

Memorandum

AIR
PRODUCTS

To: P.L.T. Brian Dept.: Corp. Engineering
From: A.J. Diglio Dept./Ext.: Corp. Environmental
Date: 29 March 1989
Subject: Public Policy Committee Presentation

cc: L.C. Doelp
D.C. Emerson
T.J. Marriott, Jr.
J.K. Spata

Thibaut:

This is in reply to your questions of March 27, 1989 concerning your Public Policy Committee presentation.

Vinyl Chloride

We do not believe vinyl chloride releases at Calvert City and Escambia are having any significant health effects on the public or our employees.

OSHA has conservatively estimated safe work place limits are 1 part per million time weighted average (TWA) for an 8 hour work day, and 5 parts per million short term exposure limit (STEL) for a 15 minute period.

Based on the 1987 Title III release data and air dispersion calculations by Radian, vinyl chloride concentrations, at and beyond the fence line, are well below OSHA standards at both plants. Table 1 summarizes this data.

TABLE 1

<u>Plant</u>	<u>Total Vinyl Chloride Released</u> <u>lbs/year</u>	<u>Concentration</u> <u>Fence-Line,ppb</u>
Calvert City	25,149	9.20
Escambia	6,000	0.017

The releases included episodic, permitted, and fugitive vinyl chloride quantities. Indications are there are no significant health threats to the public from these vinyl chloride releases compared to the OSHA standard.

On May 28, 1984, the Escambia PVC plant released about 35,000 pounds of vinyl chloride over 16 minutes. The air dispersion analysis for two cases with conservative wind speed conditions of 1mph and 3mph showed concentrations of VCM greater than 100 parts per million at the plant's fence line which exceeds the OSHA STEL. (Please see Appendix)

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A one-time exposure over a lifetime is not believed to cause chronic health effects. The US Department of Health and Human Services, Fourth Annual Report on Carcinogens, Summary 1985, states that air emissions measured near several vinyl chloride production facilities contained 3.1 to 12.5 parts per billion of vinyl chloride. Please find in the Appendix the DHHS Report on Vinyl Chloride.

Lou Doelp's plot (Figure 1) shows that at 2,000 feet from the PVC plants (approximate distance to the nearest receptor (neighbor) at both plants) 5 parts per million may be exceeded under certain worse case conditions for an instantaneous release that exceeds 1 pound. Table II shows the pounds estimated for each release for the respective plants from January 1984.

The DHHS classifies acrylonitrile as a substance that may reasonably be anticipated to be a carcinogen. The DHHS summary on acrylonitrile is attached that notes there is limited evidence of acrylonitrile's carcinogenicity in humans.

OSHA considers acrylonitrile a human carcinogen and regulates it as such with a TWA limit of 2 parts per million and a STEL of 10 parts per million in the workplace. The total Title III acrylonitrile emissions for our Wichita plant was estimated by Radian at 3,326 pounds annually. Chemical Group did not have Radian perform any air dispersion analysis on acrylonitrile at Wichita, but intuitively feels it is not a health threat.

Gulf Coast Waste Disposal Authority

The Gulf Coast Waste Disposal Authority was formed by the Texas State Legislature as a government authority. A federal judge in the late seventies declared the Gulf Coast Waste Disposal Authority facility (GCWDA) a publicly operated treatment works. At one time, EPA wished to declare it an industrial complex. The permitted volume of the GCWDA plant is 55 million gallons per day. Our Pasadena plant discharges 1 million gallons per day on an average about 2% of the total.

Superfund

Those superfund sites at which we are a potentially responsible party, PRP, resulted from legally disposing of wastes in the 60's and early 70's. Through acquisitions such as Sterns Rogers and GSF Energy, we also are involved in superfund sites as PRP's. We have taken several measures to reduce our potential exposure to superfund and other cleanup liabilities. Among these are:

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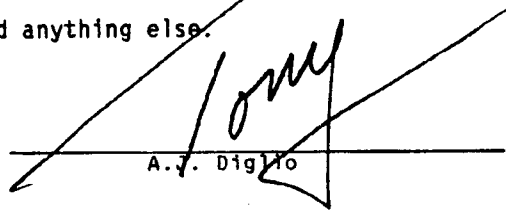
- . reduced hazardous waste generation
- . reduced hazardous waste disposed in landfills
- . recycling of solvents
- . auditing of disposal companies and sites
- . environmental assessments of acquisitions.

Air Products has reduced hazardous waste to landfills in excess of 90%. Only 2% of the estimated 7.6 thousand tons per year of hazardous waste disposed off-site is landfill. The landfills must meet stringent RCRA requirements and government inspections. They also must meet our annual environmental reviews, and in addition, we utilize a consortium of 30 companies (Commercial Hazardous Waste Management Evaluation Group) in which Air Products is a charter member that engages environmental consultants to audit off-site disposal facilities.

New Orleans PSG Ammonia - Wastewater

The sources of ammonia in the New Orleans wastewater discharge are as follows: cooling water tower blowdown, condensate, miscellaneous spills, and exchanger leaks.

Please let me know if you need anything else.


A.J. Diglio

1619q

Attachments

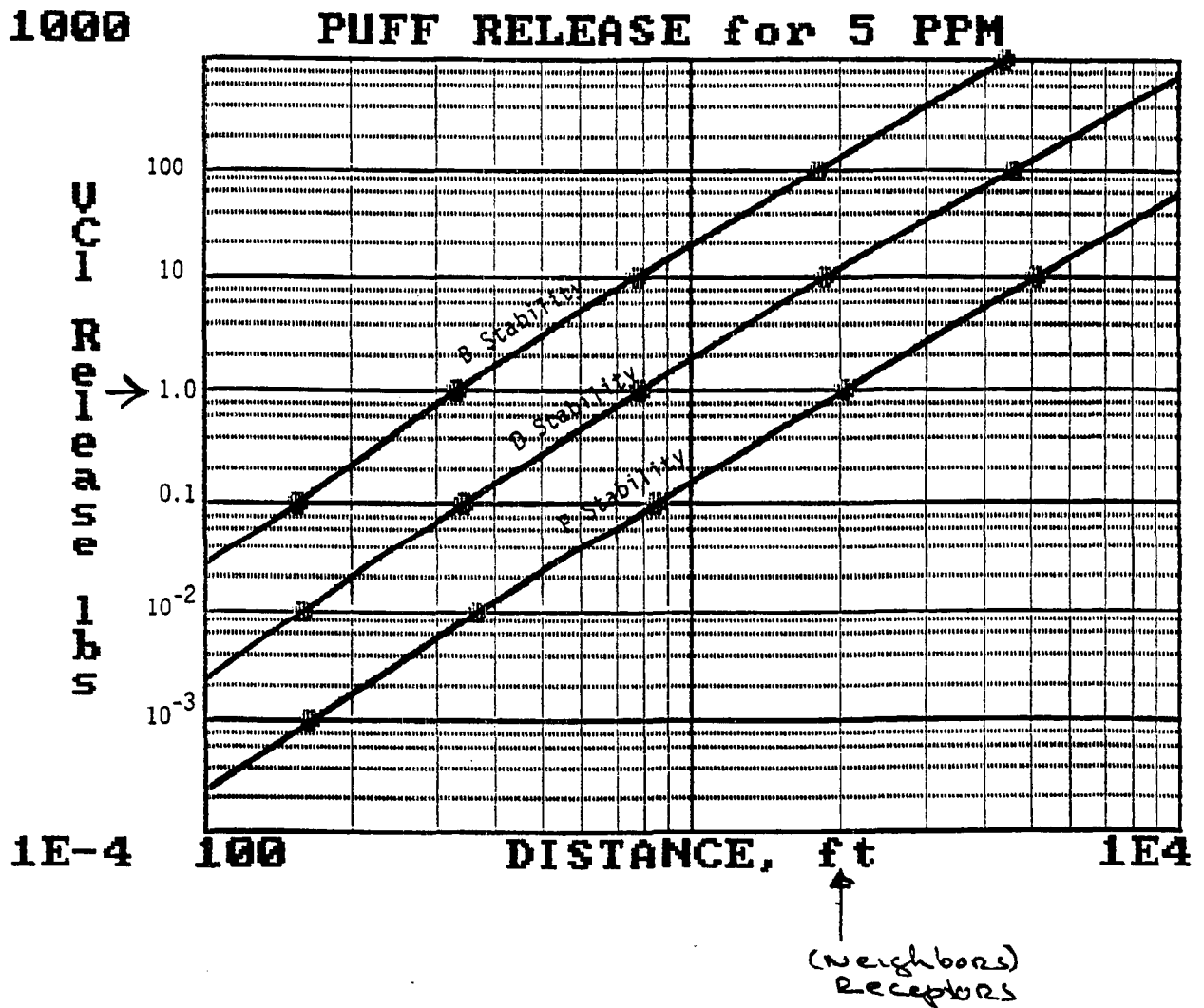
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VCM RELEASES

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FIGURE 1

VCI Instantaneous Release
 $U_w = 0.5 \text{ m/sec}$
 Minimum Release for 5 PPM
 at Receptor

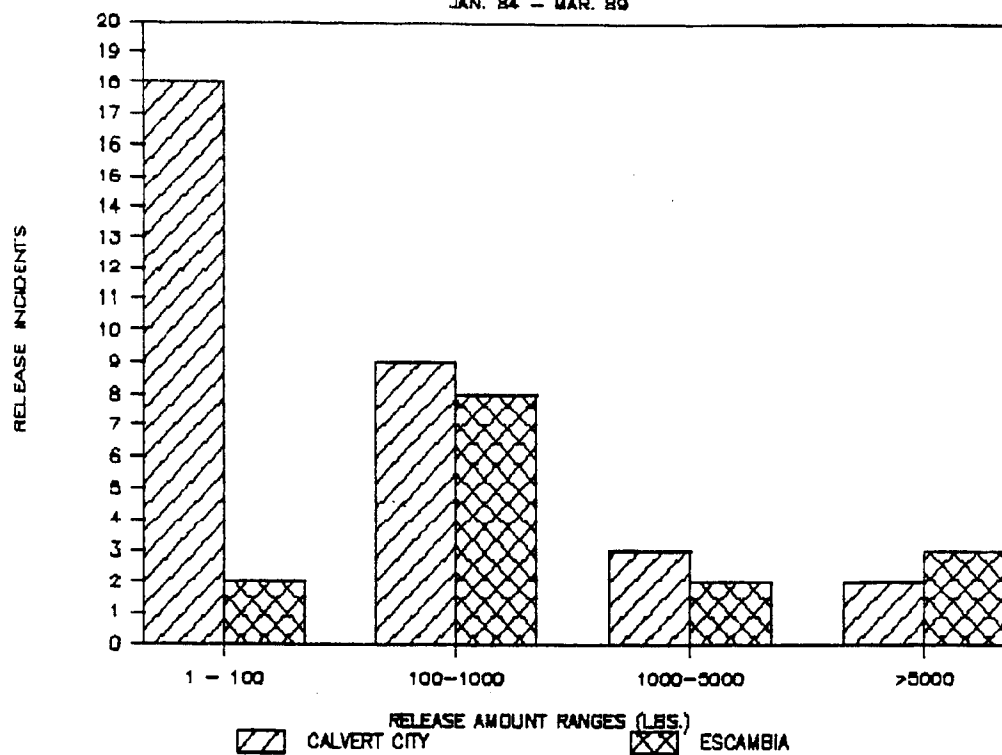


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VCM RELEASES

JAN. 84 - MAR. 89



D.C. Emerson
3/25/89

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TABLE II
VCM Releases From Jan. 1984

DATE	PLANT	NESHAP/ CERCLA	VCM RELEASED
23 JUN 84	CAL	N	5485
25 JUN 84	CAL	C	9
14 AUG 84	CAL	C	3
25 AUG 84	CAL	N	88
16 OCT 84	CAL	N	5268
31 OCT 84	CAL	C	250
23 NOV 84	CAL	N	2940
20 JAN 85	CAL	N	550
04 MAR 85	CAL	C	50
05 MAR 85	CAL	N	100
21 MAY 85	CAL	C	115
10 JUN 85	CAL	C	10
13 AUG 85	CAL	C	4590
04 DEC 85	CAL	C	11
12 DEC 85	CAL	N	20
15 DEC 85	CAL	C	2
29 MAR 86	CAL	C	150
08 JUN 86	CAL	C	5
07 AUG 86	CAL	C	10
13 SEP 86	CAL	C	741
23 FEB 87	CAL	C	20
05 MAR 87	CAL	C	17
16 MAR 87	CAL	C	61
21 APR 87	CAL	N	25
28 APR 87	CAL	C	2200
01 MAY 87	CAL	N	157
27 MAY 87	CAL	N	15
17 AUG 87	CAL	N	48
09 SEP 87	CAL	N	340
14 DEC 87	CAL	C	14
19 MAY 88	CAL	N	4515
21 AUG 88	CAL	N	388
14 DEC 88	CAL	N	3

SUMMARY

	RELEASE AMOUNT (LBS.)			
	1 - 100	100-1000	1000-5000	>5000
CALVERT CITY	18	9	3	2
DISTRIBUTION-X	55	27	12	6
ESCAMBIA	2	8	2	3
DISTRIBUTION-X	13	53	13	20

01 FEB 84	ESC	N	23300
28 MAY 84	ESC	N	35000
08 MAY 85	ESC	C	10
14 JUL 85	ESC	N	216
13 OCT 85	ESC	N	212
22 JAN 86	ESC	N	351
20 MAR 86	ESC	N	1000
15 JUL 86	ESC	N	13865
05 OCT 86	ESC	C	9
19 OCT 87	ESC	C	2511
16 MAY 88	ESC	N	548
21 MAY 88	ESC	C	172
12 OCT 88	ESC	C	2796
23 OCT 88	ESC	C	108
03 MAR 89	ESC	C	271

D. C. Emlison
3129125

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ESCAMBIA 1984
VCM EMERGENCY RELEASE

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