

achieve essentially the same decrease in the emission of wastewater pollutants to the air as Option 1, the increase in energy use requirements associated with Options 2, 3, and 4 would be equivalent to an increase of 31 percent above the 1990 pharmaceutical industry energy use. For this reason, EPA selected Option 1 over Options 2, 3, and 4.

EPA did not select Options 3 or 4 because EPA has not determined whether refractory organic materials measured as COD that are generated by facilities with subcategory A and/or C operations pass through POTWs and therefore is not proposing standards based on potentially unnecessary technology. Moreover, as noted above in EPA's discussion of the proposed BAT limitations for these subcategories, even assuming COD does pass through, EPA lacks data to estimate the COD reductions achievable by steam stripping and thus cannot compare COD reductions achievable by Options 2, 3, and 4.

EPA has also selected Option 1 as the proposed technology basis for PSES (minus cyanide destruction) for facilities with subcategory B and/or D operations. Under co-proposal (1), EPA would propose PSES for 12 highly strippable organic pollutants at in-plant location (1) and 33 less strippable pollutants at the point of discharge to the POTW sewer. In-plant location (1) is described in IX.E.3.d., above. Under co-proposal (2), EPA would propose PSES only for the 12 highly strippable organic pollutants at in-plant location (1).

In selecting steam stripping (PSES Option 1 minus cyanide destruction) as the technology basis for the proposed PSES for facilities with B and/or D subcategory operations, EPA relied upon the 1990 questionnaire data supplied by 188 facilities with subcategory B and/or D operations that send their wastewater to POTWs for treatment. For reasons that EPA is not able to explain, these data show that the wastestreams characteristic of indirect dischargers with subcategory B and/or D operations are significantly different (for regulatory purposes) than the wastestreams of direct dischargers with subcategory B and/or D operations. See Section IX.E.3.c(2) for discussion of basis for proposed BAT limitations for facilities with subcategory B and D operations. In view of this reported difference, EPA has based today's proposed pretreatment standards on a different technology—steam stripping—than the BAT limitations proposed for the direct dischargers in this subcategory, which are based on advanced biological treatment.

The data supplied by the 188 indirect facilities in this subcategory show that these facilities discharge BOD<sub>5</sub>, TSS, COD, 18 nonconventional pollutants and four priority pollutants. See Section 9 of the TDD. EPA's analysis of the questionnaire data indicates that the total nonconventional and priority pollutant loadings discharged, on average, for each indirect discharger with subcategory B and D operations in 1990 was 14,600 pounds/year (in contrast to the average of 1,660 pounds/year reported by the 14 direct dischargers in these subcategories). The 188 facilities also reported in their questionnaire responses that they emit from wastewater a total of 1.5 million pounds/year of volatile organic pollutants (in contrast to the emissions totaling 170 pounds/year reported by the direct dischargers). Subsequent analysis by EPA using its WATER7 model indicates that these indirect dischargers may actually emit closer to 3.3 million pounds/year from wastewater (in contrast to the emissions totaling 35,000 pounds/year for the direct dischargers). See Section 12 of TDD for discussion of difference between questionnaire results and WATER7 model results. Based on its evaluation of the data available to it, EPA proposes to base pretreatment standards for facilities with subcategory B and D operations on in-plant steam stripping (Option 1). This technology is designed to remove large quantities and many varieties of solvents from process wastewater. According to the data supplied by the 188 indirect dischargers with subcategory B and D operations, EPA has concluded that the wastewater characteristic of these facilities—with its comparatively high volume and concentration of solvents—is well-suited to this form of treatment. Accordingly, EPA has determined for the reasons set forth above in connection with establishing BAT limitations for facilities with A and C subcategory operations, see Section IX.E.3.c(1) above, that in-plant steam stripping is the most appropriate technology basis for pretreatment standards for facilities with subcategory B and/or D operations. Even though EPA's 1990 data indicates that subcategory B and/or D facilities discharge only 22 priority and nonconventional pollutants, EPA is proposing to establish pretreatment standards for 45 priority and nonconventional pollutants because all 45 pollutants potentially can be discharged to POTWs. (EPA is soliciting comment on mechanisms by which dischargers that do not use or generate

pollutants for which standards are proposed can be exempted from monitoring for those pollutants. See Section XIV, solicitation number 38.) In addition, EPA found that none of the 67 facilities (of the 188 indirect dischargers with subcategory B and D operations) that would incur costs as a result of the proposed PSES limitations would close as a result of this option. Therefore EPA determined that the costs of the pollutant reduction achieved by this option were economically achievable.

In considering the various technology options available as possible bases for the proposed pretreatment standards for these subcategories, EPA rejected advanced biological treatment as a viable technology option and therefore did not consider it. Because indirect discharging facilities with subcategory B and/or D operations generate levels of BOD<sub>5</sub>, TSS and COD comparable to levels found in ordinary domestic sewage, EPA concluded that biological treatment afforded by POTWs is adequate for these levels of pollutants. Accordingly, EPA has determined that BOD<sub>5</sub>, TSS and, preliminarily, COD from facilities with subcategory B and/or D operations do not pass through. Thus, advanced biological treatment at these facilities prior to POTW treatment would be duplicative.

The Agency considered age, size, processes, other engineering factors, and non-water quality environmental impacts in developing the proposed PSES for all four subcategories. The Agency did not identify any basis for establishing different pretreatment standards based on age, size, processes, or other engineering factors. EPA has concluded that the technology upon which EPA proposes to base PSES for facilities with subcategory B and/or D operations would significantly decrease air emissions and would be consistent with the Administrator's waste minimization and combustion strategy. See Section XII.B of this preamble for a discussion of this strategy. EPA did not choose Option 2 because, although this option would result in approximately the same decrease in air emissions as Option 1, it would result in a significant increase in total energy use over that required under Option 1. (See section 16 of the TDD and the BAT discussion above.)

*c. Point of Regulation.* EPA is proposing to specify an in-plant compliance monitoring location for each of the 12 highly strippable volatile organic pollutants for which EPA is proposing PSES. (This is not affected by the co-proposals addressing the 33 less strippable pollutants.) This location is described as in-plant location (1) in