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MEMORANDUM

EPA Regulation of
Vinyl Chloride Emissions

The Environmental Protection Agency (EPA) is preparing to begin rulemaking proceedings to establish a standard for ambient emissions of vinyl chloride. A staff analysis of regulatory alternatives for vinyl chloride prepared by EPA and distributed to members of industry by The Manufacturing Chemists Association, strongly suggests that EPA will proceed under Section 112 of The Clean Air Act, 42 U.S.C. 1857c-7 (1970), amending 42 U.S.C. 1857 et seq. (1963). EPA's apparent determination to proceed under Section 112, rather than a companion section, Section 111, 42 U.S.C. 1857c-6, may lead to substantial difficulties for both industry and EPA.

Before discussing Sections 111 and 112 in detail and outlining the reasons it is inappropriate to use Section 112 to regulate vinyl chloride emissions, it is important to review the legislative history of these two provisions.

The Senate Bill

Section 112, added to The Clean Air Act by the Amendments of 1970, was essentially developed by the Senate.

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Section 115 of the Senate Bill, S. 4358, 91st Cong., 2d Sess. (1970) directed the Secretary of HEW to publish in the Federal Register a list of air pollution agents "which available material evidence indicates are hazardous to the health of persons." Section 115(b) defined such an agent as one "whose presence, chronically or intermittently, in trace concentrations in the ambient air, either alone or in combination with other agents, causes or will cause, or contribute to, an increase in mortality or an increase in serious irreversible or incapacitating reversible damage to health." The report of the Senate Committee on Public Works points out that the definition of a hazardous agent was designed to encompass only a limited number of pollutants and went on to name four: asbestos, cadmium, mercury, and beryllium. S. Rep. No. 91-1196, 91st Cong., 2d Sess. 20 (1970). It is essentially this provision which survives as Section 112 of The Clean Air Act.

The Senate Bill, however, contained another provision, Section 114, calling for the establishment of "National Emission Standards" for "selected air pollution agents," which have or which "may be expected to have an adverse effect on public health." S. 5348, 91st Cong., 2d Sess. Section 114(a)(1) (1970). The Senate report stated that this section had been included on the basis of experience

gained under the Air Quality Act of 1967. It had been discovered that pollution agents fell into three general categories: (i) Those agents which are emitted from numerous, diverse stationary and moving sources and thus are widely present and detectable, and thus are appropriate for regulation by the promulgation of national ambient air quality standards and adoption of state implementation plans; (ii) Those which are hazardous to health of individuals; and (iii) Those which may have an adverse effect on human health, but are not widely present or detectable except in the immediate area of the emission source. S. Rep. No. 91-1196, 91st Cong., 2d Sess. 18 (1970).

The Senate report then listed a number of substances most likely to be regulated under Section 114:

Arsenic, chlorine gas, hydrogen chloride, copper, manganese, nickel, vanadium, zinc, barium, boron, chromium, selenium, pesticides, radioactive substances. Id.

The report also specifically recognizes that there may be some agents, initially designated for Section 114 regulation which could be determined, on subsequent evidence, to be appropriate for regulation under Section 115, as hazardous substances. Id. at 19-20.

A review of Section 114 of S. 4358, is instructive in counterpoint to Section 115 of the same Bill. The narrow range of substances to be regulated under the extremely stringent terms of Section 115 is demonstrated by the expansive list of substances including arsenic, radioactive substances, and hydrogen chloride preliminarily designated for regulation under the Section 114 standard of "adverse effect on public health."

Further, Section 114, in contrast to Section 115 of the Senate Bill and Section 112 of the Act allowed consideration of technological feasibility. Though Section 114 did not provide for general application of considerations of technological feasibility, it did, in Section 114(c)(4), provide for waivers for individual point sources which had achieved the "greatest degree of air pollution control currently technically feasible" and where the Secretary found that the health of persons would not be adversely affected by the waiver. In contrast, Section 115 contemplated closing of point sources which could not comply, as apparently is the case in Section 112 of the Act. Technological considerations appeared in Section 115 in only one instance as a result of the Senate's facing up to the problem that certain of the so-called hazardous pollutants such as beryllium and cadmium appear

as trace impurities in steel-making and other significant raw material processes. Thus in recognition that "complete control of beryllium from steel plants . . . may not be necessary or practicable," Id. at 20, Section 115 directed the Secretary to differentiate among categories of sources to which the emission prohibition limit should apply.

Except for the waivers provided by Section 114, the only provision of the Senate Bill that spoke directly in terms of technological feasibility as opposed to health considerations was Section 113 dealing with standards of performance for new stationary sources. Standards promulgated pursuant to Section 113 were to reflect "the greatest degree of emission control which the Secretary determines to be achievable through application of the latest available control technology, processes, operating methods, or other alternatives." Use of this term, the committee report explains, meant "that the technology must be available at a cost and at a time which the Secretary determines to be reasonable." Id. at 16.

Another important distinction between Sections 114 and 115 of the Senate Bill was burden of proof. Whereas, Section 114 did not specify whether the Secretary or the regulatee must carry the burden in challenging establishment of a standard under Section 114, Section 115 stated that once

the Secretary determined an agent hazardous, based upon "available material evidence," he must prohibit its emission unless the "preponderance of evidence" adduced at hearing persuaded him that the agent was not hazardous or that a departure from an absolute prohibition would not result in a health hazard. S. 4358, Section 115(a)(1)-(2). Supporting legislative history makes clear that this provision was designed to place the burden of proof that emission of the substance would not be hazardous, upon those who wished to challenge the Secretary's preliminary determination. Similarly, Section 112 of the Act states that after a judgment by the Administrator that a substance is a hazardous air pollutant, he must prescribe a standard for that pollutant "unless he finds on the basis of information presented at such hearings, that such pollutant clearly is not a hazardous air pollutant." Section 112(b)(1)(B).

Section 114 of S. 4358 disappeared during House-Senate conference. No legislative history can be found to indicate the reasons for its demise. As will be discussed, infra, Section 115 of the Senate Bill with certain modifications became Section 112 of the final bill. The disappearance of Section 114 is indeed unfortunate, for it helped by counterpoint, to define the scope of the Senate Bill's hazardous substance section. Also, the tripartite distinction it helped

make between categories of pollutants was an important one. Clearly, if Section 114 had survived, it would be the provision best suited to the regulation of vinyl chloride emissions pending further scientific exploration of vinyl chloride's health effects.

The House Bill

The House Bill, H.R. 17255, 91st Cong., 2d Sess. (1970) contained no provisions similar to Sections 114 and 115 of the Senate Bill, which applied to both new and existing sources. Section 112 of the House Bill, however, providing for emission standards for new stationary sources stated:

"For the purpose of preventing the occurrence of significant new air pollution problems arising from or associated with any class of new stationary sources which, because of the nature or amount of emissions therefrom, may contribute substantially to endangerment of the public health or welfare, the Secretary shall from time to time by regulation, giving appropriate consideration to technological and economic feasibility, establish standards with respect to such emissions." (emphasis added).

This provision also stated that the Secretary could prohibit the construction or operation of any new source where the emissions of such would be "extremely hazardous to health." Other new sources were required to be designed and equipped to prevent and control emissions "to the fullest extent compatible with the available technology and economic feasibility, as determined by the Secretary." Section 112(b)(1)-(2).

The 1970 Amendments Section 111

Section 111, 42 U.S.C. 1857c-6 appears to be an amalgam of Section 113 of the Senate Bill and Section 112 of the House Bill regulating new stationary sources, and possibly, as regards existing sources, Section 114 of the Senate Bill.

It requires the Administrator to publish a list of categories of stationary sources which "may contribute significantly to air pollution which causes or contributes to the endangerment of public health or welfare." Section 111(d)(1)(A). After the inclusion of a category of stationary sources on such a list, the Administrator is required to establish "standards of performance" for new sources within such a category and may distinguish among classes, types, and sizes within categories of new sources." Section 111(b)(1)(B) and Section 111(b)(2). The term "standard of performance" is defined by Section 111(a)(1) as a standard which:

reflects the degree of emission limitation achievable through the application of the best system of emission reduction which (taking into account the cost of achieving such reduction) the Administrator determines has been adequately demonstrated.

Thus Section 111 incorporates in essence the standard of economic and technological feasibility contained in Section 112 of the House Bill and discussed, supra.

Section 111 also directs that the Administrator prescribe regulations by which states shall submit to the Administrator implementation plans to establish emission standards for existing stationary sources of any air pollutant to which a standard of performance would apply if the existing source were a new source. Section 111(d)(1). It is very interesting to note that the tripartite distinction that was the basis for Section 114 of the Senate Bill, appears in this section of the final bill, for it specifies that state plans establishing emission standards for existing sources of air pollution should cover those which are not subject to national ambient air quality standards and the emissions of which have not been included on the list of hazardous air pollutants. One can speculate that Section 111(d)(1) may be based upon Section 114 of the Senate Bill. To the extent that an argument could be made that if Section 114 of the Senate Bill had been enacted into law, it would have represented the most appropriate vehicle for regulation of vinyl chloride, then one can argue that Section 111(d)(1) represents the preferred means of regulation.

The 1970 Amendments - Section 112

Section 112, 42 U.S.C. 1857c-7 directs the Administrator to publish and maintain a list of hazardous air pollutants.

Within 180 days after the inclusion of any air pollutant on this list, the Administrator is required to publish proposed regulations establishing emission standards for the pollutant and give notice of a public hearing within thirty days. Within 180 days after publication of the proposed regulation, the Administrator is required to prescribe an emission standard for the pollutant, at a level "which in his judgment provides an ample margin of safety to protect the public health." Section 112 defines a "hazardous air pollutant" as one to which no ambient air quality standard is applicable, and which, in the Administrator's judgment, "may cause, or contribute to, an increase in mortality or an increase in serious irreversible or incapacitating reversible, illness." This is essentially the same definition that was contained in Section 115 of S. 4358. To date, the Administrator has promulgated final standards governing emission of asbestos, mercury, beryllium, and cadmium, the four substances suggested by the Senate for classification as hazardous substances.

As already noted, supra, Section 112 places a heavy burden of proof on one who would challenge the Administrator's preliminary determination to place a substance on the hazardous air pollutant list, since, after publishing proposed regulations, the Administrator is required

to prescribe an emission standard for a pollutant unless he finds, on the basis of information presented at the hearings, "that such pollutant clearly is not a hazardous air pollutant." Section 112(b)(1)(B) (emphasis added).

The focus of Section 112 is entirely upon assuring protection of public health without regard to technological feasibility. This point was emphasized in a summary of the Act presented by Senator Muskie on the Senate floor on December 18, 1970, which stated "Under Section 112 . . . standards must be set to provide an ample margin of safety to protect the public health. This could mean, effectively, that a plant would be required to close because of the absence of control techniques." Committee Print No. 93-18, 93d Cong., 2d Sess. Vol. 1, page 33 (1974). Section 112 does allow a ninety-day grace period before a standard applies to an existing source and also allows the Administrator to grant waivers not to exceed two years if he finds that such a period is necessary for the installation of controls and that steps will be taken during this period to assure that health of persons will be protected from "imminent endangerment." Section 112(c)(1)(B)(i)-(ii).^{*/} Also, Section 112 directs

^{*/} By contrast, Section 114 of S. 4358 provided for waivers without time limit.

the Administrator to issue, from time to time, information on pollution control techniques for air pollutants designated as hazardous under Section 112.

These latter two provisions notwithstanding, it appears clear that questions of technological feasibility are not part of the permissible focus of Section 112. The standard to which the Administrator must adhere is one which protects the public health regardless of considerations of feasibility.

The Inappropriateness of Section 112 for Regulation
of Vinyl Chloride

Though EPA admits that it has no firm data regarding what level of control will provide "an ample margin of safety" for public health, it appears to intend to regulate vinyl chloride under Section 112 applying a standard of reduction to the "lowest level practicable using available control systems." EPA's own study admits that "data on the relation between health effects of vinyl chloride and air concentrations as exist in the ambient atmosphere are almost non-existent." Analysis Of Air Pollution Regulatory Alternatives For Vinyl Chloride, page 33, EPA Draft, dated September 30, 1974.

Regulation under Section 112 would, arguably, involve an impermissible contradiction. On one hand the Administrator would be admitting that he lacked adequate data by which to assess the human health consequences of exposure to low levels of ambient vinyl chloride, and on the other, he would be declaring it a hazardous pollutant appropriate for regulation under The Clean Air Act's most stringent provision, the legislative history of which clearly demonstrates that it was designed to cope with strong, imminent, and clearly defined hazards.

Further, the Administrator apparently proposes to apply a standard under Section 112 based upon technological considerations since he lacks sufficient data to prescribe a more specific standard. He, in effect, will be deciding that application of best available control technology will provide an ample margin of safety. It is difficult to believe that a court would hold this to be a lawful course of conduct since the Administrator would be making the measure of health safety, a technological criterion eschewed by the statute itself.

The drastic burden of proof placed upon potential regulatees by Section 112 is further evidence of the inappropriateness of the use of this section to regulate vinyl chloride

emissions. Since it is virtually impossible to prove a negative, a preliminary determination by the Administrator that a substance is a hazardous pollutant will be virtually impossible to rebut. The human health consequence of vinyl chloride exposure at low levels will probably not be thoroughly understood for years to come. At present, however, there is no verified evidence that exposures at low levels have any consequence.

EPA's draft analysis of regulatory alternatives for vinyl chloride comments that Section 111 regulation will involve a greater elapse of time than Section 112 before regulations will be effective, in part because EPA has not yet formulated regulations for state implementation of Section 111(d)(1). EPA Draft, page 48. This section states that the Administrator "shall" prescribe such regulations. Thus, it does not behoove EPA to interpose its failure to accomplish a statutory mandate as a reason to proceed by an inappropriate statutory alternative.

Should EPA persist in a determination to proceed under Section 112, there would appear substantial prospect that public interest groups would challenge the Administrator's action on the grounds that Section 112 does not authorize standards based upon considerations of technical feasibility.

The net result might well be greater delay and confusion than if EPA were to determine now to proceed under Section 111. Section 111 provides for consideration of cost and technology. It was designed to deal with pollutants which cause or contribute to endangerment of public health -- the most that can be said about vinyl chloride as an atmospheric pollutant on the basis of evidence currently available. Finally, Section 111(d)(1), though the legislative history is unclear, may well embody the legislative purpose of Section 114 of the Senate Bill, which as discussed, supra, if enacted would have been the most appropriate means to regulate vinyl chloride emissions pending further medical and scientific knowledge.

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