

## IMPROVED AIR QUALITY

Complying with OSHA standards is an incentive for elevator managers to utilize dust control systems in order to prevent grain dust explosions and provide a safe, healthy working environment for their employees. SAPRA and EPA regulations limit the allowable emission rate of particulate that can impact the public off property. The primary difference between these two regulatory agencies is that OSHA's goal is worker safety and health and EPA's goal is prevention of air pollution impacting the public downwind from the facility.

The use of water for dust suppression is an effective strategy for complying with air pollution regulations. In most installations it has the potential to be significantly less costly than pneumatic dust control. A large number of grain elevators may be required to install dust control systems in the near future as a consequence of states implementing the federal Clean Air Act (FCAA) amendments and the use of erroneous emission factors by many agencies [Parnell et al, 1994b]. This issue is controversial and it will require some time for the FCAA to affect change. The following discussion is included to illustrate the magnitude of the air pollution problem in the grain handling industry.

The Federal Clean Air Act (FCAA) amendments passed by Congress and signed by the President in November 1990 have had a major impact upon the regulation of air pollution in the United States. The unique aspect of the FCAA is that the funding mechanism of air pollution regulation is included in the law. All major sources<sup>1</sup> must pay an annual emission fee of \$25 (or more) per ton of pollutant emitted every year. There is no upper limit on this fee. As a consequence of the FCAA, most State Air Pollution Regulatory Agencies (SAPRAs) have had to increase their staffs including additional inspectors and engineers, in order to implement the EPA mandates. Regulation and enforcement of air pollution regulations will cost the grain handling industry millions of dollars annually. Many of these regulations will be incorrectly applied [Parnell, 1994].

SAPRAs are using the incorrect emission factors to calculate the annual emission rate. These factors are on the order of 30 to 100 times higher than is actually emitted by the elevator. Parnell et al. (1994) has indicated that a more accurate uncontrolled emission factor for a country elevator should be 0.1 to 0.3 lbs. of particulate per ton of grain handled. The published EPA AP-42 emission factor for country elevators is 8.6 lbs. of particulate per ton; for feed mills it is 9.8 lbs. per ton.

"Many in the grain industry have long suspected that the numbers in AP-42 are too high. For example, the document says 8.6 lbs of dust are emitted into the atmosphere for every ton of grain handled. NGFA officials believe that's at least two to four times too high". [Grain Journal,

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<sup>1</sup> A major source is any stationary source or group of stationary sources located on one or more contiguous or adjacent properties that directly emits or has the potential to emit 100 tons per year or more of any pollutant (including any major source of fugitive emissions of any such pollutant, as determined by rule by the Administrator). The 100 tons per year criterion can vary if the facility is located in a non-attainment area or if the pollutant is a hazardous air pollutant. Sources subject to NSPS are major sources irrespective of their emission rate [40 CFR 70.2].

1995]. According to Parnell this number is 30 to 100 times too high. The grain industry may not realize the magnitude of these errors and the economic impact of using incorrect emission standards. Additional documentation about the accuracy of emission standards can be found in Parnell *et. al.*, 1994b

U. S. Senator Charles Grassley, R-Iowa has introduced legislation that may provide some relief to grain handling operations. If this legislation passes, EPA will be required to use annual operating conditions for grain handling facilities. In effect, it will eliminate the controversy associated with the guidance from EPA to SAPRAs with regard to "potential to emit". EPA has defined potential to emit as "the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design." [40 CFR 70.2]. Many state regulators have interpreted "potential to emit" to mean that even though a feed mill or grain elevator may only operate 1000 hours per year, this facility has the potential to operate 8760 hours/year. The applicable regulation [40 CFR 70.9] establishes that fees are to be calculated on "actual emissions". The controversy at the state level relates to the definition of "actual emissions". Some states use the permit allowable emissions from the facility's permit to calculate "actual emissions". Some facilities have source sampling results that indicate their actual emission rate is far less than their permit allowable. To illustrate this controversy consider an operation (not subject to NSPS) permitted to emit 50 tons/year (t/y) while operating for 1000 hours (1000 t/h). In most states, a 50 t/y emission rate would exempt the facility from having to pay the Title V emission fees because it would not be classified as a major source. However, this operation has the potential to emit 438 t/y and would be classified as a major source (> 100 t/y). All major sources pay Title V emission fees.

In addition, Senator Grassley's bill provides an exemption from the requirement to obtain a Federal Operating Permit (FOP) for facilities that emit less than 100 tons/year but are covered by the New Source Performance Standards (NSPS). Many SAPRAs have interpreted the Federal Clean Air Act and guidance from EPA as follows: Any grain elevator with a storage capacity of more than 2.5 million bushels must obtain an FOP without regard to how much dust is emitted. This means that an elevator must obtain an FOP if it meets the NSPS criteria even if its calculated emission rate was less than 100 tons/year. This bill would provide relief for these facilities. Although EPA regulations clearly state that sources covered by NSPS are included in the new permitting program mandated by the 1990 amendments to the Clean Air Act, EPA does not dictate to states how they should determine whether a facility is classified as a major source.