

organic chemical manufacturing source category, one of the two commenters suggested that alternative testing methods are needed for hydrazine and that the definition of TOC should be changed to include hydrazine. The other commenter pointed out that the TRE equation is meaningless for hydrazine manufacturing plants because it requires sources to determine the hourly emission rate of organic HAP, and hydrazine and the raw materials used to produce hydrazine (e.g., chlorine, caustic soda, and ammonia) are all inorganic.

*Response:* Subpart FFFF covers the manufacture of hydrazine because it was one of the source categories subsumed, and the standards are based on a broad variety of chemical manufacturing processes. We developed separate standards for hydrogen halide and halogen emissions that require 99 percent control when uncontrolled hydrogen halide and halogen emissions exceed 1,000 lb/yr per process. However, hydrazine itself is also a HAP. Therefore, process vents containing hydrogen halide and halogen HAP would be subject to standards for hydrogen halide and halogen emissions. Hydrazine emissions from process vents would be subject to either the continuous process vent standards or the batch process vent standards. For the purposes of calculating the TRE for continuous process vents or mass emissions for comparison with the 10,000 lb/yr applicability threshold for batch process vents, the final rule specifies that hydrazine is to be considered an organic HAP.

*Comment:* One commenter requested an exemption for photographic processing chemicals such as fixers, bleaches, and developers because HAP emissions from the processes are minimal, the equipment to manufacture these compounds are mixing vessels, and the processes do not appear to be included in the MACT floor. The commenter suggested that administrative burdens associated with the final rule, including calculating uncontrolled emissions, are not warranted.

*Response:* We have not exempted manufacturing processes for photographic processing chemicals. The manufacturing equipment and emission characteristics, such as mixing vessels and their associated emissions from vapor displacement and evaporative losses, are represented by processes contained in the database.

*Comment:* Many commenters supported the concept of treating process vents from the production of energetics as a separate class of

emission streams subject to alternative requirements or a lesser degree of control for safety reasons. Several commenters provided specifics on the hazards posed by incineration-based controls and made recommendations that included providing definitions for energetics, waiving requirements for energetics or establishing a process where safe control technology can be identified on a case-by-case basis, and considering other control alternatives for compounds such as organic peroxides, powdered metals, metal catalysts, and highly flammable gases such as ethylene oxide and hydrogen. One of the commenters indicated that condensation and carbon adsorption are not effective on some compounds, such as nitroglycerine, which is unstable at low temperatures and cannot be safely controlled by carbon adsorption because it spontaneously combusts. The commenter supported a definition for energetics that includes "propellants, explosives, and pyrotechnics." A second commenter suggested defining explosives as material included in the U.S. Department of Transportation hazardous materials tables (49 CFR 172.101) and listed as Hazard Class I hazardous material to include all Class I materials, or specifically materials in Divisions 1.1 through 1.6. The commenter indicated that using this approach, explosive manufacturers would know who they are because they are already shipping their materials as explosives; manufacturers who make materials that have some energetic properties, but are not shipped as explosives, would clearly be excluded. A third commenter requested that other compounds also be included in the subclass as explosives, particularly organic peroxides. The commenter cited EPA's rationale in providing a similar exclusion from control according to Resource Conservation and Recovery Act (RCRA), subpart CC for organic peroxide producers. A fourth commenter agreed and requested that EPA incorporate language already included at 40 CFR 264.1080(d) (duplicated at § 265.1080(d)) and 40 CFR 264.1089(i) (duplicated at § 265.1089(i)) in 40 CFR part 63, subpart FFFF. The commenter also suggested that other streams exist in the industry that may also meet this definition. For instance, reactive radioactive mixed waste wastewaters generated under the authority of the Atomic Energy Act and the Nuclear Waste Policy Act are exempted from closed conveyance requirements per 40 CFR 264.1080(b)(6). The U.S. Department of Energy requested this exemption because the

radioactive mixed waste (RMW) containers "cannot be tightly sealed due to unacceptable pressure buildup of hydrogen gas to levels which can . . . create a potentially serious explosion hazard." The commenters requested that EPA include language that allows facilities to document the hazardous nature of their wastewater streams and petition for exemption from the wastewater standards.

*Response:* In the proposal, we recognized that the 98 percent control requirement for all process vents within affected processes would force incineration technology, and that this technology might not be appropriate for all process vent streams. Therefore, we also allowed 95 percent reduction of process vents if "recovery" control technology was employed to achieve required reductions. We envisioned at the time that the majority of this technology would be condensation. We solicited comments in the proposal on what commenters would consider achievable reductions from appropriate control technologies and how to define energetics. With the exception of the nitroglycerin example, we did not receive many comments that indicated that 95 percent control could not be achieved in most cases. Regarding organic peroxides, the add-on control requirement of RCRA, subpart CC, is 95 percent; therefore, EPA's earlier decision that indefinitely stayed requirements for producers of organic peroxides is consistent with the assumption that even 95 percent control cannot be achieved in these cases. Similarly, just as some reactive radioactive mixed wastewaters cannot be safely managed in closed systems, as one commenter suggested, there may be other situations that exist where sources may not be able to achieve the control efficiencies required by the final standards because of safety concerns. Based on the specific comments we received, we have concluded that it is appropriate to narrowly define a class of energetics and organic peroxides producers and allow, on a case-specific basis, a procedure to request an alternative compliance option. For these materials, the owner or operator must prepare and submit documentation in the precompliance report similar to the requirements in 40 CFR 264.1089(i) and 265.1089(i), explaining why an undue safety hazard would be created if the air emission controls specified in 40 CFR part 63, subpart FFFF, were installed on process vents, wastewater, and storage tanks containing energetics and organic peroxides, and describing what practices would be implemented to