* Existing plants have not been designed for total vinyl chloride monomer containment.
* There is no design or operating experience in the industry aimed at maintaining very low VCM levels.
* No direct technology transfer opportunities are known to enable development of designs for "no detectable levels" in new plants.

Generally, the same reasons apply to the VCM levels in the polyvinyl chloride industry, the report said.

It said that the costs of compliance increase rapidly with decreasing VCM target levels and represent "significant engineering uncertainty or infeasibility" beyond 10 ppm ceiling and 2-5 ppm time-weighted average for the VCM industry and 15-25 ppm ceiling and 10-15 time-weighted average for the PVC industry. The costs would rise sharply in an effort to meet a "no detectable level" standard, going up by an additional 12.71 cents per pound of product.

"For the VCM industry, the engineering control steps for OSHA compliance are significantly the same as those potentially used for air pollution control," the report said. "Therefore, appreciable air pollution control costs are automatically accounted for by OSHA compliance.

"For the PVC industry, engineering control steps from the 50 ppm VCM ceiling level to the 15-25 ppm ceiling with 10-15 ppm TWA primarily address OSHA compliance, but significant air pollution control benefits are gained, especially at lower levels."

The report recommends that OSHA establish phased requirements for reaching VCM target levels to allow the collection of additional VCM monitoring data to fully assess the efficiency of the corrective steps, subject to review in the light of current medical findings.

"The currently available data base, particularly for VCM monitoring, is relatively small," the report said. "In addition, the technology required for compliance with the lower VCM levels is not yet proven. Consequently, considerable risks exist as to the efficacy of engineering controls even for levels other than 'no detectable,' which is not technologically feasible.

"A phased compliance plan would allow for the assessment of the efficiency of corrective steps already taken by industry. In any event, significant lead times exist for hardware required for engineering controls.

"The phased compliance plan should be reviewed in light of current and emerging medical findings.

"A possible result of a phased compliance plan would be to spread the costs of compliance over periods of time. This may be desirable considering that the VCM and PVC price impacts may be of the same order of magnitude as the price results of the 'energy crisis.'

"Developmental efforts should be encouraged to improve techniques in personal protective devices, monitoring systems and residual monomer reductions."

Area monitoring, particularly in PVC plants, was recommended to OSHA by Foster Sneli as a compliance requirement regardless of the target level selected by OSHA in its standard.

Automatic Sequential Monitoring Systems (ASMS) can serve as a long-term data collection system for an entire plant. It can analyze an air sample from a particular point in the plant in one to three minutes with potential for at least 10-point monitoring, it said.

"The ASMS can be used to provide correlation with personnel monitoring data of actual work exposure," the report said. "In addition, it can be used to provide a permanent record of VCM levels, provide alarms in case of exceeding ceiling values, serve as a means to initially identify the general sources of VCM releases, and to monitor progress in complying with OSHA requirements.

"A system installed in the polymerization building can provide warning to work personnel in that area if VCM levels have gone above ceiling levels. Response to alarm can be standardized. These steps could include donning of personal protective equipment, investigation using leak detectors, isolating the point of VCM release and corrective maintenance."

Note: The Environmental Protection Agency plans to issue an air pollution emissions standard for vinyl chloride. It would apply to the nation's 15 vinyl chloride monomer and the 37 polyvinyl chloride resin manufacturing plants. It is still investigating the possible need for a standard applicable to the estimated 8,000 polyvinyl chloride fabricating facilities. The goal would be to reduce vinyl chloride emissions by 90 percent and PVC emissions by 75 percent, at a future date dependent on which section of the Clean Air Act the agency chooses to invoke.

NEW STANDARDS RECOMMENDED FOR COTTON DUST, CHLOROFORM:

Criteria documents recommending Federal standards for occupational exposure to cotton dust and to chloroform have been forwarded to OSHA by NIOSH

SENATE VOTES MORE MONEY, REJECTS SMALL BUSINESS EXEMPTION, RETAINS CONSULTATION:

As far as occupational health and safety are concerned, the Senate has voted an increase in funds for NIOSH and the National Institute of Environmental Health Sciences of approximately 25 percent and a smaller increase for OSHA in the fiscal year starting July 1.

The bill must now go to a joint House-Senate conference committee to iron out the differences between the two versions. However, the amendments providing more money for NIOSH and NIEHS, offered in the House by Rep. David R. Obey (D-Wis.), were retained by the Senate, so they will not be subject to discussion by the conference committee.

It is expected that NIOSH will be able to barely double its research on recommended standards for handling dangerous chemicals as well as expand its surveillance of health problems connected with industrial exposure to chemicals which are not presently known to be harmful to health. The amendments will permit NIEHS to begin investigation of health problems posed by new energy sources.

The Senate beat back repeated efforts to exempt businesses with fewer than 25 employees from provisions of the Act. Since the House has already adopted this amendment, this will be a subject to be ironed out by the conference committee. It is possible that a compromise may be reached at, perhaps, ten employees.

The Senate Appropriations Committee also included in its bill, approved by the Senate, the provision sponsored in the House by Rep. William A. Steiger (R-Wis.) for on-site consultation by the states with employers, and provided $5 million for the purpose.

Under the amendment, OSHA would contract with state agencies whose personnel would perform on-site consultation services for industry. Secretary of Labor Peter J. Brennan wrote to Sen. Warren G. Magnuson (D-Wash.), chairman of the appropriations committee, his version of how the Labor Department believes this amendment should be implemented:

"On-site consultative services would consist of visits to workplaces at employer request by State personnel trained in OSHA standards wherein the consultant would (1) explain to the employer which standard applies to his workplace situation; (2) when necessary, explain the technical language and application of the standard, and (3) advise the employer of where and in what way he is out of compliance with OSHA standards.

"Where it is feasible and within the technical competence of the consultant to do so, he will advise the employer of the means by which he can come into compliance. It is recognized that since the primary obligation of the consultant is to advise the employer about violation of standards, comprehensive technical advice on engineering and administrative methods of compliance must be sought from customary private sector sources.

"Distinction between consultation as to violations and advice as to various methods of abatement must be recognized in order to make this type of governmental consultative service feasible and effective. A written report on the consultation visit would be provided to the employer. . .

"Consultation personnel would be functionally separate and distinct from enforcement activities, but would be kept abreast of all appropriate Federal administrative and policy developments in order to assure that the consultative services provided satisfy the need for reliability and uniformity of advice. Consultation would be provided only upon request of the employer. . .No citations or proposed penalties would be issued on the basis of the consultative visit. However, if an imminent danger situation were discovered, the consultant would request immediate abatement of the danger or, if abatement were impossible, removal of workers from the danger area."

ECONOMIC STUDY CALLS "NO DETECTABLE LEVEL" ON VINYL CHLORIDE NOT FEASIBLE:

A final economic and technological impact study conducted by a private firm for the Labor Department has concluded that compliance with a "no detectable level" standard for occupational exposure to vinyl chloride is not feasible through engineering means with present technology.

The study was conducted by Foster D. Snell, Inc., Florham Park, N.J., a subsidiary of Booz, Allen & Hamilton. It said that based on the industry surveys and its own independent assessments of the state-of-the-art of the technology, it is concluded that achieving "no detectable" (0-1 ppm) vinyl chloride levels in the vinyl chloride manufacturing industry is not feasible principally through engineering means. It said its reasons include the following:

* Technology, including state-of-the-art developments, is not available to eliminate vinyl chloride leaks and fugitive losses.