

Air Products

Date 22 November 1983

INTEROFFICE
MEMORANDUM

Subject EPA Review of the VC Standard

To R. C. Sander

Plastics

From J. T. Barr

Regulatory Response

(Location, Organization, or Department)

cc: J. Anderson (Escambia)
R. Duggan (Escambia)
B. Helms (Calvert City)
H. Ortega (Calvert City)
R. Schenck
J. Spata
~~Mr. Watson~~

The enclosed Vinyl Institute report describes the recent meeting with EPA at RTP which I missed because of a scheduling conflict. Note that a new survey is to be conducted by the VI. If I understand it correctly, I should have enough data in my files, except for the batch number data from Escambia for the months since the old SPI report was dropped.


J. T. Barr

JTB:csb

Attachment

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H. L. WATSON

(320)

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The
Vinyl
Institute

MEMORANDUM

November 17, 1983

SUBJECT: REVISION OF VCM RELIEF VALVE DISCHARGE STANDARD

MEETING BETWEEN:

EPA Standards Development Branch and
Vinyl Institute Representatives

Durham, North Carolina
November 15, 1983

Present:

for EPA -

Susan Wyatt, Gil Wood, Leslie Evans, Bob Rosensteel

for Radian Corporation

John Stelling, Karen Fidler, Reese Howle, Clint Burklin

for The Vinyl Institute -

W. C. Holbrook (B.F. Goodrich), W. Bailey Barton (Borden Inc.),
Robert Oubre (Dow), Joe Ledvina (Conoco), Jim Kachtick (Tenneco
Polymers) and Roy Gottesman (Vinyl Institute).

1. Purpose of Meeting

Ms. Wyatt thanked The Vinyl Institute representatives for coming and indicated that EPA thinks that the numerical approach is a viable one and needs to be further explored. Mr. Holbrook indicated that the meeting had been requested as an exploratory meeting to hear from Radian Corporation concerning the scope of the study that they are to carry out for EPA and to help both Radian and EPA thereby helping the member companies of The Vinyl Institute. He noted that The Vinyl Institute has compiled numerical data relating to relief valve, rupture disc and manual vent valve discharges which it was willing to share with the Agency.

2. Status of EPA Program and Timetable

Ms. Wyatt noted that Radian is working on developing information to enable the Agency to propose changes in the relief valve discharge standard. Their objective, if possible, is to go to a numerical standard and to remove the "fuzzy part." The Agency is concerned that people will be thinking that the Agency is backing off from its original standard so that it feels it must get more educated. She noted that an earlier study TRW had received a lot of information and in addition, the Agency has access to the 10-day reports on relief valve incidents. Radian and EPA plan to visit plants that have been the "better performers" to see what techniques are being used. They also want to develop a historical pattern so that they are able to prove that the discharge frequency and volumes have been reduced.

Ms. Wyatt noted that they have gotten information from Region VI on a plant-by-plant basis and have also requested similar data from Regions II and IV. She also noted that four year data had been submitted by SPI.

A Division of

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The current plan is to put together a package with the information that has been developed by the end of January and meetings would be held during February and March so that a package could be delivered to Naptac by April. At that time, they would formally ask for comments from interested parties. She noted that this is a very tight time schedule in that they are trying to accomplish in six months what normally requires eleven.

As far as plant visitation goes, Ms. Wyatt indicated there current thinking was to visit facilities of Formosa Plastics, Shin-Tech, Georgia Pacific, Tenneco and Goodrich.

3. Vinyl Institute Survey in Discussion on Data Collection

The survey conducted by The Vinyl Institute (see Appendix A) was distributed. It was pointed out that the data represent a 12-month rolling average on pounds of vinyl chloride released per million pounds of PVC production or VCM production and that there are significant differences in the reporting plants. Mr. Holbrook noted that there is a definite difference between the pounds released from bulk (mass) polymerization plants and other plants which carry out dispersion or suspension polymerization processes. Mr. Holbrook also indicated that he believed that an "old" or "small" plants can be just as good as a "new" or "large-scale" reactor plant. Mr. Barton, on the other hand, indicated that he has found that a difference does exist between releases from small and large plants.

During the discussion on the data it was indicated that the Agency wishes to standardize on how a release is determined and there are variations in methods used. What is needed is a method to measure relief valve discharges and the Agency seeks the input of The Vinyl Institute on how this can best be accomplished. Mr. Holbrook offered the help of The Vinyl Institute members in collecting information on how the individual companies calculate their releases and offered to share this information with the Agency to see if a method can be standardized. It was pointed out that the enforcement group at EPA would very much like to have a "black-and-white" standard, especially one that state agencies can handle.

Mr. Evans suggested that a numerical approach may still narrow down to the number of discharges if the Agency is unable to develop a quantitative method involving the pounds evolved in a given period of time. Ms. Wyatt stated that the numerical approach is a viable option that they are seriously considering, but she cautioned that there are no guarantees the Agency will adopt it. She noted on the other hand that the work place practice has the same problems as the current standard and they are not leaning towards approach since there are problems of interpretation by the enforcement people.

4. New Survey to be Conducted

On the basis that The Vinyl Institute wishes to be of assistance to the Agency and cooperate with them in every way, considerable time was spent in developing information that is required by the Agency in order to survey the current state of relief valve discharges. After considerable discussion, it was agreed that Vinyl Institute members will be surveyed and asked to respond to information on PVC processes including suspension, dispersion, mass, and latex polymerization processes and providing information on the number of releases, the pounds of vinyl chloride released on

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the basis of both production volume and number of batches. The data will be supplied on a monthly basis for the period of August, 1981 through August, 1983. A separate survey on vinyl chloride plants will also be made for the same period and will cover the number of releases and pounds released per month and per million pounds of production. It was indicated that this survey will take some time to complete but we will undertake it promptly and report back to the Agency as soon as the data is available.

5. EPA/Radian Information Obtained from Region VI

The Radian representatives presented a table of data involving vinyl chloride monomer relief valve discharge data summary by year (Appendix B) which is their summary both on pounds, per million pounds of production, pounds released annually and the number of discharges for various plants in Region VI. Also presented was a breakdown of relief valve discharges (Appendix C) which provides a breakdown on the reasons reported for these discharges and recommendations being considered by Radian to eliminate such discharges.

After some discussion, it was recommended that since the Shin-Tech and Tenneco plants are sister plants, that consideration be given to visiting one additional bulk polymerization plant; one additional EDC-based vinyl chloride monomer plant and one plant that contained small reactors. Mr. Barton offered the Agency the opportunity to visit the Borden Iliapolis plant which contains small and large reactors, this contingent on the Agency signing a suitable confidentiality/secrecy agreement.

6. Confidentiality Agreement

Ms. Wyatt indicated that EPA no longer will allow contractors to sign separate third party confidentiality agreements. She indicated that the Agency's Office of General Counsel has developed a "memorandum of understanding" which protects confidentiality in their view. Their proposed memorandum on confidential treatment is attached (see Appendix D). This memorandum should be reviewed by legal counsel of the companies involved. Mr. Barton pointed out that one of the problems without having a confidentiality agreement with the contractor itself is that should an employee leave the contractor's employ, the cooperating company has no recourse on the protection of its information. Ms. Wyatt indicated that inasmuch as contractor's employees were designated as "authorized representatives" of EPA, the Agency felt that confidentiality was protected. Nevertheless, this should be reviewed by the individual companies involved.

7. Review of Other Parts of the Standard

In response to Mr. Holbrook's question as to other points within the vinyl chloride emission standard that the Agency was considering reviewing, Susan Wyatt indicated that generally they were updating the data base without any idea of really changing the standard. Mr. Holbrook asked whether EPA would agree to some malfunction provisions for those infrequent instances where the 10-parts per million standard is not met. Ms. Wyatt said that the Agency thought that making 10-parts per million a continuous compliance over a three hour average period would take care of the infrequent excursions. She also indicated that the Agency was considering

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requiring reporting on a quarterly basis to be consistent with other reporting requirements.

8. Future Program

Participants agreed that this was a useful meeting and once the survey data is available, it was agreed that the parties would sit down again to review the data obtained and to plan any future cooperative work.


Roy I. Gottesman

RTG:jmd
Attachments

cc: W. Bailey Barton
Robert Oubre
James Kachtick
W. C. Holbrook
J. Barr ✓
N. Blackman
J. Ledvina
J. King
S. Kuis
J. A. Mullins

Peter de la Cruz - for your information

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Appendix A

TWELVE MONTH ROLLING AVERAGE INDEX⁽¹⁾ POUNDS VCM RELEASED PER MILLION POUNDS PVC PRODUCTION

PVC Plants	1982					1983								
	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
EX-106A A	0.65	0	0	0	0	0	0	0	0	0	0.5	0.5	0.5	
B	2.4	2.3	1.0	.7	.7	5.0	4.9	4.9	4.6	4.5	4.1	4.0	10.3	
C	85	84	4.9	4.8	4.8	2.5	2.9	2.9	2.9	2.9	2.9	2.9	1.6	
D	93.7	93.0	177.0	176.0	191.0	225.0	219.0	219.0	210.2	158.2	160.9	147.3	146.9	
E	0	0	0	0	0	0	0	3.2	3.2	3.1	3.1	3.2	7.4	
F	11	10	10	10	8	8	8	7	12	11	16	10	10	
G	84	0	0	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.02	0.02	0.02	
H	2	0.3	0.2	0.2	0.2	0.2	0	0	0	0	0	0.2	3.0	
I	6.1	6.5	6.9	0	0	47.7	47.8	47.4	48.2	48.2	46.3	44.6	44.8	
J	3.6	0	0	0	0	0	0	0	0	0	0	0	0	
→ K CALUGET.	1.38	1.38	2.66	3.53	4.87	14.5	Plant Closed		-	-	-	-	-	
L	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.16	1.2	
M	328.1	289.8	125.5	146.6	151.4	150.4	97.7	207.4	284.7	287.8	275.1	279.9	255.0	
N	2.4	2.1	1.4	1.4	1.3	1.4	1.0	1.0	1.7	1.4	1.4	1.3	1.4	
O	18	17	15	15	14	14	13	3	0	0	0	0	0.06	
P	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0	0	0	0	0	
Q	0	0	0	0	0	0	0	0	0	0	0	0	0	
R	40.6	38.1	38.3	37.5	36.5	35.5	34.9	34.4	33.9	33.5	34.1	39.8	8.2	
S	202	208	199	198	115	122	117	113	110	106	103	8	8	
Million Pounds Production ⁽²⁾	260.6	265.2	265.2	262.5	272.5	279.3	278.6	284.0	280.4	284.2	288.9	295.6	298.2	

(1) Each monthly Index entry = The sum of all relief valve, rupture disc, and manual vent VCM releases for the previous 12 months divided by the sum of all PVC production at the plant for the previous 12 months.

(2) Each monthly entry represents the sum of the previous 12 months PVC production for plants A through S divided by 12.

Source - The Vinyl Institute November 1983.

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TWELVE MONTH ROLLING AVERAGE INDEX⁽¹⁾
POUNDS VCM RELEASED PER MILLION POUNDS VCM PRODUCTION

VCM Plants	1982					1983							
	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.
A	4.8	4.7	2.3	2.3	2.3	2.3	2.3	2.5	2.9	5.8	5.6	3.1	3.1
B	2	0.2	0.2	0.2	0	0	0	0	6	6	6	5	5
C	6.6	6.5	6.3	18.8	18.3	18.0	17.8	17.8	16.7	15.6	15.5	15.0	10.6
D	0.4	0.13	0.13	0.13	0.13	0.12	0.12	0.13	0.12	0.12	0	0	0
E	23.34	26.98	26.96	26.82	4.11	4.03	4.05	6.65	7.53	7.37	7.08	6.91	7.50
F	123	124	123	122	58	59	59	61	64	62	0	0	.04
G	3.4	3.4	24.3	23.2	23.9	23.4	23.5	23.5	32.9	34.0	34.2	34.3	31.1
H	2.60	2.61	2.58	2.71	2.87	2.81	2.90	2.94	0	0	0	0	0
I	0.40	0.37	0.35	0.33	0.31	0.31	0.85	0.78	0.47	37.92	37.38	36.57	36.57
Million Pounds Production ⁽²⁾	355.5	360.8	370.5	374.4	375.3	379.6	375	370.1	364.8	376.6	375.3	382.1	387

(1) Each monthly index entry = The sum of all relief valve, rupture disc, and manual vent VCM releases for the previous 12 months divided by the sum of all VCM production at the plant for the previous 12 months.

(2) Each monthly entry represents the sum of the previous 12 months VCM production for plants A through I divided by 12.

Source - The Vinyl Institute November 1983.

[illegible]

Appendix C

BREAKDOWN OF RVDS 1977 - 1982

REASON	CONTROL	EDC/VCM PLANTS		PVC PLANTS	
		PERCENT BY NUMBER	PERCENT BY WEIGHT	PERCENT BY NUMBER	PERCENT BY WEIGHT
OPERATOR ERROR	OPERATOR TRAINING/SOP	43.8	45.2	30.5	42.2
PREMATURE RELEASE	MAINTENANCE PROGRAM Q/A	6.1	4.3	9.0	32.5
INSTRUMENT MALFUNCTION	MAINTENANCE/REDUNDANT INSTR.	21.5	19.6	26.9	18.5
POWER FAILURE	BACK-UP POWER	3.8	11.0	1.2	1.4
EQUIPMENT FAILURE		6.9	10.6	20.3	1.8
UPSET CONDITIONS		8.5	4.2	6.0	0.6
INCORRECT SRV SETTING		3.1	3.2	0	0
UNKNOWN/NOT AVAILABLE		6.2	1.8	6.0	2.9
TOTAL OF DISCHARGES		130	213,000 Lbs	167	366,000 Lbs

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Appendix D

MEMORANDUM ON CONFIDENTIAL TREATMENT OF CERTAIN INFORMATION FOR USE WITH SITE VISITS BY EPA AUTHORIZED CONTRACTOR REPRESENTATIVES UNDER AUTHORITY OF SECTION 114 OF THE CLEAN AIR ACT

1. Pursuant to the provisions of Section 114 of the Clean Air Act, as amended, (source) (hereinafter "the source") will provide, or give access to, information requested by the Environmental Protection Agency (EPA) in the course of carrying out its responsibilities. Such information and such access will be provided to EPA and to its duly authorized representative (contractor) (hereinafter "the contractor") designated by EPA to assist EPA in carrying out such responsibilities pursuant to Contract No. _____ with EPA. The information requested may be either documentary (e.g., records, photographs or charts) or non-documentary (e.g., oral communications, taking of photographs, or visual observations). EPA and the contractor recognize that the source may consider the information so provided, or some part of it, to be confidential within the meaning of Section 114 and 18 U.S.C. 1905. The source may assert a claim of confidentiality under the procedures established in Part 2 of Title 40 of the Code of Federal Regulations (40 CFR Part 2) by noting such claim on documentary material provided to the contractor or to EPA. The contractor will note such claim when submitting the information to EPA. The EPA will note such claim when submitting such information to the contractor. Moreover, the source may notify the contractor or EPA that it considers the non-documentary information provided to EPA or to the contractor to be confidential. The contractor will note said claim of confidentiality in any reports or documents submitted to EPA which utilize such non-documentary information. The EPA will note said claim of confidentiality in any reports or documents submitted to the contractor which utilizes such non-documentary information. Any material

or information claimed as confidential will be treated by the contractor as confidential in accordance with its contract and will be treated by EPA in accordance with the provisions of 40 CFR Part 2. Any material or information for which a claim of confidentiality is not made may be made available to the public by EPA without notice to the source.

2. The provisions in the contractor's contract with EPA concerning the use and disclosure of confidential information are included therein for the benefit of, and shall be enforceable by, both EPA and the source.

The provisions of Contract No. _____ between EPA and the contractor provide:

- a. The contractor and its employees will: (i) use the information claimed to be confidential only for purposes of carrying out the work required by the contract; (ii) not disclose the information to anyone other than EPA employees without the prior written approval of the Assistant General Counsel for Contracts and General Administration; and (iii) return to the EPA Contracting officer all copies of the information, and any abstracts or excerpts therefrom, upon request by the Contracting Office, whenever the information is no longer required by the contractor for the performance of the work or upon completion of the contract.
- b. The contractor will obtain a written agreement to honor the provisions of paragraph 2(a) from each of its employees who will have access to the information, before the employee is allowed access.

- c. The contractor will not use any information claimed to be confidential to compete with the source.
 - d. Before entering into any subcontract that will involve either the disclosure to a subcontractor by the contractor of information claimed to be confidential, or the collection of information by a subcontractor, the contractor will obtain the written consent of the EPA Contracting Officer, after a written determination by the appropriate EPA program office.
3. Any subcontractor who will have access to the information is subject to the restrictions set forth in this memorandum.
4. It is intended that this memorandum be consistent with and not exceed the provisions of 40 CFR Part 2 and the provisions of Contract No. _____. This memorandum does not address information not obtained from the source. Nothing in this memorandum relieves the contractor of any liability it may independently have to the source as a matter of statutory or common law from injury to the source arising from the contractor's release of information in a manner which exceeds its authority under 40 CFR Part 2 and its contract with EPA.

U.S. Environmental Protection Agency

Company

By: _____

By: _____

Date: _____

Date: _____

Contractor

By: _____

Date: _____