

reduction programs (programs whose goal is to reduce raw waste loadings of volatiles) because plants with high raw waste loadings of volatiles can more easily comply with percent reduction regulations than plants with moderate or low volatile loadings. Finally, the percent reduction approach for effluent limitations guidelines and standards imposes special burdens on permit writers and facilities. The percent reduction approach would require the gathering and evaluation of long-term raw waste data from each facility in order to develop plant-specific limitations on individual pollutants, and to demonstrate continuing compliance with the limitations.

The Agency solicits comments and data on potential alternative formats for effluent limitations guidelines and standards, such as percent removal limitations and standards and minimum treatment threshold concentrations for individual wastewater streams. See Section XIV of this preamble, solicitation number 32.4.

Another issue arises in connection with the design of the steam stripper being proposed as a technology basis for various limitations and standards in today's rule. Today's notice proposes performance standards, based on a specific steam stripper design, that correspond to the wastestreams being treated. EPA also expects that the MACT standards for this industry also will be a performance standard based on a specific steam stripper design. However, the control approach contained in the air rule will include four components: (1) Suppression or control of air emissions from the point of generation to the treatment device by installing controls on the sewer system, tanks, and containers used to transport the wastewater; (2) a treatment device (such as a steam stripper); (3) control of air emissions from the treatment device itself (e.g., the non-condensable air emissions from the steam stripper condenser); and (4) control or recycling of the organics removed by the treatment device (e.g., the condensed residuals collected by the steam stripper condenser). The treatment device itself is a major component of the air emissions control approach for wastewater. It is the Agency's intent that a facility that installs steam stripping for the purpose of complying with this proposed rule also will achieve the requirements of the MACT standards to be developed for this industry. By the time public comments on the effluent guideline are being considered, EPA will have a better understanding of the stripper design that will serve as the basis for the MACT standards to be

proposed for this industry. This understanding, as well as the public comments on the water rule, will be considered in formulating the final effluent guideline as it pertains to stripper design. The Agency's intent is that the same stripper design will be able to achieve the requirements of both final rules, and will be applicable both to direct dischargers (BAT) and indirect dischargers (PSES). It is possible, however, that the stripper design upon which today's proposed water rule is based could change before promulgation based upon additional data and any comments received. Any information or comment on this subject is welcomed. See Section XIV, solicitation number 32.3. EPA also will develop air emission standards for other emission points (e.g., process vents, process area fugitive emissions, etc.).

A third issue relates to the possibility that the future MACT standard for the pharmaceutical manufacturing industry will allow plants to use an enclosed collection system to suppress emissions while transporting the wastewaters containing volatile pollutants to a central treatment unit, which in turn can be controlled for air emissions. In today's notice, EPA has selected in-plant steam stripping for controlling volatile organic pollutants. Under this proposal, plants would be required to treat all wastewater streams that contain regulated volatile organic pollutants at concentrations greater than the long-term average concentrations established for these regulated pollutants. However, a plant could choose to meet the proposed effluent limitations guidelines and standards by combining all such streams and treating the combined wastestreams at a central treatment unit prior to their dilution by wastestreams that do not contain volatile organic pollutants. This approach to the treatment of wastestreams containing volatile organic pollutants not only would satisfy the proposed regulations, but also appears to be more efficient than treating individual wastestreams at the wastewater generation source. However, in certain cases individual plants may find that streams containing recoverable quantities of individual volatile organic pollutants (e.g., methanol) may be more cost-effectively managed as segregated binary streams (i.e., water and one solvent), rather than mixing them with streams containing all other volatile organic pollutants generated at the facility, prior to either steam stripping or steam stripping/distillation. EPA solicits data and comment on this option. See Section

XIV of this preamble, solicitation number 32.5.

A fourth issue concerns the possibility that the future MACT standards will allow the use of open biological treatment units to treat organic compounds with limited volatility (e.g., methanol) from enclosed primary treatment systems, provided that a facility-specific emission limit or a 95 percent destruction of the organic HAP by biodegradation is achieved. In demonstrating the destruction, losses due to air emissions and effluent discharge would not be considered destruction. EPA did not select this technology as BAT for subcategories A and C because all known A and C direct discharger plants have open biological treatment systems and no air emissions data were available from plants with biological treatment systems that demonstrate 95 percent biodegradation of volatiles. In addition, the use of biodegradation for volatiles treatment eliminates the potential for their recovery and reuse. Nevertheless, EPA solicits comment on whether it is appropriate and feasible, considering recycle opportunities and control of air emissions, to develop a separate subcategory for the effluent limitations guidelines and standards with alternate limits that would allow for end-of-pipe biological treatment in place of or in combination with in-plant steam stripping for volatile organic pollutants. See Section XIV of this preamble, solicitation number 32.6.

#### **XI. Impacts of Regulatory Options Considered in this Rulemaking**

The purpose of this section is to analyze the projected economic impacts and non-water quality environmental impacts associated with the various technology options considered as possible bases for the limitations and standards proposed in today's notice.

##### *A. Regulatory Options*

In developing the proposed effluent limitations and standards set forth in today's notice, EPA developed technology options based upon a variety of different technologies and combinations of technologies. EPA developed technology options for direct dischargers and indirect dischargers, and for different industry subcategory groupings, *i.e.*, facilities with subcategory A and C operations and facilities with subcategory B and D operations. For direct dischargers, EPA proposes limitations and standards based on options for Best Practicable Control Technology Currently Available (BPT), Best Conventional Pollutant Control Technology (BCT), Best