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August 22, 1990

Mr. Frank Jeanson  
VISTA Chemicals  
P.O. Box 91  
Aberdeen MS. 39730

Dear Frank:

As you requested, we have put together a proposal concerning the vinyl chloride emissions from your plant and how we could determine the potential cancer risks based on current data, procedures and guidelines. As you know, the current National Emission Standards for Hazardous Air Pollutants (NESHAPS) for VC are 10 ppm for VC production processes and 400 ppm for polymer process stripping. The NESHAPS were set back in 1975 based on technological feasibility and not on a quantitative estimate of cancer risk, because the science of cancer risk assessment was not sufficiently advanced at that time. Although EPA lost a protracted Court battle on VC in 1987, which directed that EPA promulgate new NESHAPS for VC based upon a two step risk based process, my discussions with EPA staff today indicate that they do not have current plans to revise the existing NESHAPS. They are, instead, waiting on the new Clean Air Act Amendments to be enacted later this Fall. We have been following Congress' progress, but it is too early to predict the impact of the Clean Air Act Amendments on VC emission standards. Interestingly, EPA apparently has never conducted any risk assessments of VC emission sources; thus, they do not know what risk levels are associated with the current NESHAPS.

Regardless, VC currently is classified as a category A carcinogen by EPA and there is ample data available from which to quantify risks. I recently found out that EPA's Cancer Risk Assessment Verification Endeavor group (CRAVE) is supposed to evaluate the cancer risk to VC via inhalation and oral routes in which both animal studies and epidemiology studies will be considered. I also heard that the state of California may be using animal studies to base their regulations for VC emissions (this needs to be verified). It's likely that most if not all other states have directly adopted the EPA standards mentioned above.

In response to the VC Court decision, EPA published in 1989 its cancer risk decision rule for hazardous air pollutants. The intent of the decision process is to "provide maximum feasible protection against risks to health from hazardous air pollutants by: (1) protecting the greatest number of persons possible to an individual lifetime risk level no higher than  $1 \times 10^{-6}$ , and (2) limiting to no higher than approximately  $1 \times 10^{-4}$  the estimated risk that a person living near a plant would have if he or she were exposed to the maximum pollutant concentrations for 70 years." This latter risk is known as the maximum individual risk, or MIR. EPA generally assumes that if the MIR is no higher than  $1 \times 10^{-4}$ , the risk is considered acceptable. The MIR provides a benchmark but does not constitute a rigid goal for making a risk determination. The MIR is generally conservative, i.e., it is an upperbound that is unlikely to be exceeded, and EPA views this level as the upper end of

the range of acceptability. However, EPA states that as risks increase above this benchmark, "they become presumptively less acceptable under section 112 of the Clean Air Act, and would be weighed with the other health information in making an overall judgment of acceptability." By using your air dispersion modeling data we can estimate if the cancer risks are likely to be at the MIR or lower. If lower, a case could be made that your plant is in compliance under EPA's published decision rule. If the estimates of risks are higher, then the quantitative assessment can be used in conjunction with the dispersion modeling data to set emission limits that would be acceptable (we also would be interested in exploring and discussing with you other strategies and options).

Attached are an outline of the proposed work, a tentative schedule and estimated costs. I have also enclosed my resume with that of David Patrick who before joining Clement International in 1986 spent 15 years in EPA's Office of Air Quality Planning and Standards, where he was involved in all of the Agency's NESHAPS. During his last 6 years with the Agency, he directed EPA's hazardous air pollutant program activities. Dave has unparalleled experience in the regulation of hazardous air pollutants. Finally, if needed, two Divisions of Clement International are world renowned in sciences of particular concern here. The K.S. Crump Division in Ruston, LA, developed the dose-response modeling procedures used by EPA and most others to quantitatively assess carcinogens. The SAI Division in San Rafael, CA, developed many of the air dispersion models used today by EPA to evaluate the impacts of air pollutants.

I look forward to hearing from you. If you have any questions, call me at (703) 934-3500.

Sincerely

Peter Voytek

attachments