

Finally, with respect to the commenter's point that EPA is obligated to establish MACT standards for formaldehyde, EPA has established such standards, based on GCP implemented by means of an operation and maintenance plan and site-specific determinations through the permitting process, as explained above.

HCl and HF

Comment: One commenter stated that EPA has a clear statutory obligation to set emission standards for each listed HAP, including HCl and HF. The commenter asserted that, just because plants are achieving some incidental control of acid gases, it does not free EPA of its statutory obligation to set a specific emission limit for HCl and HF. Two commenters stated that EPA must set a standard for HCl and HF that reflects, at a minimum, the average emission level achieved by the five best performing plants. One commenter cited the *National Lime* opinion which states "The CAA requires EPA to set MACT floors upon the average emission limitation achieved; it nowhere suggests that this achievement must be the product of specific intent."

One commenter stated that EPA's rejection of beyond-the-floor standards for HCl and HF is not logical when a technology is available and substantially reduces HAP. The commenter contended that available acid gas control technology would yield a far greater degree of reduction than is required by EPA's proposed standards, which require no reduction at all.

Response: Acid gases (HCl and HF) are formed in the indurating furnace due to the presence of chlorides and fluorides in pellet additives, such as dolomite and limestone, as well as in the ore bodies. The taconite industry has not installed equipment specifically for the purpose of controlling acid gases from indurating furnace stacks, but, as the commenters correctly note, intent is irrelevant in determining HAP control (*National Lime*). What matters is the extent of control, where control in fact occurs. Test data for HCl and HF emissions were available from seven indurating furnaces at six taconite plants. Since most of the furnaces have multiple stacks, these tests represent emissions from fifteen control devices: 8 venturi scrubbers, 2 multiclones, 3 dry ESP, and 2 wet ESP. These data show that, except for emissions from stacks controlled with multiclones, HCl and HF are emitted from indurating furnaces at very low concentrations, typically less than 3 ppm.

Of the six plants for which HCl and HF test data were available, three plants

conducted PM emissions tests concurrently with the HCl and HF tests. These tests represent emissions from 3 furnaces and 8 emission control devices: 4 venturi scrubbers, 2 multiclones, and a dry ESP/wet ESP ducted together. An analysis of the HCl and HF emissions data and the corresponding PM emissions data indicates that, for this industry, there is a correlation between acid gas and PM emissions from control devices on indurating furnaces. Specifically, the data indicate that stacks with higher PM emissions also have higher acid gas emissions, and likewise, stacks with lower PM emissions have lower acid gas emissions ("Correlation of Acid Gas Emissions to PM Emissions for Taconite Indurating Furnaces," July 2003). Consistent with this correlation, the best performing sources for PM are also the best performing for acid gas emissions.

There is an engineering basis for this correlation. Due to the strong affinity of acid gases for water, PM control equipment that uses water, such as wet scrubbers and wet ESP, has the capability of reducing HCl and HF emissions substantially. Therefore, wet scrubbers and wet ESP control technologies used for the reduction of PM emissions from taconite indurating furnaces to achieve the MACT level of control for HAP metals are expected to achieve a reduction of acid gas emissions as well. Standards requiring good control of PM emissions for this industry will also achieve control of acid gas emissions. For the taconite industry, PM emissions can be used as a surrogate for the acid gases emitted from taconite indurating furnaces. Therefore, we are establishing standards for total PM as a surrogate pollutant for the acid gases, HCl and HF. This finding is valid only for these taconite indurating furnace data; data for other industries may not show a correlation between acid gas emissions and PM emissions. Therefore, this finding should not be used as a precedent in other rulemakings.

Establishing separate standards for acid gases would impose costly and significantly more-complex compliance and monitoring requirements. In addition, establishing separate standards for acid gases would achieve little, if any, HAP emissions reductions beyond what would be achieved using the total PM surrogate pollutant approach. Consequently, EPA has chosen to establish a standard for acid gases using the PM surrogate. Therefore, the MACT floor level of control for acid gases is equivalent to (and expressed as) the MACT floor level of 0.01 gr/dscf for PM.

We then examined the beyond-the-floor option. The next increment of control beyond the floor is the installation of venturi scrubbers or dry ESP capable of meeting a PM concentration limit of 0.006 gr/dscf, which is equivalent to the level of PM control required for new furnaces. We estimate the additional capital cost of going from the MACT level of 0.01 gr/dscf for PM to 0.006 gr/dscf to be \$99.7 million per year. We estimate the corresponding additional reduction in acid gases achieved by this PM level to be 112 tons of acid gases. The cost per ton of acid gas is \$890,000/ton. The energy increase would be expected to be 53,436 mega-watt hours per year, primarily due to the energy requirements of new wet scrubbers and dry ESP. (Beyond-the-Floor Analysis for Acid Gases, July 2003). The high cost, the small reduction in HAP emissions, and the additional energy requirements do not justify this beyond-the-floor alternative for acid gases. Consequently, we chose the MACT floor level of control for PM of 0.01 gr/dscf as the existing indurating furnace MACT for acid gases. New source MACT for acid gases is equivalent to the PM new source MACT level of 0.006 gr/dscf.

By establishing a standard for acid gases, we have addressed the commenters' point that the Agency is legally obligated to do so.

PM as a Surrogate for Metallic HAP

Comment: One commenter asserted that EPA cannot use a surrogate when doing so would result in regulations that do not include emission standards for each listed HAP or in standards that do not at least match the average emission level that the best sources achieve. The commenter pointed out that the Court has already held that the use of PM as a surrogate for non-mercury metals is not reasonable and, therefore, not lawful where factors other than PM control affect emissions of such metals (*National Lime*). The commenter reasoned that, since each plant's actual metallic HAP emission levels are influenced not just by PM control technology but also to a very large extent by the HAP metal content in the ore used, the use of PM as a surrogate for non-mercury metals is unlawful.

The commenter stated that, in the past, EPA has recognized that it can set standards for groups of metals that behave similarly (for example, in the hazardous waste combustors rule). The commenter asserted that EPA has no basis for assuming that its only two options are either to set a PM standard for all HAP or to set individual emission standards for each HAP. The commenter