

additional treatment step at proposal under Option 4. EPA is still considering Option 4 as a basis for the final limitations and standards for certain subcategories. Option 4 includes nitrification, complete denitrification and chemical phosphorus removal. There are several facilities currently employing Option 4 (or more advanced technology) in the MPP industry. EPA is now giving less consideration to Option 3, because the only MPP facility (a poultry slaughtering facility) to identify Option 3 technology on their survey was not able to provide EPA with supporting data (*i.e.*, nitrate/nitrite, TKN, or total nitrogen effluent concentrations). Therefore, EPA did not have a facility to use as the basis for establishing long-term average concentrations for Option 3. The only facilities determined to have complete denitrification also used chemicals to remove phosphorus. EPA classified these facilities as Option 4. EPA notes that for the purposes of comparison it also looked at an option consisting of the nitrification treatment system of Option 2 followed by phosphorus removal (referred to as Option 2 + P). However, EPA is not considering Option 2 + P further for the final rule because of the considerable increase in cost as compared to either Option 2 or Option 2.5 (*i.e.*, an additional \$31 million and \$23 million, respectively) without the additional nitrogen removals associated with Option 2.5.

The options EPA is considering for non-small facilities in Subcategories A–D and K for the final rule are listed in Table IX–1, below. As discussed previously, EPA is not providing the revised estimates of costs, pollutant reductions, or economic impacts for small slaughtering facilities or meat and poultry further processing (Subcategories F–I and L) and independent rendering (Subcategory J) facilities in today's notice due to time constraints. However, those estimates are provided in, Section 21.1, DCNs 125803, 125606, 126002, and 126003 of the public record. EPA notes that it is considering the modified options discussed above, in addition to the proposed options, for those subcategories as well.

TABLE IX–1.—OPTIONS BEING CONSIDERED FOR NON-SMALL FACILITIES IN SUBCATEGORIES A–D AND K

Option	Description
2 .....	Biological Treatment + Nitrification

TABLE IX–1.—OPTIONS BEING CONSIDERED FOR NON-SMALL FACILITIES IN SUBCATEGORIES A–D AND K—Continued

Option	Description
2.5 .....	Biological Treatment + Nitrification + Partial Denitrification
2.5 + P .....	Biological Treatment + Nitrification + Partial Denitrification + Chemical Phosphorus Removal
4 .....	Biological Treatment + Nitrification + Complete Denitrification + Chemical Phosphorus Removal

*B. Options Being Considered for Best Practicable Control Technology Currently Available (BPT)*

As discussed in the proposal (67 FR 8582), in specifying BPT, EPA looks at a number of factors. EPA first considers the total cost of applying the control technology in relation to the effluent reduction benefits. The Agency also considers the age of the equipment and facilities, the processes employed and any required process changes, engineering aspects of the control technologies, non-water quality environmental impacts (including energy requirements), and such other factors as the EPA Administrator deems appropriate (CWA 304(b)(1)(B)). Traditionally, EPA establishes BPT effluent limitations based on the average of the best performances of facilities within the industry of various ages, sizes, processes or other common characteristics employing the BPT technology. Where existing performance is uniformly inadequate, BPT may reflect higher levels of control than currently in place in an industrial category if the Agency determines that the technology can be practically applied.

1. Subcategories A–D (Meat Slaughterhouses)

EPA established BPT for the Meat subcategories (A–I) in 1974 based on biological treatment (*e.g.* aerobic and anaerobic treatment) to control five conventional pollutants or pollutant parameters (BOD<sub>5</sub>, TSS, Oil & Grease, fecal coliforms, and pH). The BPT technology also provided some nitrification in the course of extended aeration. EPA did not, however, develop limits for ammonia based on this technology. In 2001, EPA proposed new BPT limitations based on Option 2 for non-small facilities in Subcategories A–D (meat slaughterhouses). Option 2 consists of biological treatment followed

by complete nitrification to reduce ammonia. Based on comments and the completion of the review and incorporation of data from the detailed surveys, EPA is now also considering establishing limits based on Option 2.5 for BPT for the final rule. EPA estimates that 38 of 39 direct discharging facilities in these subcategories are currently employing Option 2 technology, while 13 of 39 facilities employ Option 2.5.

EPA notes that although more than 97 percent of facilities have the components of Option 2 technology in place, many facilities are not currently achieving the projected Option 2 target effluent concentrations presented in this notice. EPA has calculated the actual baseline discharges using each direct discharge survey recipient's 1999 effluent concentration data (DMR data) and survey information on treatment technology in place (*see* Sections III.B and IV.B for additional discussion of the revised cost and loading methodologies). When estimating the costs of compliance with Option 2, EPA has included costs for treatment optimization for a number of facilities to achieve the Option 2 average target effluent concentration. For example, EPA has included costs, for example, for increased aeration, increased chemical addition, increased sludge handling, additional process controls, in-process sampling and analytical testing, and additional capacity.

EPA also notes that even though one-third of the meat slaughtering (*i.e.*, first processing) facilities are performing partial denitrification (Option 2.5), they are not achieving the target effluent concentrations that EPA currently projects for this option. EPA believes these facilities may not be optimizing their performance, as suggested by reviewing their BOD:TKN ratios (*see* DCN 100765). Thus, for developing the estimates of compliance costs and pollutant loadings presented in today's notice, EPA transferred the target effluent concentration for Total N from well-operated facilities at Option 2.5 that slaughter poultry (Subcategory K) to red meat facilities in Subcategory A–D. EPA is aware that some commenters believe that red meat facilities may not be able to achieve the same limits as poultry facilities due to higher influent concentrations of nitrogen. EPA is continuing to explore this issue. After reviewing the detailed surveys, EPA believes that in many cases facilities may need additional capacity (through installation of anoxic tanks) and additional pumping (for nitrate recycle) to perform partial denitrification. EPA notes that some facilities may also require additional equipment (*e.g.*,