

Business Confidential

UNION CARBIDE CORPORATION

Texas City

Brain Tumor Turmoil

New Orleans

February 8, 1983

UCC 097690

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BACKGROUND FACT SHEET

Union Carbide's Texas City facility has been in operation since 1941. During this period, approximately 9000 people have worked at the facility for periods ranging from a few weeks to 39 years.

During the first half of 1978, the company's Gulf Coast medical director proposed to plant management that an epidemiological study be conducted at Texas City. Similar studies were being conducted at other Union Carbide chemical facilities, and it was felt that since Texas City was then 37 years old and had employed thousands of workers, such a study would provide valuable information for Union Carbide's total occupational health program.

Initial discussions were held with a prominent medical consulting group with a view toward designing an epidemiological study. During this period, an employee at Texas City who was diagnosed by his physician as having a brain tumor reported that he suspected an excess in their incidence to the Occupational Safety and Health Administration.

OSHA requested from Union Carbide work history information on any employees known to have died of a primary brain tumor. After reviewing these files, OSHA asked for assistance from NIOSH, the agency responsible for scientific evaluation of any possibly work-related health risks.

In February, 1979, Union Carbide and NIOSH agreed that an epidemiology study at Texas City would be undertaken by NIOSH. Union Carbide agreed to cooperate in the study, and to provide all available health information on past and present employees at Texas City.

A total of 8,851 employee work histories were provided to NIOSH for epidemiological study by the end of the year 1979.

Subsequent Chronology:

2-26-80	OSHA-NIOSH-UCC meeting, Washington, D.C. Epi study status report.
1980	Discussions relative to concurrent study by Pat Buffler versus in-house UC study.
1980	Dr. Leffingwell's preliminary report in morbidity and mortality weekly SMR 143 17 observed, 11.2 expected.
1980	Dr. Alexander et al <u>American Journal of Industrial Medicine</u> "excess brain cancer risk twice expected".

- Oct 1980 New York Academy of Sciences
Drs. Alexander and Leffingwell
- separate presentations.
- Dec 1980 OSHA-NIOSH-UCC meeting, Texas City
Estimated completion of both NIOSH
studies - the end of January.
- 10-21-1981 John Whittlesey meeting, Chicago
Discuss lawsuit strategy.
- 11-11-1981 Press Conference, Texas City
Release of Dr. Susan Austin's
in-house Cohort and Case Control
Study results.
- 11-18-1981 OSHA-NIOSH-UCC meeting, New York
"You stole our study".
- 1982 No activity. Maintained telephone
communication with NIOSH. Efforts
directed towards getting NIOSH to
release Case Control Study.
- 1983 (?) Publication of Waxweiler's Cohort
Study, January issue, Journal of
National Cancer Institute.
- (?) Publication of Austin's Cohort and
Case Control studies in Journal
of Occupational Medicine, (~~May~~ or *March*
~~June~~).
- (?) Publication of Leffingwell's Case
Control Study, Fall of 1983.

Basic Differences in NIOSH and UCC Studies

Dr. Austin used original protocol to use as a cohort white males through December 31, 1977.

NIOSH extended study to include blacks and Hispanics through December 31, 1979.

Brain Tumor Types

Glenn 02-01-1983
All *Gr I & II mal.*

*Gr I & II mal.
Astrocytoma
Meningioma
Negative*

(Living)

Alexander	12-31-1977	14	Glioblastomas
	All	1	Astrocytoma
	"Two-fold increase"	1	Meningiosarcoma
		1	Meningioma
		1	Negative
		18	Cases

Austin	12-31-1977	10	Glioblastomas
	White males	1	Astrocytoma
	(12 observed	1	Meningiosarcoma
	7.42 expected)	12	Cases

Waxweiller	12-31-1979	Draft (Breakdown of types not available)	
	All	19 observed	9.6 expected <i>Ended in 1977</i>
	Hourly males	22 observed	10.7 expected <i>Extended to 1977</i>
	15 yrs since hire	19 observed	7.2 expected

13 - 2 - 2

#17 not incl.

Brain Tumor Cases

Inaccurate
↓

<u>Initial</u>	<u>Race/Sex</u>	<u>Date of Hire</u>	<u>Date of Death</u>	<u>Age</u>	<u>Diagnosis</u>	<u>Job Title</u>	<u>Years</u>
1. HL	WM	12-16-40	05-15-64	51	Glioblastoma multiforme	Operator <i>(17yrs @ Monsanto)</i>	<i>24 yrs</i>
2. SP	WM	08-17-53	04-05-62	30	Glioblastoma multiforme	Weighmaster	?
3. VE	WM	05-18-41	02-19-66	55	Meningio-sarcoma	Operator Ch. Operator	<i>25</i>
4. LRB	WM	01-25-50	01-13-68	66	Glioblastoma multiforme	Heavy Equipment Operator	<i>18</i>
5. ERP	WM	08-21-53	05-05-71	44	Malignant Glioma	Operator	<i>18</i>
6. CM	WM	03-02-49	06-05-71	61	Path - Neg.	Operator	<i>22</i>
7. WRW	WM	09-26-46	03-22-73	63	Glioblastoma multiforme	Operator Ch. Operator	<i>27</i>
8. LST	WM	09-19-51	01-08-74	52	Glioblastoma multiforme	Machinist	<i>23</i>
9. KR	WM	10-19-50	05-14-74	59	Glioblastoma multiforme	Operator	<i>24</i>
10. JL	WM	07-29-41	05-18-76	66	Glioblastoma multiforme	Instruments Foreman	<i>35</i>
11. BJH	WM	10-30-53	12-21-78	49	Glioblastoma	Weighmaster	<i>25</i>
12. LM	BM	09-18-46	03-07-79	55	Glioblastoma multiforme	Laborer Oiler	<i>33</i>
13. JRC	WM	09-21-48	07-20-75	49	Astrocytoma Grade I	Pipefitter	<i>27</i>
14. PJDeG	WM	09-18-44	05-21-74	55	Glioma Type IV	Operator	<i>30</i>
15. LRK	WM	01-12-48	01-26-71	53	Cerebellar tumor (metastatic lesion)	Painter	<i>23</i>
16. MCG	WM	04-27-53	10-03-56	33	Glioblastoma multiforme	Machinist	<i>3</i>
17. LGO	WM	10-23-50	02-18-80	57	Astrocytoma Grade IV	Operator	<i>30</i>

Brain Tumor Cases - continued:

<u>Initial</u>	<u>Race/Sex</u>	<u>Date of Hire</u>	<u>Date of Death</u>	<u>Age</u>	<u>Diagnosis</u>	<u>Job Title</u>	<u>So. No.</u>
18. RJB	WM	07-09-44	10-28-79	59	Glioblastoma multiforme	Boilermaker Leadman	30
(19.) MCC	WM	11-30-41	12-13-65	55	Brain Tumor- Meningioma	Chief Operator	24
(20.) JL	BM	03-00-47	06-28-74	61	Meningioma	Laborer	27
21. RDT	WM	10-08-45	10-00-07	70	Glioblastoma multiforme	Painter Leadman	25
(22.) WRS	BM	07-09-44	12-17-63	63	Meningioma	Laborer	19
23. WER	--	10-24-45	04-15-55	49	Negative autopsy	Laborer	10
24. DB	BM	05/27/55		51	Glioblastoma multiforme	Laborer Maint. Supv.	27-
25. RG	WM	02-25-53	09-27-81	50	Glioblastoma	Clerk	28-

O. Berigri

Areas of Disagreement: UCC - NIOSH
Occupational Or Non-Occupational

1. "We have not been able to associate these brain cancer cases with any particular chemical exposure."

NIOSH agrees but argues that the etiological factor may be a combination of different chemical exposures which may be almost impossible to trace or identify. Alexander and Waxweiler are firm in their belief that the cases are occupationally related.

2. "The types of brain cancer are present in the same percentages as that seen in the general population. Ordinarily, chemically caused cancer is a specific and often unusual type, different than those seen in the general population."

NIOSH says that although this is true in some occupationally-related cancers, it does not hold true for all cancers.

3. "Excessive brain cancer has not been confirmed in chemical plants similar to ours in other parts of the country."

NIOSH feels excesses have been shown to occur and may cite Dow, Monsanto, Exxon, etc., where results of studies have been controversial.

4. Diagnostic Sensitivity Bias may be a factor in an apparent increased incidence of brain tumor in our employees. We are close to an internationally known medical center in Houston, we have a practicing neurosurgeon in our area and we point out the improved medical buying power of excellent insurance coverage and above average salaries of chemical plant employees.

NIOSH believes if such a bias exists that its effect would be minimal and "certainly not sufficient to account for the excess risk of death due to brain tumor observed in this investigation."

Alexander (OSHA) and Waxweiler (NIOSH) feel that their studies show an excess of brain cancers which they strongly feel are occupationally related.

Leffingwell (NIOSH) feels that an excess number of brain cancers may be related geographically but are probably not occupationally related.