

for the ERP under the RMRR exclusion. We believe industrial facilities are constructed with the understanding that certain equipment failures are common and ongoing maintenance programs that include replacing components in order to maintain, restore, or enhance the reliability, safety, and efficiency of a plant are routine. Conversely, delaying or foregoing maintenance could lead to failure of the production unit and may create or add to safety concerns.

When such equipment replacement occurs, the replaced component is inherent to both the design and purpose of the process unit, and there is no reason to believe that such activity will cause the unit to emit above its original design capacity. Moreover, most of these replacements are conducted at industrial facilities to maintain proper operations and to implement good engineering practices. For example, if a pump associated with a distillation column fails and is replaced with an identical new pump, we believe that such a common activity is and should be considered an excluded replacement. It is not a "change" to the plant, since it merely maintains the plant as designed. Instead, it is the type of activity expected to occur to maintain the plant. Therefore, we think replacements like this properly fall within the exclusion for "routine maintenance, repair and replacement." We also believe treating them in this fashion is consistent with the basic policies of the CAA: that existing plants are subject to major NSR permitting requirements only when they engage in an activity that constitutes an opportune time to install state-of-the-art pollution control equipment.

We also believe that this principle extends beyond the replacement of equipment with identical equipment. When equipment is wearing out or breaks down, it often is replaced with equipment that serves the same purpose or function but is different in some respects or improved in some ways in comparison with the equipment that is removed. To continue with the example used above, if, instead of replacing the worn out distillation column pump with an identical one, the owner or operator replaced it with a new and improved model, it does not seem to us that this changes the fundamental reasons for treating that replacement as likewise within the scope of "routine maintenance, repair and replacement."

This is particularly true since technology is constantly changing and evolving. When equipment of this sort needs to be replaced, it often is simply not possible to find the old-style technology. Owners or operators may

have no choice but to purchase and install equipment reflecting current design innovations. Even if it is possible to find old-style equipment, it seems unnecessary and undesirable to generally construe NSR permitting requirements in a manner that is bound to deter owners or operators from using the best equipment that suits the given need when replacements must be installed.

The limiting principle here is that the replacement equipment must be identical or functionally equivalent and must not change the basic design parameters of the affected process unit (e.g., for electric utility steam generating units, this might mean heat input and fuel consumption specifications). We also believe, however, that we need not and should not treat efficiency as a basic design parameter as we do not believe NSR was intended to impede industry in making energy and process efficiency improvements. We believe such improvements, on balance, will be beneficial both economically and environmentally. This treatment of efficiency should address the concern and perception that the NSR program serves as a barrier to activities undertaken to facilitate, restore, or improve efficiency, reliability, availability, or safety of a facility.

Today's rule does not distinguish between the replacement of components that are expected to be replaced frequently or periodically and the replacement of components that may occur on a less frequent or one-time basis. It likewise does not distinguish between the replacement of larger and smaller components, instead requiring greater scrutiny if the replacement in question is part of an activity that exceeds 20 percent of the replacement value of the process unit.

Our decisions on these points are derived from reflection on the function of the exclusion in the context of the CAA. As explained above, and as described more fully in our legal analysis set forth below, we do not believe that application of the major NSR program to "modified" plants is designed to require existing plants that are continuing to operate in a manner consistent with their original design to curtail their rate of production or hours of operation beyond limitations set forth in their existing permits. We likewise do not believe that the program is designed to discourage plants from replacing parts or components so as to preserve their ability to produce at that rate. Rather, we believe Title I of the Clean Air Act largely leaves to State and local permitting authorities whether to require adjustments in the operations of

those plants in order to reduce emissions to the degree needed to attain or maintain national air quality standards, and how to weigh the trade-offs such adjustments may produce in terms of potential economic impacts and loss of productivity. Instead, we believe the central function of the application of major NSR permitting requirements to "modifications" is to assure that plants install state-of-the-art pollution controls.

We recognize that on these points, the approach taken by our final rule thereby differs in some respects from the multi-factor, case-by-case approach we have been using in identifying RMRR, and particularly from some of our applications of that test to certain equipment replacements. We believe, however, that this adjustment in our approach is fully warranted for the reasons outlined above, and described more fully in our legal analysis below.

The following examples of functionally equivalent replacements under today's rule include:<sup>7</sup>

- Replacing worn out pipes in a chemical process plant with pipes that are constructed of different metallurgy (e.g., to help reduce corrosion, erosion, or chemical compatibility problems).
- Replacing an analog controller with a digital controller, even though a similar analog controller can still be purchased and even though the new controller would allow for more precise control. A good example was presented to us by the forest products industry during our review of the NSR program's impacts on the energy sector. A company in that sector needed to replace outdated analog controllers at a series of six batch digesters. In this case, the original controllers were no longer manufactured. The new digital controllers, costing approximately \$50,000, are capable of receiving inputs from the digester vessel temperature, pressure, and chemical/steam flow. The new controllers would have more precisely filled and pressurized digesters with chips, chemicals, and steam, thus bringing a batch digester on line faster.

- Replacing an existing mill or pulverizer (e.g., grinding clinker in a

<sup>7</sup> As discussed in more detail below, although such activities would be functionally equivalent, they would still need to meet other criteria to qualify for the ERP. For example, a functionally equivalent replacement does not qualify for the ERP if it results in a change to a basic design parameter of the affected unit. If an activity does not qualify for RMRR under the ERP, the case-by-case RMRR approach would still be available to the owner or operator under those circumstances. And, of course, even if the activity does not qualify for the RMRR exclusion, the activity will not be a modification and, hence, will not trigger NSR unless it results in a significant emissions increase.