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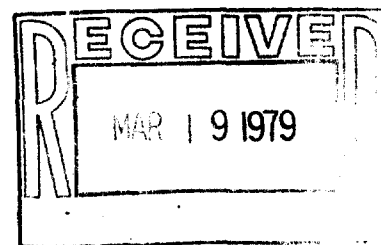
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EPA cuts VCM emissions 95 % — and PVC output 12 %

The book is not closed on how EPA's VCM rules will affect PVC processors, but possibilities are for more of the same—higher resin prices and tight supplies of some grades



By now there's no question; PVC producers *have* lost resin capacity by complying with Environmental Protection Agency (EPA) vinyl chloride emission standards that took effect last October. This is a major, though not the sole, cause of cost and supply pressures on processors.

Several suppliers claim that even if a threat of still more stringent EPA rulings is not realized, industry's response to those now in effect (see box for a summary of them) has postponed addition of capacity that will be sorely needed in 1981. Other suppliers are busy with accelerated expansion plans, but it is difficult to predict whether their add-ons will be big enough or early enough to avert trouble two years from now.

Resin companies began preparing for the EPA rulings when they first were promulgated, two years before the October deadline; but by August 1978 it became apparent that supply troubles due to compliance were imminent. SPI monthly resin-production figures for August through November lagged 3 to 5% behind sales-and-use totals. Yet even as late as January—by which time resin inventories had shrunk and there were reports of scattered shortages—it still was difficult to gage the effect of EPA rulings on capacity. Some general conclusions, culled from conversations with PVC producers, follow:

☐ Regulatory impact varies from plant to plant. Since 1976, suppliers have been building new plants, modifying old ones, and closing the few whose modification would have been too costly to undertake. Still, the October deadline caught many companies struggling to debug the new compliance technology.

☐ Most suppliers estimate that individual-company losses in capacity range from minimal or nil (in the case of new plants designed to meet or exceed EPA standards) to as much as 15%, with a likely industrywide average loss of about 12%. After allowing 8% production losses due to normal downtime, it is safe to assume that effective U.S. PVC capacity now is about 20% under nameplate.

☐ Dispersion resins are hardest-hit. The minimum estimate of industry capacity loss is 15%, going up to 25%. Having always been more difficult to make than suspension resins, dispersion grades, which account for 13% of U.S. PVC output, also are proving to be more difficult to strip of VCM.

☐ Suppliers expect most of the production loss will prove temporary—they compare the problems with those encountered in any new process. Incinerator failures, for example, appear to be endemic; many suppliers use incinerators to burn off free VCM gas before discharging vent streams. Another problem is training personnel in the new compliance technology. There is a general belief that by end-1979 losses could be cut to about 5% overall and to about 12% for dispersion resins.

But these loss-reductions will not offset long-term EPA impacts. Until recently, many suppliers predicted that compliance with EPA would lead to resin shortage in 1981—there were estimates of effective-capacity utilization in that year running near 100%. The reason is that as late as January 1 suppliers had indicated no plans for expansion beyond projects already slated to come on stream in 1979. This dearth of new projects derived not only from the high cost of current compliance with EPA but from uncertainty over EPA's next move.

On June 2, 1977, the Agency proposed amendments to the standards now in effect; these would make the rules more stringent for plants or additions begun after that date. An EPA spokesman said that no final action on these amendments would be taken until after EPA releases a policy statement on future regulation of carcinogens under the Clean Air Act. In the meantime, suppliers have found themselves unable to delay expansion any longer.

Last month's MODERN PLASTICS report on PVC presented late news on several suppliers' plans to help avert a shortage in 1981. A MODERN PLASTICS estimate of the minimum capacity addition yielded by their new projects (assuming all receive funding approval in coming weeks) is 250,000 tons. The new tonnage would be enough to reduce effective-capacity utilization in 1981 from the predicted level at or near 100% to about 92%—if all of the add-ons come on stream early enough in that year. And it is reasonable to make the assumption that other suppliers may soon be moved to announce expansions, at least for 1982 startups. [End]

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What EPA requires—and may require

As of October 20, 1978, PVC suppliers must comply with EPA rulings on VCM air emissions by:

- ☐ limiting emissions from all polymerization steps up to and including the resin stripper to 10 p.p.m.
- ☐ controlling emissions of residual (in-the-resin) VCM by stripping dispersion resins to 2000 p.p.m. and all other resins to 400 p.p.m.
- ☐ and reducing emissions from reactor openings to 0.02 g./kg. of PVC product.

Relief valve discharges and manual venting of gases are forbidden except in emergencies—in which case, emissions must be captured and controlled.

The proposed EPA amendment to these rulings would reduce the overall-emissions maximum from 10 to 5 p.p.m. and require that resins be stripped to 500 (dispersion) and 100 (suspension) p.p.m.