

such facilities in the final rule. The fact sheet requested confirmation of the following information for 1999 by product type (*i.e.*, red meat or poultry): Type of processing (*i.e.*, first processing, further processing, rendering), the related production volume, and the wastewater flows from various production operations. In addition, EPA requested information on the site's wastewater treatment system. This included confirmation of the Agency's classification of the treatment level of the facility's wastewater treatment system according to EPA's treatment option designations as identified in the cover letter to the facility; average effluent flow rate; targeted pollutant parameters (*e.g.*, BOD removal, nitrification, phosphorus removal); and confirmation of the summary of the effluent parameters and concentrations from the survey that EPA intends to use in developing pollutant loading estimates. Based on the revised fact sheets, EPA incorporated changes to its database for today's notice to the extent possible (*e.g.*, EPA is still contacting some facilities to clarify their response). See Section 19.3.2.4 of the record for copies of non-confidential letters and fact sheets.

III. Revisions to the Cost Model

A. Proposed Costing Approach

EPA proposed to establish effluent limitations based on the performance of biological wastewater treatment designed and operated to achieve denitrification. For the proposed costs, EPA used a model facility approach, applied frequency factors to obtain national estimates, and applied the CAPDET computer model.

1. Model Facility Approach

To determine the economic achievability of this technology EPA used a model facility approach to estimate the cost of installing or upgrading the wastewater treatment to achieve the limits. As described in the preamble to the proposed regulation (67 *FR* 8607), EPA developed 19 separate model facility groups based on the different combinations of production processes that are possible (for example a meat slaughtering, rendering and further processing facility as compared to a meat slaughtering and rendering facility). These model facility groups were further subdivided according to facility size based on annual production. The distribution of facilities by size and the production range defining each size group were derived from the screener survey responses, and a median wastewater flow for each

model facility/size category combination was identified.

2. National Estimates Using Frequency Factors

EPA evaluated the baseline wastewater treatment technologies using information provided in response to the detailed survey as described in the proposal preamble (67 *FR* 8609). The number of facilities with specific treatment units, as reported in the detailed surveys were counted and from these counts EPA developed frequency factors, presented as percentages and applied them to the national population to represent the baseline level of treatment-in-place. These frequency factors were based upon raw counts of survey responses without regard to the sample weights, because these weights were not yet available for the proposal, due to the fact that EPA had not completed its analysis of survey results. See Section III.B.3 for an explanation of the survey weights. As an example of the type of frequency factor calculation used at proposal, suppose ten facilities reported a specific treatment system, then a frequency factor of 3 percent of the industry as a whole was calculated by dividing ten by the number of detailed survey responses (328), and expressing as a percent. This frequency factor was then applied to each model facility group.

3. Use of CAPDET Model

At proposal, EPA used a commercially available cost model entitled the Computer Assisted Procedure For Design And Evaluation Of Wastewater Treatment Systems (CAPDET) as one approach to estimate the costs of wastewater treatment for meat and poultry processors (67 *FR* 8609). CAPDET designs and estimates the cost of construction, installation and annual operation of wastewater treatment from the ground up, but cannot evaluate the cost of upgrades to existing equipment. Since all direct discharge MPP facilities have wastewater treatment in place, much of the costs that would be incurred by MPP facilities would be associated with upgrades to their treatment systems. Recognizing that CAPDET is not suited for addressing upgrades, EPA developed a second approach for the proposal analysis that specifically estimated the retrofit costs associated with the required upgrades (67 *FR* 8610).

B. Revised Costing Approach

Based on public comments on the proposed costing approach and the incorporation of new data, EPA has revised its approach for developing

national estimates of compliance costs for the MPP industry. For the costs presented in today's notice, EPA used a facility-specific approach, applied survey weights to obtain national estimates, and developed its own computer model specific to the MPP industry.

1. Comments on Proposed Approach

EPA received several comments critical of the proposed approach for developing costs for the MPP industry. Many comments criticized the use of the frequency factor approach for estimating national costs. Commenters were concerned that this approach identified the frequency of a particular treatment technology in place without considering the varying levels of performance within that technology.

EPA also received comments regarding the use of the CAPDET model to estimate the costs of compliance. Commenters argued that CAPDET is not appropriate for estimating the costs of treating meat and poultry products wastewater. Commenters also expressed disagreement over the retrofit cost estimate arguing that this approach does not account for site specific factors and concerns such as the need to add a source of carbon which would result in an increase in the sludge produced. Some facilities may need a carbon source, such as methanol, to provide enough BOD for denitrification to occur. These aspects of the wastewater treatment requirements would result in additional costs. The commenters stated that EPA had underestimated the costs by an order of magnitude.

2. Facility-Specific Model Approach

In response to comments and because it was able to incorporate new data, EPA has substantially revised the method to estimate compliance costs since the proposal by developing a cost model specific to the Meat and Poultry Products Category. This new approach considers the costs for each facility, rather than the proposed model approach. EPA has now estimated facility specific costs for each of the 53 direct discharging meat and poultry slaughterers (*i.e.*, first processors) that responded to EPA's detailed survey. These estimates are the basis for the national estimates of costs for these subcategories. EPA classified each detailed survey facility's wastewater treatment system based on the description provided in the survey, and the summary of monitoring data also submitted with the survey. In some cases, EPA modified a facility's discharge status from direct to indirect discharger following discussions with