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FROM: T. G. Grumbles
DATE: November 1, 1991

VISTA

Interoffice
Communication

SUBJ: CLEAN AIR ACT MANDATED HF STUDY

The attached report from NPRA describing the current status of EPA's efforts to meet the HF study requirement is found in the revised CAA.

It appears they are on a fast track to finish the study on time.


T. G. Grumbles

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Attachment

Distribution: J. Ware-LCLAB, J. Friend-LCCP
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Washington Bulletin

NATIONAL PETROLEUM REFINERS ASSOCIATION

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EPA Launches HF Study

The Environmental Protection Agency held a "roundtable meeting" recently to obtain public participation as the Agency begins work on a study of hydrofluoric acid (HF). EPA is required by the air toxics section of the Clean Air Act Amendments of 1990 to do the study, to include examining the various uses of HF and potential hazards it may pose in industrial and commercial applications. EPA will review public health and safety issues, taking into consideration a range of possible events, including worst-case accidental releases.

While it is expected that EPA's study will consider all HF uses and all HF industry segments, it is clear that the focus will be on refiners' use of HF as an economical catalyst to make alkylate, a blending component for gasoline. EPA sees HF alkylation as posing the greatest risk for a catastrophic chemical accident. The study will focus primarily on the anhydrous form of HF, since the dilute aqueous solutions pose little risk of a toxic cloud.

There were about 30 persons at the meeting, with representatives present from the refining and petrochemical industries, environmentalist groups, organized labor, consulting firms, the Occupational Safety and Health Administration, and EPA. The Agency reviewed the goals and objectives of the study with the attendees, and sought advice on the outline of topics to be covered. EPA asked those present for a commitment to provide both information and peer review as the report is completed.

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The requirement that EPA conduct an HF study was the result of a series of negotiations during consideration of the 1990 Clean Air Act. Representative Mel Levine (D-CA) wanted a provision included in the bill that would have completely banned the use of HF in petroleum refineries. Mr. Levine represents Torrance, California, the site of a Mobil Oil Company refinery where an HF release occurred in 1987. This HF release was one of several in the country in the 1980s.

Mr. Levine was unsuccessful in persuading a majority of his colleagues to approve an outright ban on HF use. As finally signed into law, however, the clean air bill did provide for an EPA study which is to include recommendations for further actions, if needed. These actions might range from a hazard management program to a date-certain ban on HF alkylation. EPA has until November of 1992 to make its recommendations to Congress.

One of the major issues that EPA must resolve quickly in order to draft its study is the methodology it will use in examining "potential hazards" of HF. EPA could engage in what it calls "consequence analysis." This would make the study relatively simple. Using this approach, the Agency would address the kinds of accidents that could occur at all HF handling facilities, and determine the consequences and impacts on the public and the environment associated with those releases. It would then review how these accidents may or may not be prevented at these facilities.

A more comprehensive approach--and the one EPA appears more inclined to follow--would involve "risk assessment." EPA believes that Congress contemplated this more strenuous assessment methodology. The review of whether a risk assessment has to be completed by EPA for the overall HF problem led to a lengthy discussion at the roundtable meeting. The question is whether a site-specific risk assessment will have to be performed at each individual HF facility in the country--bearing in mind that the study is to be completed by about this time next year--or whether, in the alternative, EPA could derive a "model" facility for each industry segment. The models, of course, would have to capture most of the essential characteristics important to the hazards and risks.

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Oil industry representatives at the meeting, from both API and NPRA, reminded EPA there are about 60 refineries using HF alkylation, each of which would present a different set of factors to be considered in assessing its risk. They suggested that EPA use the risk assessments and consequence analyses that have already been completed by industry for many of these facilities to evaluate the potential hazards of HF alkylation

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The only area of the nation that currently regulates hydrofluoric acid is the South Coast Air Quality Management District in California, so no further hazard assessment must be performed in that region. EPA will likely include the data from California's review of the HF situation in its study.

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EPA says it expects to meet the statutory deadline for reporting to Congress. The Agency plans to complete the risk analysis in December, and have the draft report completed in February of 1992 to issue for technical peer review. EPA officials say they will hold a public advisory meeting in April to review and discuss the findings, and then make their report to Congress in November. Industry representatives see this as a very compressed schedule for a very difficult issue, and think it unreasonably optimistic.

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Coincident with the EPA roundtable on HF, a group calling itself the "Energy Safety Council" released a booklet titled American Bhopals: The Threat of Catastrophic Refinery Accidents and Sabotage to Hydrofluoric Acid Alkylation Units. This rather dramatic publication focuses on industry accidents, as well as on the possibility of criminal sabotage, in its description of the dangers of HF. It recommends a ban on construction of new HF alkylation units at refineries, a phase-out of all existing units by the end of the decade, as well as government-mandated water mitigation systems to meet worst-case scenarios.

The "Energy Safety Council" publication draws heavily on the work of Dr. Fred Millar of Friends of the Earth (FOE). He has been the most outspoken critic of HF alkylation at refineries. Dr. Millar was active in the EPA roundtable meeting as the environmental community's representative to discuss the study design. Dr. Millar's friends have sent copies of the booklet to all members of Congress.

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In recent months, a number of refining companies have been working on a new "API Recommended Practice on Hydrofluoric Acid Alkylation Unit Safety." A draft of this recommended practice has been circulated to those companies that participated in its development, and it is to be finalized shortly. The draft recommended practice has been provided to EPA as the industry recommended risk management program for HF. This document will be reviewed by EPA in making its recommendations to Congress.

There are larger implications for the petroleum refining and petrochemical industries from this hydrofluoric acid study. EPA is looking at this first study on hydrofluoric acid as the model for conducting such studies in the future for other hazardous substances. Under the "accidental release" provisions in the same air toxics title of the Clean Air Act Amendments of 1990, EPA is required to publish, again by November 1992, the list of 100 substances which are known to cause or which may reasonably be anticipated to cause death, injury or serious adverse effects to human health or the environment. The statute provides that EPA's initial list include, for example, benzene, styrene, chlorine, anhydrous ammonia, methyl chloride, ethylene oxide, vinyl chloride, methyl isocyanate, hydrogen sulfide, and hydrofluoric acid. The Chemical Safety Board that must be established under this section of the act must issue a report to EPA and to OSHA recommending the adoption of regulations for the preparation of risk management plans and general requirements for the prevention of accidental releases of regulated substances and for mitigation of adverse effects of releases.

NPRA will remain closely involved in the HF study, and will be providing more detailed information to NPRA members who operate HF alkylation facilities as the study progresses. We note that some EPA officials have indicated an interest in reviewing the impact on gasoline supply if refiners using HF alkylation were required to discontinue that operation, and in reviewing carefully the impact on smaller refiners if they were to have to meet extensive hazard management program criteria.

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