "cross over" study in which the 28 test vehicles were tested a number of times using both the Vektron product and base fuel. However, because of a "carry over" affect caused by a lasting presence of the reference or the test fuel, Infineum requested that half of the test runs be discarded (all RUN2 data). As a result the conclusions of the study are based on (in most cases) two runs on base fuel and two runs on reference or test fuel. Given the relatively small change in NOx emissions from the base fuel to the reference or test fuel claimed by Infineum, it is not possible to establish the reduction without a more robust testing program.[1] The Northeast states believe insufficient data were collected to support the conclusion that Vektron achieves a 10% average fleet reduction in NOx emissions.

Second, in addition to excluding the RUN2 data from their analysis, Infineum excluded two outlier data points from the RUN1 data set. Because the analysis does not include all the test data, the distribution and the variability in the data set has been altered. We disagree with the decision to discard data points. The decision to discard the data from one of the vehicles was made based on the fact that the vehicle was consuming a high level of lubricating oil. It is the states belief that it is important to evaluate the effectiveness of a product in reducing NOx emissions in all vehicles, especially those that are high emitters such as the ones excluded from the Infineum analysis. Given the impact that variable age, maintenance, and other factors have on automobile emissions, a valid series of tests would need to consider these factors in order to provide a robust evaluation of NOx reductions from the detergent additive.

Third, Infineum chose to use a discrimination level of 0.10 which means that there is a one in ten probability that their results are due to chance. Normally, a 0.05 discrimination level is used which would mean that there would be a one in twenty probability that the results are due to chance. As a result of the test design there is twice as high a probability that the Infineum results are due to chance. Infineum states that their results are significant ($p<.06\%$), but they are not significant at the 20% level which is used in a more standard program design.

[1] For products that provide a greater emission reduction benefit, fewer tests are required to establish emission reductions. For example, in the proposed Environmental Technology Verification retrofit program most devices being verified will require few tests to establish emission reductions since products being verified achieve relatively high reductions (up to 95% in some cases). Because of this, fewer tests can be conducted to establish an emission reduction estimate.

Last, the reference fuel used in the program contained a high level of detergent (three times higher than average) and did not contain any oxygenate. Thus, we cannot know how the Vektron product will perform in cars using either conventional or reformulated gasoline.

Establishing a Mobile Source Emission Reduction Credit Program

The Northeast states support EPA's efforts to establish mobile source emission reduction credit (MERC) programs. MERC programs provide an opportunity to achieve emissions reductions in a cost effective manner. In addition, MERC programs can facilitate the introduction of new emission control technologies in mobile sources which might otherwise not occur due to market barriers. As an example of our support for such programs, over the past three years NESCAUM and NESCAUM member states have worked with EPA, CARB, the Manufacturers of Emission Controls Association, and other stakeholders to develop the Voluntary Measures Retrofit Program which first resulted in program recommendations (NESCAUM 1998). After the development of the recommendations, NESCAUM oversaw an interim third party verification program for two years. In addition, states in the region have established mobile source credit trading programs.

Experience gained from efforts to establish MERC programs reveal several important insights that the Agency should consider as it moves forward to establish a program. The Agency needs to be prepared to evaluate not only the first application that is submitted for MERC credits, but the many products that will inevitably follow the first application. This requires that EPA designate an adequate level of staffing to design the program evaluation process and evaluate applications. The program design process will include the establishment of the level of testing required by applicants, quality assurance criteria for the test program, and a program design that assures a level playing field for product manufacturers. An equally valid approach would be to contract out to a third party to evaluate applications. In short, the states need to be assured that the Agency will establish a credible evaluation process for emission reduction products. While developing a MERC program is important, a misstep could jeopardize the credibility of such a program.

It should be noted that the cost of the Vektron product will be passed on to the gasoline purchasing public. Thus the credits will be paid for by the public but owned by the manufacturer. The manufacturer will in turn profit from the sale of emission reduction credits to stationary sources. In effect, the program does not provide any air quality benefit but does provide an economic benefit to Infineum. One of the goals of market based programs is to encourage the introduction of new technologies to reduce mobile source emissions. However, given that no emission reductions will be achieved through this program, we encourage EPA to discount any credits granted for the use of Vektron to ensure that some environmental benefit will result.

Thank you for the opportunity to comment on the Infineum test program. We look forward to working with you in the development of EPA's market based mobile source emissions credit program.

Very truly yours,

Coralie Cooper
Mobile Source Analyst