



INTERNAL
CORRESPONDENCE

UNION CARBIDE CORPORATION OLD RIDGEBURY ROAD, DANBURY, CT 06817

To (Name) Susan G. Austin, Sc.D.
Division HS & EA
Location Epidemiology
Area P2

Date November 11, 1982

Originating Dept. HS & EA

Area Epidemiology, P2

Copy to

Subject Recalculation of ETO
Exposure In The UCC
Texas City Case
Control Study

Dear Susan:

While attempting to validate specific department codes which used ethylene oxide, an omission was discovered on the original chemical-department group list (reference: 1/30/81 document from R.L. Frantz to S.S. Leffingwell). Our in-house case-control study will have to be updated to reflect this discovery.

The omission was that ethylene oxide was not included in DG016 (Chemicals Lab). The number of persons who had DG016 in their work history, and were not previously counted as exposed to ethylene oxide is included in the following table:

ADDITIONAL EMPLOYEES EXPOSED TO ETHYLENE OXIDE WITH ADDITIONS TO
TOTAL NUMBER OF EMPLOYEES WITH KNOWN EXPOSURES IN PARENTHESES

	<u>Overall</u>	<u>15-Year Latency</u>
Cases	1 (1)	1 (1)
Control 1	4 (2)	3 (1)
Control 2	1 (0)	1 (0)
Hourly Ctl 1	2 (2)	1 (1)
Hourly Ctl 2	1 (0)	1 (0)

The numbers in parenthesis are persons who were previously treated as unknown, so these persons are added to the total number in each group as well as the total number exposed.

I've enclosed changes that should be made on the case control report. Please let me know if you have any questions.

Sincerely,

A. Robert Schnatter

ARS:gac
Enclosure

UCC
053171

TABLE 3. Exposure Status Of Cases And Controls For Five Chemicals
Used Or Produced At The Texas City Plant (1941-1977)

CHEMICAL	CASES						CONTROL I						CONTROL II					
	Exposed N (%)	Unexposed N (%)	Unknown N (%)	Exposed N (%)	Unexposed N (%)	Unknown N (%)	Exposed N (%)	Unexposed N (%)	Unknown N (%)	Exposed N (%)	Unexposed N (%)	Unknown N (%)	Exposed N (%)	Unexposed N (%)	Unknown N (%)	Exposed N (%)	Unexposed N (%)	Unknown N (%)
BENZENE	1 (4.8)	8 (38.1)	12 (57.1)	11 (13.8)	18 (22.5)	51 (63.8)	5 (6.2)	21 (26.3)	54 (67.5)									
DIETHYL SULFATE	5 (23.8)	6 (28.6)	10 (47.6)	17 (21.3)	18 (22.5)	45 (56.3)	13 (16.3)	19 (23.8)	48 (60.0)									
ETHYLENE DICHLORIDE	5 (23.8)	6 (28.6)	10 (47.6)	14 (17.5)	19 (23.8)	47 (58.8)	14 (17.5)	17 (21.3)	49 (61.3)									
ETHYLENE OXIDE	4 (19.0) 2 (9.5)	7 (33.3) 7 (33.3)	10 (47.6) 11 (52.4)	13 (16.3) 9 (11.3)	20 (25.0) 22 (27.5)	47 (58.8) 49 (61.3)	12 (15.0) 11 (13.8)	19 (23.8) 20 (25.0)	49 (61.3) 49 (61.3)									
VINYL CHLORIDE	4 (19.0)	7 (33.3)	10 (47.6)	12 (15.0)	20 (25.0)	48 (60.0)	13 (16.2)	19 (23.8)	48 (60.0)									

Table 4A. Proportions of Cases and Controls Exposed
to Five Chemicals at UCC Texas City

CHEMICAL	ALL CASES		GLIOMAS		CONTROL I		CONTROL II	
	Total	Percent Exposed	Total	Percent Exposed	Total	Percent Exposed	Total	Percent Exposed
BENZENE	9	11.1	8	12.5	29	37.9	26	19.2
DIETHYL-SULFATE	11	45.5	10	40.0	35	48.6	32	40.6
ETHYLENE DICHLORIDE	11	45.5	10	50.0	33	42.4	31	45.2
ETHYLENE OXIDE	11 10	36.4 36.0	10 9	40.0 33.3	33 31	39.4 29.0	31 31	38.7 35.5
VINYL CHLORIDE	11	36.4	10	40.0	32	37.5	32	40.6

Table 4B. Proportions of Cases and Hourly Controls
Exposed to Five Chemicals at UCC Texas City

CHEMICAL	ALL CASES		GLIOMAS		CONTROL I		CONTROL II	
	Total	Percent Exposed	Total	Percent Exposed	Total	Percent Exposed	Total	Percent Exposed
BENZENE	9	11.1	8	12.5	26	38.5	24	16.7
DIETHYL-SULFATE	11	45.5	10	40.0	31	48.4	30	40.0
ETHYLENE DICHLORIDE	11	45.5	10	50.0	30	43.3	29	44.8
ETHYLENE OXIDE	11 10	36.4 36.0	10 9	40.0 33.3	30 28	43.3 32.1	29 29	37.9 34.5
VINYL CHLORIDE	11	36.4	10	30.0	29	37.9	29	37.9

Table 5A. Proportions of Cases and Controls Exposed
to Five Chemicals at UCC Texas City at
Least 15 Years Prior to Death

CHEMICAL	ALL CASES		GLIOMAS		CONTROL I		CONTROL 2	
	Total	Percent Exposed	Total	Percent Exposed	Total	Percent Exposed	Total	Percent Exposed
BENZENE	9	11.1	8	12.5	30	26.7	23	4.3
DIETHYL-SULFATE	10	40.0	9	33.3	33	42.4	27	29.6
ETHYLENE DICHLORIDE	10	40.0	9	44.4	31	32.3	26	34.6
ETHYLENE OXIDE	10 9	30.0 33.3	9 8	33.3 35.0	31 30	29.0 26.0	26 26	26.9 23.1
VINYL CHLORIDE	10	30.0	9	33.3	33	30.3	27	33.3

Table 5B. Proportions of Cases and Hourly Controls
Exposed to Five Chemicals at UCC Texas City
at Least 15 Years Prior to Death

CHEMICAL	ALL CASES		GLIOMAS		CONTROL I		CONTROL II	
	Total	Percent Exposed	Total	Percent Exposed	Total	Percent Exposed	Total	Percent Exposed
BENZENE	9	11.1	8	12.5	26	26.9	22	4.5
DIETHYL-SULFATE	10	40.0	9	33.3	29	44.8	26	30.8
ETHYLENE DICHLORIDE	10	40.0	9	44.4	27	33.3	25	36.0
ETHYLENE OXIDE	10 9	30.0 33.3	9 8	33.3 35.0	27 26	25.9 23.1	25 25	27.0 24.0
VINYL CHLORIDE	10	30.0	9	33.3	29	31.0	25	32.0