



Dow U.S.A.

The Dow Chemical Company
Midland, Michigan 48674

2020 Dow Center
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~~Sally Ginter, 2020 Dow Center~~

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VCM/EDC PMT

ACTIVE PROJECTS AT THE VINYL AND CHLORINE INSTITUTES

I have attached a copy of the slide summarizing my Vinyl and Chlorine Institute activities that was used at the recent C&M R&D Management Meeting. As you know, this slide (and accompanying notes) was extracted from my TS&D Project Review presentation on October 28, 1992.

Although I have indicated that some of the projects are "active" and others are on "hold", all of these issues remain important and unresolved. For example, the VCM HON's effort at VI is currently on hold but our subcommittee will meet to draft our response to EPA once the 90 day public comment period begins (December 18th?).

Following the October project review, I routed a copy of my presentation to the VCM/EDC PMT with a commitment to provide updates of my institute activities in 1993. If you would like, I will expand circulation of these updates to include the BMT.

If you have any questions on my current activities at either of the institutes, please let me know.

Thank you for your continued support.

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attachments

R&S150604

VCM/PVC ACTIVITIES

► The Vinyl Institute - Health, Safety & Environment Committee

- Special Issues (Tellus Report, VCM residual in pipe, ...)
- Regulatory Issues (ATSDR, HON's, CTC - Ozone Depleting Cmpds)

► The Vinyl Institute - Technical Committee

- Medical subcommittee (Update Patty's "Industrial Hygiene & Toxicology")
- LCA subcommittee (Exchange with Europe & Japan - Tripartite Mtgs)
- Incineration Pilot Tests in Norway & Sweden
- PVC combustion tox & corrosion (ASTM, Polyolefins Council)
- VOC limitations for pipe cement (SCAQMD)
- Cancer Unit Risk Factor Updated (Dick Reitz - Dow Chemical USA)

► The Chlorine Institute Cl₂ Benefits Task Group

- Benefits (Net Cost to replace chlorine chemistry) > \$100 Billion
 - » Primarily Pharmaceutical & Pesticides
- Contributions (Impact of current indirect and direct chlorine chain) > \$???

RLM - 10/92

DOW RESTRICTED INFORMATION

VI - HEALTH, SAFETY & ENVIRONMENT COMMITTEE

Tellus Report (Active) ...

The Tellus Report is a "Life Cycle" developed by Tellus Institute (Boston) for The Council of State Governments. Dow supported this project via industry funding directly (Plastics Dept) and thru The Council for Solid Waste Solutions.

This LCA assigned remediation costs (based on the cost of lead removal from residential housing) to the major packaging materials. These costs were based upon emission data for carcinogens and toxics during production. Their database was outdated and heavily weighted against carcinogens. Because of this, PVC resulted in a remediation cost 15 - 150 X other packaging materials. A task group (including myself) critiqued the report and Tellus has verbally changed their PVC numbers to 2 - 15 X other materials.

The Tellus Report continues to get press (the most recent in the Wall Street Journal - 10/27/92) and there is concern that it may be used by advocacy groups in state PVC ban initiatives. I have scheduled a mtg with Capriccioso, Mike Hayes, Hutchison, & Lienhart to decide if additional proactive response is needed by Dow or VI.

Residual VCM in Pipe (Active) ...

A reoccurring issue for water pipe - updating white paper to include new tests at UniBell Labs for residual VCM in PVC pipe.

ATSDR (Hold) ...

(Agency for Toxic Substances and Disease Registry) published additional data needs for VCM on 10/17/91. A task group (including myself) drafted response for the VI. No voluntary data generation efforts have been started by industry to fulfill their "data gap" requirements but ATSDR has the authority thru EPA to force a "Priority Data Needs Research Program " that industry would have to participate in.

HON's (Hold) ...

Hazardous Organic NESHAPs (Nat'l Emission Stds for Hazardous Air Pollutants) - CMA is the primary responder but a VI task group (including myself) responded on the applicability of Parts 60, 61 & 63.

Ozone Depleting Compounds (Active) ...

The VI is actively mtg with EPA and submitting comments because CTC is incidentally produced and added to the EDC/VCM process. A task group (including myself) has drafted response to both the process and labeling rule making.

VI - TECHNICAL COMMITTEE

Patty's (Active) ...

Patty's "Industrial Hygiene & Toxicology" is the toxicologist's "bible" (Lange's & CRC Handbook (Chem) , Perry's (Chem Engr) etc...) that has not been updated since 1976. Ted Torkelson (Dow/retiree) wrote the VCM section under contract, CanTox (same consultants doing the Cl2 Health Study) will be contracted to write PVC section.

Tripartite Mtgs (Active) ...

I Participated and presented at the first meeting of this newly formed alliance between Europe, NA and Japanese VCM/PVC Trade Organizations. I'm acting as the editor for the NA information in the LCA data exchange with Europe and Japan. Next meeting in April 1993 in England.

Incineration (Active) ...

Funding partners in pilot scale burns in Norway & Sweden to study dioxin/furan and HCl generation with PVC in (and out) of the municipal solid waste stream. Project Steering Team includes VI's incineration consultant (Dr. MaGee) and we have a good deal of influence in study design with minimal funding (\$20,000).

PVC Combustion (Active) ...

Several active testing programs being funded to develop comparable data on combustion toxicity and corrosion. Projects are in response to continuing (and growing) de-selection of PVC durables for indoor applications because fear of HCl and toxic by-products.

VOC Limitations (Active) ...

Funding of alternative solvent cement formulations because the SCAQMD (South Coast Air Quality Management District - southern CA) has passed a 1/1/93 VOC regulation the current cements cannot meet. Expect a delay on the 1/1/93 deadline and a raising of the VOC target. Alternative cement systems (including a proposal by Dow of 50/50 Nova Bond P and Downanol DPnB glycol ether) would have to go thru extensive tox and migration studies to comply with NSF (Nat'l Sanitation Foundation) Std 61 for approval in drinking water piping.

Unit Risk Factor (Active) ...

Updating the Cancer Unit Risk Factor for VCM using PbPk methodology will provide additional scientific relief for air permitting regs/legs at the state level. We have already used PbPk Unit Risk Factor methodology in Dow's response to CA and LA air quality regs. This work (Dow and ICI) will be peer reviewed and published to allow use in non-Dow responses to the states.

CI - CHLORINE BENEFITS TASK GROUP

Charles River Associates (Boston) contracted to develop BENEFITS (long term cost to replace) and CONTRIBUTIONS (snapshot of current economic impact) of the "chlorine chain". The chlorine chain includes chemicals "processed with" and "containing" chlorine.

I am Dow's rep on the task group (contract adm, etc) and am currently working to get CRA access to Dow Plastics, C&PP, Dow Corning, Dow Elanco, MMD.

R&S150607

BENEFITS ...

First approximation is > \$100 billion penalty annually to replace the chlorine chain. Primary consumer impact is in pharmaceutical and pesticides (about \$50 billion each).

CONTRIBUTIONS ...

Estimate of dollar amount not yet available but will include "jobs, payroll, capital asset base, taxes, balance of trade contributions & value of output" thru the chlorine chain until the "chlorine chemistry" adds little of the product's value or functionality.