

performers with subcategory A and/or C operations. EPA believes that a substantial portion of the raw waste load COD can be removed in plant, prior to advanced biological treatment, by application of steam stripping with distillation technology—upon which the proposed NSPS for priority pollutants and the other nonconventional pollutants are based. However, EPA lacks sufficient data at this time to quantify the removal of COD achievable through in-plant steam stripping with distillation, and in turn the further removal of remaining COD load achievable by advanced biological treatment, and therefore is not able to propose subcategory A and/or C NSPS for COD based on that combination of technologies. EPA solicits data and comments concerning the establishment of NSPS for COD for subcategories A and C based on steam stripping with distillation plus advanced biological treatment. See Section XIV, solicitation number 20.

(ii) Conventional pollutants. EPA today is proposing NSPS for BOD₅ and TSS for the fermentation and chemical synthesis subcategories (A and C). As noted above for the proposed revised BPT limitations, EPA is not proposing to change the pH limitations incorporated in the existing NSPS. Based upon data available for this subcategory, the technology basis for these proposed standards—advanced biological treatment—represents the best available demonstrated level of performance (the one best performer) for the control of BOD₅ and TSS in these subcategories.

EPA considered the cost of the proposed technology basis for NSPS for new plants. EPA concluded that such costs are not so great as to present a barrier to entry, as demonstrated by the fact that one currently operating plant is performing at the NSPS level using this technology. The Agency considered energy requirements and other non-water quality environmental impacts and found no basis for any different standards than the proposed NSPS for conventional pollutants.

(2) Biological and Natural Extraction and Mixing/Compounding/Formulating Subcategories, Subparts B and D. EPA today is proposing New Source Performance Standards (NSPS) for 56 priority, nonconventional and conventional pollutants for facilities with Biological and Natural Extraction and Mixing/Compounding/Formulating (B and D) subcategory operations. These proposed standards are based on the best available demonstrated control technology, process, operating method, or other alternative. In developing these proposed standards, the Agency

considered factors including the cost of achieving effluent reductions, non-water quality environmental impacts, and energy requirements.

(i) Priority and Nonconventional Pollutants. EPA today is proposing New Source Performance Standards for 54 priority and nonconventional pollutants for facilities with subcategory B and D operations. In developing NSPS for these subcategories, EPA evaluated two technology options described earlier in Section IX.E.3.c.(2). The two options are: (1) In-plant steam stripping with distillation plus advanced biological treatment; and (2) Option 1 plus Granular Activated Carbon adsorption treatment.

EPA is today proposing Option 1 as the NSPS technology basis for subcategories B and/or D. In making this selection, EPA analyzed all of the questionnaire data supplied by facilities with subcategory B and/or D operations and projected the types and volume of volatile organic pollutants that would be present in treatable levels in process wastewaters from new facilities in these subcategories. Although the 1990 questionnaire data indicated that process wastewater from the 14 direct dischargers contained fewer pollutants in lower concentrations than the process wastewater of indirect dischargers (therefore justifying proposed effluent limitations based on advanced biological treatment alone, not including steam stripping with distillation), EPA has determined that there is no basis to conclude that data would adequately depict the wastewater characteristics of a new direct discharger. Thus, EPA relied instead on the entire universe of facilities with subcategory B and/or D operations, irrespective of their direct or indirect discharger status, on the theory that these facilities are more plentiful and hence statistically more significant. Because EPA has no basis for concluding that the wastewater characteristics are related to the manner of discharge, EPA saw no reason to confine its NSPS analysis to the 14 existing direct dischargers and to ignore the 67 indirect dischargers that reported data. In evaluating all of the data available to it for these subcategories from the 1990 questionnaire, EPA concluded that the vast majority of facilities with subcategory B and/or D operations have process wastewater with a comparatively wide variety of volatile organic pollutants in comparatively high concentrations, as reported by 67 of the 188 existing indirect discharging plants with subcategory B and/or D operations. EPA considers wastestreams of these 67

plants to be more typical of the wastestreams EPA expects to find in new sources in this subcategory. Therefore, EPA concluded that the process wastewater of new facilities with subcategory B and/or D operations was more likely to resemble the more typical subcategory B and/or D wastestreams, not the atypical wastestreams reported by the 14 existing direct dischargers in those subcategories. Based on that conclusion, EPA selected, as the proposed technology basis for NSPS for facilities with subcategory B and/or D operations, in-plant steam stripping with distillation treatment followed by end-of-pipe advanced biological treatment, which EPA has concluded represents the best available demonstrated treatment technology. EPA selected a more stringent NSPS technology than its chosen BAT technology because new sources have the opportunity to segregate their process wastewater in such a way as to minimize the amount of wastewater that will require steam stripping with distillation, thereby reducing the adverse energy impacts that prevented EPA from selecting this technology as BAT. See Section 5 of the TDD for further discussion of process wastewaters that EPA projects would be generated by facilities with subcategory B and D operations.

EPA considered the potential cost of the proposed NSPS technology for new plants. EPA concluded that costs associated with either option would not be so great as to present a barrier to entry. EPA predicted no economic impacts (i.e., closures) for existing source subcategory B and D plants if they were to implement the equivalent technology options considered as possible BAT for those subcategories. The Agency noted, however, that the BAT technology option (based primarily on steam stripping with distillation) was inappropriate treatment for the small reported quantities of volatile organic loadings, because the resulting small pollutant removals did not warrant the additional cost of steam stripping with distillation. See Section IX.E.3.c.(2) above.

The Agency also considered energy requirements and other non-water quality environmental impacts when comparing the GAC technology (Option 2) with Option 1. EPA concluded that there would be only a slight difference in the energy requirements associated with Options 1 and 2. There are no significant differences in the other non-water quality environmental impacts between the two options considered. EPA did not select Option 2 as the proposed basis for NSPS because, as