

The company level closure analysis is identical to the facility level closure analysis in that EPA projects the net present value (NPV) of each company's net income over the 15 year project life. Salvage value is assumed to equal zero, as proposed, for the reasons described in DCN 125505. EPA excludes salvage value from the closure analysis because academic studies and EPA experience on previous projects both demonstrate that it is extremely difficult to estimate accurately. Therefore, inclusion of salvage value would add a highly arbitrary component to the closure analysis. The NPV of projected compliance costs is subtracted from the NPV of projected net income; if this value is positive, the company is deemed to remain open, if this value is negative, the company is projected to close, with associated losses in output and employment.

To estimate company level compliance costs, EPA reviewed the 55 non-small detailed survey direct discharging facilities to determine their corporate parent, then compiled a list of all other meat processing facilities owned by each of those corporate parents. EPA primarily relied on the screener survey and the PCS database to estimate the number of direct discharging facilities owned by these corporate parents that were not represented in the detailed survey database. EPA estimates that the 26 corporate parents of those 55 direct dischargers owned about 345 MPP facilities in 1999. EPA then determined the discharge status of these 345 facilities because indirect discharging facilities will not incur costs under this regulation, and estimated that of the 345 facilities owned by these corporate parents, approximately 125 were direct dischargers. Of these 125 direct dischargers, 55 received detailed surveys, and 70 required analysis based on non-survey data.

To estimate compliance costs attributable to the 70 non-surveyed facilities, EPA applied mean compliance costs by meat type (red meat or poultry) to each non-surveyed facility. EPA examined alternative means of allocating compliance costs to these facilities, such as matching costs from detailed survey facilities based on meat type and processes performed. EPA determined that applying average costs by meat type to non-surveyed facilities resulted in more conservative (*i.e.*, higher) cost estimates. See DCN 125501 for additional information on the estimation of non-surveyed direct discharge facilities. EPA solicits information on the actual number of non-surveyed direct discharging

facilities that are owned by each parent company identified and the production type of these facilities (*e.g.*, first processor, further processor, renderer). EPA notes that, for the final rule, it is considering using a company-specific mean compliance cost if additional financial data is received in response to today's notice. EPA did not attempt to scale up the projected company closures to correspond to a national estimate because EPA lacks data on which to base sample weights for the 26 companies. Thus, the company level analysis reflects closures only among the 26 companies analyzed. EPA made an effort to determine whether there are additional companies that own direct discharging MPP facilities and found three additional companies based on the screener survey results that may own direct discharging MPP facilities. Therefore, the company level analysis could underestimate the number of company closures nationally. EPA solicits comment and information on the presence of additional companies that have facilities within the scope of the MPP rule.

In addition, EPA solicits comment on the aggregation of facility level compliance costs to the company level, and the use of a company level closure analysis. In addition, EPA solicits comment on the methodology used to estimate compliance costs for the closure analysis for the 70 non-surveyed facilities which are owned by the same parent companies as the 55 detailed survey recipients.

#### B. Trade Elasticity Methodology

Commenters on the proposed rule raised concerns over EPA's assessment of foreign trade impacts for poultry facilities. Specifically, the commenters stated that EPA did not adequately address the impact of the proposal on poultry exports. Based on these comments, EPA has reviewed its methodology and is considering revising it for the final rule.

For the proposed rule, EPA analyzed trade impacts through the international trade component of EPA's MPP market model. The primary determinant of trade impacts are the trade elasticities specified for the model. EPA derived its trade elasticities based on Armington's framework in which one country's meat products are an imperfect substitute for those of other countries. After review of the proposal model, EPA is considering revising its derivation of trade elasticities for the final rule, and is using the revised trade elasticities for the analyses supporting today's notice. EPA also examined but rejected an alternative derivation of trade

elasticities based on Orcutt's framework in which each country's meat products are perfect substitutes for those of any other country for the reasons described below.

EPA selected the Armington specification based on the fact that the U.S. both imports and exports meat products. If U.S. consumers consider U.S. meat products and foreign meat products to be perfect substitutes, there would be no reason to simultaneously import and export these products. This intuitive explanation is supported by econometric evidence (Galloway, *et al.* 2000). In addition, analysts have observed that U.S. poultry exports are largely composed of dark meat which is considered inferior by U.S. consumers but is preferred by foreign consumers (Aylward, 2002; Salin *et al.*, 2002; Standard & Poor's, 2000). Thus, EPA determined that the Armington framework is conceptually more appropriate for modeling trade in meat and poultry products than a framework that treats all meat products as perfect substitutes.

EPA used Armington's (1969a, 1969b) expressions for partial and cross-price elasticities of demand for a traded product to derive trade elasticities for meat products. The key data points for this estimation are: (1) The price elasticity of domestic demand for meat products regardless of the country of origin, (2) relative trade shares between the home country and its trading partner(s), and (3) the elasticity of substitution between each country's meat products. EPA found suitable econometric estimates of the elasticity of substitution, and adequate data for estimating trade shares (*see* Section 3.1.4 and Appendix C of the proposal EA).

For the proposed rule, EPA indirectly derived the price elasticity of U.S. demand for meat products regardless of the country of origin from the price elasticity of U.S. demand for meat products of U.S. origin (assumed to equal the U.S. domestic price elasticity of meat demand) using Armington's equations in repeated substitutions. In the revisions being considered by EPA, the Agency uses the U.S. domestic price elasticity of meat demand as a direct proxy for the price elasticity of U.S. demand for meat products regardless of the country of origin. This is more consistent with the econometric studies used to estimate the U.S. price elasticity of meat demand; such studies do not typically distinguish country of origin in measuring U.S. retail meat purchases. Details of EPA's derivation of trade elasticities may be found in the docket (DCN 125503).