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Proposed Allegheny Air Quality Regs Could Hamper Growth

Hard on the heels of the recent release of CNBC's dismally low ranking of Pennsylvania's business friendliness (*Policy Brief Volume 12 Number 36*) the Allegheny County Health Department (ACHD) on September 5th will decide whether to adopt tighter air quality requirements on local businesses, especially certain manufacturing industries. At a time when the local manufacturing sector is beginning to rebound after decades of decline, tightening regulations could unnecessarily slow the budding recovery.

The new policy would require any firm looking to install, modify, replace, reconstruct, or reactivate any emission producing equipment to obtain an Installation Permit (IP) before proceeding. Strict guidelines will have to be met before an IP is granted. Prior to getting an IP, an applying company will have to provide thorough analyses of the levels of both carcinogenic and non-carcinogenic toxins that will be emitted from the project.

Under the terms of the proposed ACHD policy, emissions from the project covered by the IP application must be sufficiently low that the "...combined impact of the proposed increased potential air toxic emissions with known or possible carcinogenic health effects does not result in an aggregated Maximum Individual Carcinogenic Risk (MICR) of greater than one in one hundred thousand beyond the fence-line of the facility." The Federal Environmental Protection Agency (EPA) defines MICR as is the estimated risk of contracting cancer for a person exposed to the pollutant 24 hours per day, 7 days a week, and 52 weeks per year for 70 years.

An official with the Pennsylvania Department of Environmental Protection (DEP) has confirmed that DEP uses the EPA standard risk characterization, which as outlined in a Region 6 Risk Management <u>Addendum</u> is a range of one in ten thousand to one in a million. Even though the recommended risk for a single facility should not exceed one in one hundred thousand, the Addendum notes that "a calculated risk that exceeds these targets, however, would not, in and of itself, indicate that the proposed action is not safe or that it presents an unacceptable risk. Rather, a risk calculation that exceeds target value triggers further careful consideration of the underlying scientific basis for the calculation." Insomuch as the EPA uses this as a target that merits further study, the ACHD policy is much stricter in that it will deny the firm an IP if the one in one hundred thousand level is exceeded. To analyze non-carcinogenic toxin effects, the ACHD policy will use a Cumulative Hazard Index (HI) which they define as the sum of the Hazard Quotients (HQ) for substances found in the pollutants. Any HI value over 2.0 (measured beyond the fence-line) will cause a denial of the IP. The EPA notes that if an HQ for a chemical is equal to or less than one (1.0) it is believed to have no appreciable risk for non-cancer health effects.

The ACHD policy will look at the HI which again is the cumulative of the HQs present in a sample. And if this cumulative value exceeds 2.0, then the firm will have to undergo a battery of, no doubt expensive, tests and analyses. Quoting the proposed guidelines, "If the HI from the proposed IP plus other nearby existing point sources is greater than 2.0 beyond the fence-line, the Department will require an emissions modeling analysis that includes the potential emissions from the proposed IP, emission offsets from the facility and other nearby existing sources, and actual emissions from other nearby existing permitted sources that are expected to have a significant impact." While the EPA, and the State DEP, uses an HI range with 1.0 as its upper limit, it does note in the Addendum that if that boundary is exceeded "…rather than indicating that non-carcinogenic health effects can or will occur, indicates only that there is a potential for non-carcinogenic effects, based on a specific set of exposure, model, and toxicity assumptions." Thus, ACHD's proposed guidelines are stiffer than state and EPA operational standards.

As noted above, the EPA uses a risk-based system to provide guidelines and if those guidelines are exceeded, further study is warranted. Using a risk-based standard is confusing and far less instructive than employing a simple concentration measure of pollution. It introduces far too much squishiness into the analysis. No one is ever exposed to a single source of a pollutant non-stop for a seventy year span. Further, there has never been a study that puts an individual in a location with a specific level of a pollutant level and keeps them there for 70 years. Obviously, the MICR calculation is based on studies of concentration levels over much shorter period of time and must be merely an extrapolation with a lot of assumptions. Any such extrapolation cannot be more than a guess. Why not use a cancer risk based on cumulative hours exposed of an individual over a five or ten year period? Or better yet, why not base the guidelines on annualized amounts of pollutants released by the facility?

Since most plants or equipment will not operate for 70 years and no individual will spend 70 uninterrupted years next to a plant site, the use of MICR as a standard is illogical. Indeed, why not use a measure of the risk of cancer based on a reasonable expectation of hours of exposure of someone living near the plant over a reasonable life expectancy of the equipment in question?

Consider too that the primary measurement will be taken at the fence line of the facility. Factories with smaller properties could be disadvantaged compared to those with larger ones who would benefit from having a greater opportunity for pollutants to fall in concentration before reaching the fence line. And what of those facilities that are downwind from other factories? Even though the policy claims it would take into account nearby existing sources, how much will be attributed to the new equipment?

What if the new equipment is an improvement over the old, but still does not meet the policy's standards? This may encourage firms to continue using older, greater polluting equipment rather than investing in new technology that actually reduces total pollution? The unintended consequences could be to deter improvements to air quality. How will the policy address this possibility?

Which brings up the larger issue of how much serious pollution will be left in place while the ACHD is making it harder for newer equipment or plants to locate in the County and thereby reduce employment opportunities while doing nothing about serious pollution producers?

The ACHD wants to establish a policy that will be used to evaluate the human health effects of emissions from new or significantly modified sources in Allegheny County. But the document also claims that "this policy does not change any federal, state, or County requirements..." It goes on to explain that "there is no intent on the part of the Department to give this policy the weight or deference of a regulation." But "...establishes the framework for the Department to exercise its administrative discretion in the future."

That is a big concern. How will discretion be used? To punish firms that resist unionization as County Council did to a steel fabricator a couple of years ago while allowing unionized companies to proceed with the same or worse pollution levels? Clarification in the wording of the guidelines and a rethinking of the pollution attenuation efforts should be undertaken. One that recognizes distorting effects, focuses on understandable standards, gets rid of unnecessary hardships for applicants and eliminates any enforcement latitude that could lead to favoritism in granting permits.

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