

### **Proposed HON Residual Risk Standards**

Federal regulations for hazardous air pollutants (HAPS), under the Clean Air Act (CAA), Section 112, are established through a two-step process. The first step requires a maximum achievable control technology (MACT) standard for the particular source category, where technology-based standards are required to reflect emission levels achieved by the best controlled sources. The second step requires the EPA to address the health risk remaining after implementation of the MACT standards.

The first MACT standard promulgated by the EPA was the hazardous organic NESHAP, or HON, back in April 1994. The rules are located in 40 CFR Part 63, Subpart F, G, H and I and contain emission standards for process vents, storage vessels, transfer racks, heat exchangers, wastewater streams, and equipment leaks located at SOCOMI facilities that manufacture as a primary product, one or more of the 382 SOCOMI chemicals listed in the rule.

On June 14, 2006, EPA proposed the following two options to address residual risk associated with facilities subjected to the HON:

- Option 1 - Impose no new additional controls and find existing standards are adequate in the protection of public health.
- Option 2 - Require that additional storage tanks and process vents be controlled, and specify additional controls for equipment leaks.

EPA used site-specific data from 105 of the total 234 facilities regulated under the HON in their residual risk assessment, and used the Human Exposure Model, Version 3 (HEM-2) in the inhalation and multipathway risk assessments.

#### Option 1 – No additional controls

EPA estimates that the maximum individual lifetime cancer risk to the most exposed individual is estimated at 100-in-1 million. This estimate characterizes the lifetime risk of developing cancer for the individual facing the highest estimated exposure over a 70-year period.

EPA estimated that there are no people with estimated risks greater than 100-in-1 million with lifetime exposure to emissions from HON CMPUs. EPA estimates emissions from 32 HON facilities pose cancer risks between 10 and 100-in-1 million, with 9,000 people estimated to be in this range. Cancer risk associated with emissions from HON CMPUs at the remaining 206 HON facilities are estimated at 10-in-1 million or less.

## Option 2 – Additional Control

Under Option 2, additional controls would be required for storage vessels, process vents and equipment leaks to reduce total HAP emissions by 1,700 tons/yr. The additional control would reduce cancer risk to the most exposed individual by about 40%.

Instead of requiring additional control of all the HAPS regulated under the HON, only malic anhydride, methyl bromide, acrolein, and any HAP for which cancer risk estimates have developed would require additional control. A total list of 50 chemicals is being proposed under Option 2, and is listed in Table 38 of the proposed rule.).

The proposed rule is also modifying the definition of Group 1 storage vessels and process vents to include the following:

- Storage vessels that store one or more of the 50 HAPs listed in Table 38 of the proposed rule making, and have a combined HAP emission rate of greater than 5 tons/yr on a rolling 12-month average.
- Process vents for which the vent stream emits one or more of the 50 HAP listed in Table 38 of the proposed rule, and the total resource effectiveness (TRE) value is less than or equal to 4.0.

As for equipment leaks, for CMPU's containing one or more of the HAPS listed in Table 2 of the proposed rulemaking, monthly monitoring of equipment components would be required until the process has less than 0.5% leaking valves in gas/vapor and light liquid service. The frequency of monitoring could be reduced to quarterly, semi-annually and annually of successive monitoring periods show that facilities are able to maintain less than 0.5% leaking components.

Existing facilities would have to comply with the Option 2 controls for storage vessels and process vents 3 years after the effective date of the final rule. For the equipment leak provisions for existing sources, compliance would be one year after promulgation. New sources that commence construction or reconstruction after the date in the final rule would be required to come into compliance upon startup, or the date of the final rule, whichever is later.