THE VINYL INSTITUTE TECHNICAL COMMITTEE
AUGUST 1993 STATUS REPORT

MISSION STATEMENT

(Revised May 26, 1993, Pending Approval September 23, 1993)

To provide technical support for VI activities which address issues impacting existing and future uses of vinyl products. Committee activities to fulfill this mission will include:

1. Develop and document scientifically sound information regarding performance of vinyl products.

2. Initiate or support research programs that fill important technology gaps pertinent to the use of vinyl products.

3. Provide technical support to the VI Issues Management Committee and Ad-Hoc Task Groups.

4. Present and promote scientific facts about vinyl products to government, industry and environmental organizations.

5. Serve a proactive "early alert" function which recognizes emerging issues, recommends and takes appropriate action.

6. Support and protect the interests of the vinyl industry through liaisons with trade associations and consensus standards organizations.

1993 - 1994 COMMITTEE STATUS

BUDGET

1993-94 Fiscal Year: $ 195,000
YTD (June 1993): $ 12,500

APPORTIONMENT ...

- Solid Waste Management / Incineration	$ 55,000
- Solvent Cement	$ 10,000
- Fire Sciences	$ 76,000
- Medical & Health Effects	$ 35,000
- Contingency	$ 19,000

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KEY PROGRAMS

PROJECT	LEAD CONTACT
INCINERATION ...	
- Swedish/Norwegian Pilot Incineration	R. Magee
- MSW & Hospital Incinerator Economics	R. Magee
- New HCl Removal Technology	R. Magee
FIRE SCIENCES ...	
- UL Corrosion Hazard Assessment	B. Hall
- Code Monitoring	B. Hall
MEDICAL & HEALTH EFFECTS	
- Compendium on Combustion Toxicity	L. Maresca
- VCM Unit Risk Factor	R. McCreedy
- Indoor Air Quality	L. Fishbein
LIAISON EFFORTS	
- Solvent Cement	D. Goodman
- APC Advanced Recovery Technology	R. Burnett
AD-HOC TASK GROUPS	
- Dioxin Allegations in EDC/VCM/PVC	Borrelli/McCreedy
- Kansas Drinking Water	Goodman/McCreedy

PROJECT UPDATES

Swedish/Norwegian PVC Incineration (R. Magee - 8/16/93)

The objective of this project is to conduct an experimental test program to demonstrate that incineration of PVC in MSW streams does not increase PCDD/PCDF emissions. The Norwegian study focuses on precursors; the Swedish study will relate PCDD/PCDF emissions to fuel composition (e.g. percent chlorine and PVC).

The SI (Norwegian) final report is due the end of August 1993. Umea (Swedish) has proposed a follow-up study to investigate questions raised by the steering committee and determine reasons for unexpected results (direct correlation between fuel composition and PCDD/PCDF creation). This continuation phase is scheduled for 12 months at a cost of 200,000 ECU. Funding is to be finalized by the end of August.

The Technical Committee will continue to participate in the project through Dr. Magee (steering committee). The 1993-94 Budget includes $10,000 (U.S.) to support the work in Sweden.

Economics of Incinerating Wastes Containing PVC (R. Magee - 8/16/93)

The objective of this project is to determine the economic impact of PVC in municipal solid waste and hospital waste on overall incineration and air pollution control system costs.

A contract was awarded to Midwest Research Institute (MRI) in July 1993 to perform this study. Efforts are underway to establish a peer review of the work by ASME.

A small ad-hoc task group will be established under the technical committee to monitor the study and to provide MRI guidance and assistance throughout the project.

VCM Unit Risk Factor Assessment (R. McCreedy - 8/13/93)

The objective of this project is to conduct a new quantitative risk assessment for VCM using pharmacokinetics (PB-PK). The results of this study will be used to update the existing unit risk factors used by regulators today.

Mel Andersen (CIIT), Dick Reitz (Dow Chemical) and Trevor Green (et. al. ICI) completed a draft of their results using a PB-PK model they developed for VCM. Their study indicates a 100 fold improvement in the safe VCM exposure level (24 hour, continuous) when the results of the PB-PK model is compared to the EPA Health Effects Assessment Summary Tables (EPA HEAST -12/92). The final manuscript will be completed by September 20, 1993. The manuscript will be submitted to *Toxicology & Applied Pharmacology* in October 1993.

A continuation phase of this project has been proposed by the investigators to address the data quality gaps in the existing human inhalation database. The investigators believe that a study involving in-vitro studies on human, rat and mice livers could provide additional improvement in the safe VCM exposure level.

A small task group of the technical committee will review the final manuscript and make recommendations on the value of additional studies. The 1993-94 Budget includes $20,000 to support additional studies, if warranted.

PVC Pipe Drinking Water Quality (Ad-Hoc Task Group) (R. McCreedy - 8/17/93)

This project (resourced jointly with Uni-Bell) had an initial objective to determination the source of elevated VCM concentrations drinking water samples taken in Kansas Rural Water District No. 5. In addition, remediation techniques

to reduce VCM concentrations at the point-of-use are being reviewed. A methodology to determine the scope of the potential problem and the impact on end users and the PVC industry will be developed.

Testing conducted by NSF (contracted by Uni-Bell and VI) confirmed the results of the Kansas Dept. of Health & Environment. These results indicate that VCM levels of 1 - 10 ppb are present in point-of-use samples from PVC pipe lines in RWD No. 5 that meet several criteria. These criteria include pre-certification pipe (<1977), small diameter (<2") and low flow rates (? gpm). As a result of this confirming data, PW Pipe made a TSCA 8(e) Submission on July 29, 1993.

The Vinyl Institute, Uni-Bell and NSF met with the USEPA Drinking Water Office in Washington, DC on August 16, 1993. The industry outlined the existing data, remediation techniques that could be piloted on a lab scale, and industry efforts to date to determine if this is an isolated occurrence.

Prior to an October meeting with USEPA, the industry will complete current efforts to document potential remediation techniques and to define the methodology needed to determine the scope of the effect.

Dioxin Allegations in EDC/VCM/PVC (Ad-Hoc Task Group) (R. McCreedy - 8/17/93)

The objectives of this project include:

1) to investigate and evaluate the human health and environmental effects of the formation of dioxin and furans in the EDC, VCM and PVC processes and products.

2) to obtain third party review of the allegations presented in the Greenpeace report entitled "Dioxin Factories".

3) to review available data on dioxins, including toxicology, risk assessment, sampling protocols, and analysis.

4) to report any industry findings to the scientific community, appropriate government agencies, our employees, our neighbors, the media and the public.

The EVCM has completed a review of Greenpeace's report. In the U.S., the VI has contracted ChemRisk to complete an independent evaluation of the report by September 1, 1993. Federal and provincial environmental agencies in Canada have asked Canadian producers to supply data and interpretation of the Greenpeace allegations. Their request includes any known dioxin concentration data in plant air and water discharges. There has been no response from the USEPA following initial contact by Greenpeace in May 1993. One Canadian

producer has forwarded the EVCM report and plans a joint meeting with federal and provincial agencies once the ChemRisk report is available.

The ad-hoc task group will meet by teleconference on August 27, 1993. The task group will continue to monitor the activities on the Canadian environmental agencies and the VCM/PVC industry to determine risk assessment, sampling protocols, and any analysis needs. In addition, liaison activities will continue with the CI and CCC task groups on dioxin to obtain toxicology and epidemiology analyses. Edward Howard Company is active on the task group to help develop scientifically based communication packages.

Ron McCreedy
Dow Chemical
August 18, 1993