

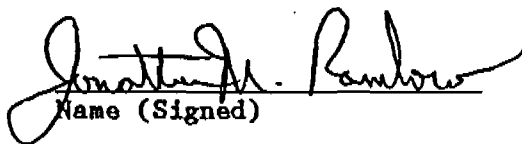
CHEMICAL MANUFACTURERS ASSOCIATION
Vinyl Chloride Panel
Vinyl Chloride Research Coordinators
Commitment Form

☒ My company commits its pro-rata share of \$300,000 research and advocacy budget as described in the attached July 5, 1994 Explanation of VCRC Budget. The Vinyl Chloride Panel is conducted under the policies and procedures outlined in the CHEMSTAR Panel Guidelines and briefly noted on the reverse of this form.

☐ While appreciating the opportunity, my company declines to participate.

CMA has estimated that 16% of the total CMA 1994/95 fiscal year "dues and similar income", which includes CHEMSTAR contributions, is allocable to lobbying and political expenditures to which Section 162 (e)(1) of the Internal Revenue Code of 1986, as amended, applies. Consequently, this portion of your commitment is not deductible as an ordinary and necessary business expense for federal income tax purposes. Further, contributions to CMA are not tax deductible as charitable contributions.

Panel Representative


Name (Signed)

Jonathon M. Ramlow, Ph.D.
Name (Typed)

Epidemiologist
Title

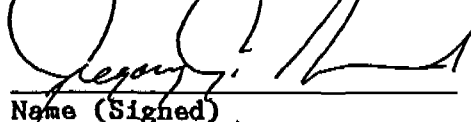
Dow Chemical
Company

1803 Building, Midland, MI
Address

(517) 636-1276
Telephone

(517) 636-1875
Telecopier

Management Contact


Name (Signed)

Gregory G. Bond, Ph.D.
Name (Typed)

Senior Development Manager
Title

Dow Chemical
Company

2020 Building, Midland, MI
Address

(517) 636-9063
Telephone

(517) 636-9899
Telecopier

Please return signed form to:

Hasmukh C. Shah, Manager
Chemical Manufacturers Association
2501 M Street, NW
Washington, D.C. 20037

PRINTED BY U246074 RAMLOW, JONATHAN M.
1803 636-1276 94/08/09 08:48:39

From: U077399 --S08VRNA Date and time 08/08/94 17:43:55
To: U246074 --S21VM RAMLOW, JONATHAN
cc: U303653 --TXDECD NUILA, CARLOS C E

FROM: BOND, GREGORY G., 2020, 636-9063
Subject: VCM Research Coordinators Conference Call
Jonathon -- In the past the business has requested that the cost be spread
over a two year period and this is the agreement I have had with Carlos Nuila.
-- Greg

*** Forwarding note from U246074 --S21VM 08/04/94 17:14 ***
To: U077399 --S08VRNA BOND, GREGORY G. / U077632 --S08VRNA DILLON JR, GEORGE
U076129 --S21VM DOMORADZKI, JEANNE U075024 --S08VRNA HAYES, WILLIAM C.
U073763 --S08VRNA MCCREEDY, R L. / 2 U303653 --TXDECD NUILA, CARLOS C E
U134803 --S08VRNA STEARNS JR, W J. /

FROM: RAMLOW, JONATHAN M.
SUBJECT: VCM Research Coordinators Conference Call

The VCM Research Coordinators group held a conference call on Tuesday,
August 2. We covered the following items:

1. VCM Cohort Mortality Study Update: all participating companies have now committed to funding this study, and the Request For Proposal has been sent to four potential contractors, three of which have already verbally indicated their intention to submit a proposal.

Dr. Shah from CMA has calculated each company's share of the cost of the study, based on 1993 nameplate production capacity. Dow's share will be \$55,630 (of \$300,000), of which we expect to recover about \$30,000 after invoicing CMA for my time as study coordinator. This raises a question: CMA can invoice Dow either once or twice for our share of the study cost, and I need to tell them which we prefer. I need your input on this question.

2. EPA test rule issues for VCM: EPA intends to add developmental and reproductive inhalation testing for VCM to the Master Testing List this year. CMA would like to confer with EPA to determine whether these are current, pressing data needs or whether enough data already exist to answer their questions. We will assemble a short review of the current data to present to EPA at a meeting which Dr. Shah would like to arrange for the first part of October, if possible.

In this regard, it has also been suggested by Joe Ledvina of Vista that the VCM panel also address ethylene dichloride hazardous air pollutant testing issues with EPA. The sense of the panel was that this would be a good idea, although Jim Barter suggested that HSIA would be an alternative platform for addressing EDC. I need your input on this question, too, so that I can let CMA know what Dow would like to do about this.

3. The panel finalized a letter to the American Cancer Society commenting on the ACS including VCM as a possible risk factor for malignant lymphoma in its annual Cancer Facts and Figures publication. This

R&S151200

was the source used by a writer for Time magazine in an article about cancer which listed the VCM/lymphoma link in a table of "Big Killers". The panel's letter basically pointed out that the most recent data show only very weak, if any, evidence for an association between VCM exposure and lymphoma, and requested that ACS either modify the statement in their publication or remove it altogether. Please let me know if you would like to see copies of these documents.

Again, I need your advice on how to respond to CMA about how we would like to pay our share of the cost of the epidemiology study, and also about whether or not we think that the CMA VC panel should address EDC testing issues with EPA. Thanks in advance for your responses.

Jonathan Ramlow
Chair, VC Research Coordinators Group
Phone 636-1276

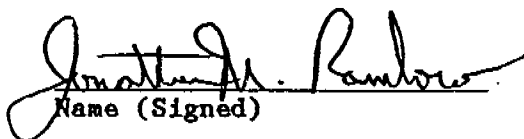
CHEMICAL MANUFACTURERS ASSOCIATION
Vinyl Chloride Panel
Vinyl Chloride Research Coordinators
Commitment Form

☒ My company commits its pro-rata share of \$300,000 research and advocacy budget as described in the attached July 5, 1994 Explanation of VCRC Budget. The Vinyl Chloride Panel is conducted under the policies and procedures outlined in the CHEMSTAR Panel Guidelines and briefly noted on the reverse of this form.

☐ While appreciating the opportunity, my company declines to participate.

CMA has estimated that 16% of the total CMA 1994/95 fiscal year "dues and similar income", which includes CHEMSTAR contributions, is allocable to lobbying and political expenditures to which Section 162 (e)(1) of the Internal Revenue Code of 1986, as amended, applies. Consequently, this portion of your commitment is not deductible as an ordinary and necessary business expense for federal income tax purposes. Further, contributions to CMA are not tax deductible as charitable contributions.

Panel Representative


Name (Signed)

Jonathon M. Ramlow, Ph.D.
Name (Typed)

Epidemiologist
Title

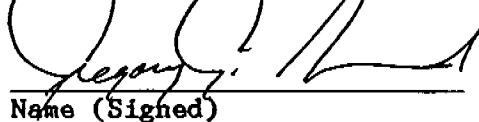
Dow Chemical
Company

1803 Building, Midland, MI
Address

(517) 636-1276
Telephone

(517) 636-1875
Telecopier

Management Contact


Name (Signed)

Gregory G. Bond, Ph.D.
Name (Typed)

Senior Development Manager
Title

Dow Chemical
Company

2020 Building, Midland, MI
Address

(517) 636-9063
Telephone

(517) 636-9899
Telecopier

Please return signed form to:

Hasmukh C. Shah, Manager
Chemical Manufacturers Association
2501 M Street, NW
Washington, D.C. 20037

R8S151202

July 5, 1994
Explanation of Vinyl Chloride Research Coordinator Budget

An initial budget of \$300,000 is proposed for the following activities:

- Contractor cost for the update of vinyl chloride epidemiology study
- Dow Chemical's expenses for designing, monitoring, consulting with the selected contractor, and reviewing interim, draft and final reports for the epidemiological update
- Consultant expenses for vinyl chloride risk assessment and short-term exposure effects studies
- Administrative expenses for update of the epidemiology study; follow-ups with EPA on VC risk assessment; follow-ups with EPA on VC and/or EDC testing under TSCA Section 4; follow-ups with consultants on VC risk assessment and short-term exposure effects studies; meeting planning, attendance, and other routine services; follow-up of action items resulting from meetings and conference calls; and, monitoring of regulatory activities impacting vinyl chloride manufacturing companies

The VCRC has proposed to share the estimated \$300,000 budget based upon the 1993 VC nameplate capacity. CMA has used the nameplate capacities for VC published in the attached chart from Chemical Data Inc., September 1993, to determine each company's pro-rata share as follows:

Total 1993 VC Nameplate Capacity	12,918 M lbs.
Westlake 1993 VC Nameplate Capacity	<u>1,000 M lbs.</u>
Total 1993 VC Nameplate Capacity	11,918 M lbs.
Used in Determining VCRC Member Companies Pro-Rata Share	

<u>COMPANY</u>	<u>NAMEPLATE CAPACITY (Million Lbs.)</u>	<u>PRO-RATA SHARE</u>
Borden Chemical	935	23,536
Dow Chemical	2,210	55,630
Formosa Plastics	1,793	45,133
GEON	1,400	35,241
Georgia Gulf	1,260	31,717
Occidental (w/OxyMar)	2,600	65,447
PPG Industries	840	21,145
Vista Chemical	<u>880</u>	<u>22,151</u>
TOTAL	11,918	300,000

If the above budget is committed by all companies, one-half of the commitment will be due in August, 1994 and the remainder in January, 1995. If Westlake joins the VCRC at a later date, your 1995 amount due will be adjusted accordingly.

**U.S.
VINYL CHLORIDE MONOMER**
AVERAGE DESIGN CAPACITY
(Millions of Pounds Per Year)

PRODUCER	LOCATION	FEEDSTOCKS	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Borden Chemical	Geismar, LA	Ethylene	525	525	525	568	610	610	610	610	610	610	610	610
	Geismar, LA	Acetylene	325	325	325	325	325	325	325	325	325	325	325	325
Dow Chemical	Oyster Creek, TX	Ethylene	750	810	810	833	900	900	900	910	910	910	910	910
	Oyster Creek, TX	Ethylene	--	--	--	--	--	--	--	--	563	750	750	750
	Plaquemine, LA	Ethylene	850	900	1,040	1,200	1,200	1,275	1,300	1,300	1,300	1,300	1,300	1,300
Formosa Plastics	Point Comfort, TX	Ethylene	580	580	580	690	838	900	900	900	900	900	900	900
	Baton Rouge, LA	Ethylene	420	420	420	420	420	420	315	53	420	420	420	420
	Baton Rouge, LA	EDC	--	--	--	--	--	--	537	840	840	840	840	840
Geon (formerly Goodrich)	Calvert City, KY	Ethylene	1,000	1,000	1,000	1,000	See Westlake Monomers							
	La Porte, TX	Ethylene	1,100	1,100	1,250	1,300	1,300	1,400	1,400	1,400	1,400	1,400	1,400	1,400
Georgia Gulf	Plaquemine, LA	Ethylene	1,025	1,100	1,220	1,260	1,260	1,260	1,260	1,260	1,260	1,260	1,260	1,260
Occidental Chem	Deer Park, TX	Ethylene	--	450	925	1,100	1,100	1,100	1,100	1,100	1,100	1,100	1,100	1,100
OxyMar	Corpus Christi, TX	Ethylene	--	--	--	--	--	1,467	1,500	1,500	1,500	1,500	1,500	1,500
PPG Ind.	Lake Charles, LA	Ethylene	600	750	800	800	840	840	840	840	840	840	840	840
Shell	Deer Park, TX	Ethylene	900	450				See Occidental Chemical						
Vista Chemical	Lake Charles, LA	Ethylene	700	738	750	825	825	825	835	880	910	970	990	990
Westlake Monomers	Calvert City, KY	Ethylene	--	--	--	--	1,000	1,000	1,000	1,000	1,000	1,000	1,050	1,050
Total			8,775	9,148	9,645	10,320	10,618	12,322	12,822	12,918	13,878	14,125	14,195	14,195

SEPTEMBER 1993

Vinyl Chloride Panel
Research Coordinators
Financial Statement
93 *October* Through April, 1994

REVENUE:

Company Contributions	\$ 24,000
Interest	<u>48</u>
Total	\$ 24,048

EXPENSES:

Consultant - Richard Reitz	\$ 600
Administration	<u>5,784</u>
Total	\$ 6,384

BALANCE:	\$ 17,664
----------	-----------

UCM Planning

3/16/94

- 1) 8 participating companies, currently
Westlake refusing (Taiwanese)
- 2) \$40K in costs up front to ENSR
to transfer data to someone else
\$75K OMA overhead
\$350K estimate from ENSR for update
- 3) update only, no additional workers

VINYL CHLORIDE HEALTH COMMITTEE

PROPOSED 1995 PROGRAM

Epidemiology Study Update

Otto Wong 275 K

Ken Mundt 350 K

Synthesis of ¹³C-vinyl chloride 10 K

UNC Research Program 50 K

ENSR Data Transfer Cost 20 K

Dow Monitoring Cost 30 K

Outside Counsel for TSCA Section 4 Rule 30 K

Administration: 4 days/mo ~~92.25 K~~ 100 K (incl. travel)

Epidemiology

Contract negotiations

Work with ENSR for data transfer

Contract management

James Swenberg

Research program

TSCA

ATSDR communication

EPA negotiations

Risk Assessment

Consultant

Risk assessment workshop

Agency and contractor communication

Modification of Heast Table

Contingency 30 K

R&S151208

590 K
- 320 available
270
+ 30
- 1/2 new

1994		
Company	Nameplate	1.
Borden	935	6.74
Dow	2,773	19.98
Formosa	2,160	15.56
Geon	1,400	10.09
Georgia Gulf	1,260	9.08
Oxy	2,600	18.73
PPG	840	6.05
Vista	910	6.56
Westlake	1,000	7.21
	<u>13,878</u>	<u>100.00</u>



The Dow Chemical Company

JONATHAN RAMLOW
Epidemiology
Health and Environmental Sciences

1803 Building
Midland, Michigan 48674
(517) 636-1276

VCM
monophlate - 1993

Oyster Creek
933 MM lbs.

Asquith
1,300 MM lbs.



R&S151210



GREG BOND
Chemicals TS&D
Environmental Affairs

The Dow Chemical Company
Dow North America
2020 Dow Center
Midland, Michigan 48674
(517) 636-9063

Jonathan Rowlow
1803

Jonathan - Please review
this and give me - call to
discuss. I would like to see us
work on how share to adjust the
formula for future research allocations.

Greg



R8S151211



Pls send to

GEORGE DILLON
EDC/VCM

1/22/95

The Dow Chemical Company
2020 Dow Center
Midland, Michigan 48674
(517) 636-4982

Greg Bond 2020

Here is a "revised" formula that shares the cost based on both PVC and VCM capacity from 1994. This particular formula is the way the Vinyl Institute spreads its costs amongst its primary members (makes sense when you have a mix of PVC only, VCM only and PVC/VCM producers.)

My data source for these capacities is the most recent CHEM DATA update on capacities. (Attached). This summary of mine should be used for discussion only. Each member company would submit their nameplate capacity for the actual calculation.

I included the two largest PVC producers (Shintech & Certainteed). The group would have to decide if the three smallest (Union Carbide, Goodyear and Keysor) should be included, Vygen is bankrupt.   George

R&S151212

JOB NO.

SHEET

OF

FILE

BY

DATE

Company	1994 Nameplate Capacity (mm lbs)			1994 Nameplate Capacity %	Current Share %
	PVC	VCM	Total		
Borden	850	935	1785	7.1	6.74 (+0.36)
Certainteed	265	-	265	1.1	0 (+1.10)
Dow	-	2523	2523	10.0	19.98 (-9.98)
Formosa	1990	2205	4195	16.7	15.56 (+1.14)
Geon	1425	1500	2925	11.6	10.09 (+1.51)
Georgia Gulf	928	1260	2188	8.7	9.08 (-0.38)
OxyChem	2100	1100	3200	12.7	18.73 (-6.03)
Oxymar	-	1500	1500	6.0	0 (+6.00)
PPG	-	840	840	3.3	6.05 (-2.75)
Shintech	2375	-	2375	9.4	0 (+9.40)
Vista	845	910	1755	7.0	6.56 (+0.44)
Westlake	550	1050	1600	6.4	7.21 (-0.81)
	11328	13823	25151	100.0	100.00

**U.S.
POLYVINYL CHLORIDE CAPACITY**
(Millions of Pounds Per Year)

Monthly Petrochemical & Plastics Analysis
CHEMICAL DATA INC.

PRODUCER	LOCATION	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Air Products	Calvert City, KY	300	300	300	300	150							
	Pace, FL	200	200	200	200	100							
									Sold to Pacific Western Resins				
									Sold to Pacific Western Resins				
Borden Chemical	Illioopolis, IL	350	350	400	400	400	400	400	400	400	400	400	400
	Gelsmar, LA	350	350	350	400	450	450	450	450	450	450	450	450
Certain-Teed	Lake Charles, LA	220	220	220	265	265	265	265	265	265	265	265	265
Formosa Plastics	Delaware City, DE	275	182	100	100	155	155	155	155	155	155	155	155
	Point Comfort, TX	890	890	910	930	930	930	964	1,035	1,035	1,035	1,235	1,235
	Baton Rouge, LA	--	--	--	--	--	100	800	800	800	800	800	950
Geon (formally Goodrich)	Avon Lake, OH	300	300	300	300	300	281	225	113	(225)	(225)	(225)	(225)
	Deer Park, TX	285	285	285	325	325	325	325	360	395	490	660	660
	Henry, IL	185	185	195	195	195	195	132	68	90	90	90	90
	Louisville, KY	275	275	306	400	400	400	400	450	485	500	565	575
	Pedricktown, NJ	340	340	340	370	370	370	380	390	455	465	475	475
	Plaquemine, LA	160	160	160	160	160	160	160	(160)	(160)	(160)	(160)	(160)
Georgia Gulf	Plaquemine, LA	725	725	725	725	810	810	840	840	880	1,080	1,080	1,080
	Delaware City, DE	130	130	130	148	48	48	48	48	48	48	48	48
Goodyear	Niagara Falls, NY	110	125	125	125	125	125	125	125	125	125	125	125
Keysor Corporation	Saugus, CA	60	60	60	60	60	60	60	60	60	60	60	60
Occidental Chemical	Burlington, NJ	150	150	150	150	75	(150)	(150)	(150)	(150)	(150)	(150)	(150)
	Burlington, NJ	120	120	120	120	120	120	120	120	120	120	120	120
	Addis, LA	300	350	375	444	500	500	500	500	500	500	500	500
	Pottstown, PA	200	200	228	230	230	230	230	230	230	230	230	230
	Pasadena, TX	700	790	900	950	1,113	1,250	1,250	1,250	1,250	1,288	1,400	1,700
Pacific Western Resins	Calvert City, KY	--	--	--	--	150	225						
	Pace, FL	--	--	--	--	100	150						
									Sold to Westlake Polymers				
									Sold to Westlake Polymers				
Shintech	Freeport, TX	1,000	1,000	1,167	1,500	1,500	2,000	2,094	2,375	2,375	2,685	2,685	3,000
Union Carbide	Texas City, TX	125	125	125	125	140	140	140	140	140	140	140	140
	So. Charleston, WV	(50)	(50)	(50)	(50)	(50)	(50)	(50)	(50)	(50)	(50)	(50)	(50)
Vista Chemical	Aberdeen, MS	425	438	450	463	475	475	485	490	490	490	640	690
	Oklahoma City, OK	290	320	350	350	350	350	350	355	355	441	470	470
Vygen Corporation	Ashtabula, OH	94	125	125	125	125	125	125	125	44	(125)	(125)	(125)
Westlake PVC	Calvert City, KY	--	--	--	--	--	75	300	300	350	350	350	350
	Pace, FL	--	--	--	--	--	50	200	200	200	200	200	200
Totals		8,559	8,695	9,096	9,859	10,121	10,764	11,482	11,644	11,697	12,407	12,943	14,043

SEPTEMBER 1994

U.S.
VINYL CHLORIDE MONOMER
AVERAGE DESIGN CAPACITY
(Millions of Pounds Per Year)

PRODUCER	LOCATION	FEEDSTOCKS	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Borden Chemical	Geismar, LA	Ethylene	525	525	525	568	610	610	610	610	610	610	610	610
		Acetylene	325	325	325	325	325	325	325	325	325	325	325	325
Dow Chemical	Oyster Creek, TX	Ethylene	750	810	810	833	900	900	900	910	910	910	910	910
	Oyster Creek, TX	Ethylene	--	--	--	--	--	--	--	--	313	750	750	750
	Plaquemine, LA	Ethylene	850	900	1,040	1,200	1,200	1,275	1,300	1,300	1,300	1,300	1,300	1,300
Formosa Plastics	Point Comfort, TX	Ethylene	580	580	580	690	838	900	900	900	900	900	900	900
	Baton Rouge, LA	Ethylene	420	420	420	420	420	420	315	53	465	465	465	465
	Baton Rouge, LA	EDC	--	--	--	--	--	--	537	840	840	840	840	1,000
Geon (formerly Goodrich)	Calvert City, KY	Ethylene	1,000	1,000	1,000	1,000	See Westlake Monomers							
	La Porte, TX	Ethylene	1,100	1,100	1,250	1,300	1,300	1,400	1,400	1,500	1,500	1,500	1,500	1,500
	La Porte, TX	Ethylene	--	--	--	--	--	--	--	--	--	--	600	800
Georgia Gulf	Plaquemine, LA	Ethylene	1,025	1,100	1,220	1,260	1,260	1,260	1,260	1,260	1,260	1,260	1,260	1,500
Occidental Chem	Deer Park, TX	Ethylene	--	450	925	1,100	1,100	1,100	1,100	1,100	1,100	1,100	1,150	1,200
OxyMar	Corpus Christi, TX	Ethylene	--	--	--	--	--	1,467	1,500	1,500	1,500	1,500	1,725	1,800
PPG Ind.	Lake Charles, LA	Ethylene	600	750	800	800	840	840	840	840	840	840	840	840
Shell	Deer Park, TX	Ethylene	900	450	See Occidental Chemical									
Vista Chemical	Lake Charles, LA	Ethylene	700	738	750	825	825	825	835	880	910	910	990	990
Westlake Monomers	Calvert City, KY	Ethylene	--	--	--	--	1,000	1,000	1,000	1,000	1,050	1,100	1,100	1,100
Total			8,775	9,148	9,645	10,320	10,618	12,322	12,822	13,018	13,823	14,310	15,265	15,990

CHEMICAL DATA INC.
Monthly Petr chemical & Plastics Analysis

SEPTEMBER 1994

Vinyl Chloride Health Committee

Proposed 1994-1995 Budget

Budget	Activity (Explanation Attached)
\$✓ 400,000	Epidemiology Study Update Contractor Cost - \$ 350,000 ENSR Data Transfer Cost - \$20,000 Dow Chemical's Monitoring Cost - \$30,000 <i>final payment in 96</i>
✓ 30,000	Outside Counsel for TSCA Section 4 Prop. Rule The estimated cost of the EPA recommended testing program is \$850,000.
60,000	University of North Carolina Research Program Synthesis of ¹³ C-vinyl chloride - \$10,000 Determination of Half-Life of Etheno-Adducts in Animals & Determination of P-450 in Human Tissues at Diff. Ages - <u>\$50,000</u>
10,000	Vinyl Chloride Risk Assessment Consultant for Modification of the Heast Table (R. Reitz) Consultant to Demonstrate a Biological Threshold for Vinyl Chloride Induced Liver Angiosarcoma and Absence of Cause-Effect Relationship Between Vinyl Chloride and Brain Cancers (C. Tamburo) International Workshop to be Sponsored by the Vinyl Chloride Panel to Assess Available Scientific Information and Review Work in Progress or Planned to Assess Vinyl Chloride Risk
50 100,000	Administration Direct Time Oct.1994 - Dec.1995 - \$90,000 (Based on Estimated Level of Effort of Four Days/Month) Travel and Miscellaneous - \$10,000
20 25,000	Contingency
\$ 625,000	TOTAL

J of Plann & Bkg Theory
270 : 414-423
1994 Greenwich