New Mexico Citizens for Clean Air & Water

CRITIQUE OF AIR QUALITY STANDARDS AND REGULATIONS

Generally the standards are good. The worst shortcomings are:

1. *Visibility is not protected.*
2. *SO_2 standards are too high.*
3. *Allowable emissions from existing power plants are too high and there is no timetable for improving.*
4. *Allowable particulate emissions should not be based on stack height (Section 505)*

The Meaning of Ambient Air Quality Standards

These numbers define the levels of contaminants which if exceeded are unacceptable because they "with reasonable probability will injure human health, animal or plant life, or property, or as will unreasonably interfere with the public welfare or the use of property." This quote is from definition of pollution in the state's air polution law. The standards, themselves, do not directly control pollution sources, which is the function of the emission regulations, but their violation can be used to justify tighter emission reglations.

Particulate Matter Standard

These dust levels are described in micrograms of particulate matter per cubic meter of air ($\mu g/m^3$). From data presented by the National Air Pollution Control Association, it is possible to conclude that these dust levels will probably not constitute a health hazard. They may allow some material damage.

Our principal concern about these levels is that they will not protect one of our most valuable resources--our beautiful vistas which allow the eye to roam over hundreds of square miles of superb scenery. If the air had a uniform concentration of 60 $\mu g/m^3$, the visible range would probably fall somewhere between 6.3 and 25 miles with the most likely value being 12.5 miles. By visible range we mean distance at which objects are no longer visible, that is the eye can no longer detect their presence. Needless to say, objects become hazy and indistinct at somewhat shorter distances.

In general a single source will not produce a uniform concentration of 60 $\mu g/m^3$ over a large land area, so that with 60 as a maximum the visible range will be greater than that calculated because much of the air will have a lower concentration. However with many sources an average near 60 could become a reality with consequent loss of our great vistas.

Most states have numbers ranging from 80 upward, but parts of Florida have 60 and New York is discussing 40 for recreation areas. None of these states boast the vistas that New Mexico does.

SO_2 Standard

This standard is measured in micrograms of SO_2 per cubic meter or in parts per million (ppm). One ppm of SO_2 is one volume of SO_2 diluted by one million volumes of air. At about the proposed levels (.03 ppm annual average, .14 max.) health effects have been observed. In the laboratory effects on the respiration of small animals have been observed. In addition vegetation including pines has been damaged at or below these levels. St. Louis presently has a standard of .02 ppm annual mean and they are planning to drop to .015 ppm. In 1967 Cincinnati recorded an annual mean of .02, and St. Louis .03, while in 1966 Denver had .01 and Washington, D.C. had .04. Our annual average should be 0.015 or less with 24 hr average of .07 or less.

H_2S Standard

This appears to be a good standard. Pure H_2S has a discernible odor at .001 ppm while impurities raise the number to .005 ppm. This level should prevent objectional odors.

Reduced Sulfur

Mercaptan is the principal villain here and it has a discernible odor at .002 ppm. This appears to be a good standard.

Particulate Emissions from Fuel Burning Equipment (Power Plants)

The regulations for new equipment are among the best in the country; however, there is one major fault. The regulations covering existing equipment are among the poorest in the country of those that control power plants and they make no provision for upgrading the performance at a later date. These regulations will result in the dirt from the Farmington plant being decreased from the present unacceptable level to half this level. This would still leave the plant emitting as much particulate matter each day as the whole city of New York on a summer day.

These regulations must either be upgraded dramatically or there should be a time limit put on them. This amounts to a permanent variance.

Particulate Matter from Asphalt Plants

The best states allow a maximum of 40 pounds per hour for the largest plants. Our regulation allows 50.

Particulate Emissions from Other Sources

In general we should oppose regulations in which allowable particulate emissions are based on stack height, as in this section (505). We don't want pollution. Dispersing it doesn't eliminate it. This is not a good standard.