



DOW CHEMICAL U.S.A.

LOUISIANA DIVISION
PLAQUEMINE, LOUISIANA 70764
604 388-8000

INDUSTRIAL HYGIENE REPORT

CHLOR-ALKALI II
ASBESTOS SURVEY UPDATE

FILE NO. 109-8-4
DATE April 8, 1976
AUTHOR Dannie Kennedy

CHECKED *Charlie Halperin*
DATE May 28, 1976

SUMMARY

An asbestos survey was conducted in Chlor-Alkali II to update the data and determine if any significant changes had occurred since the last survey was completed.

The samples, collected from the breathing zone, ranged from a low of .005 fib/cc for an operator performing routine duties in the cell area, with no asbestos pulping involved, to a high of .12 fib/cc for an operator pulping cells. (This was a 30 minute peak sample.)

All samples were below OSHA and Dow's standards, however, we must adhere strictly to safe operating procedures and good housekeeping which supervision is responsible for enforcing.

DISTRIBUTION

<u>Louisiana</u>	<u>Bldg.</u>	<u>Midland</u>	<u>Bldg.</u>
G. J. Cardinal	3601	R. Langner	1803
G. W. Daigre	2501	M. Swank	1803
E. P. Edwards	3701		
T. C. Howard	3601	<u>Freeport</u>	
C. L. Melancon	2306		
L. G. Witty	3601	R. L. Daniel	B-101
Medical	2303		
File (2)			

AN OPERATING UNIT OF THE DOW CHEMICAL COMPANY



DO 011660
CONFIDENTIAL

CHLOR-ALKALI II

An asbestos survey was conducted in Chlor Alkali II Plant to update data and determine if any significant changes had occurred since the last survey was completed. The asbestos samples were collected from the operators' breathing zone using a 37 millimeter millipore filter mounted in an open face filter holder. The air was drawn through the filter with a Bendix pump, Model C115, calibrated to operate at 2 liters per minute.

Slide samples were prepared and observed with the microscope magnification set at 500. All fibers longer than 5 microns were counted to determine the fiber concentrations. Results ranged from a low of .005 fibers for an operator working in the cell area with no asbestos pulping involved to a high of .120 fibers per cubic centimeter greater than five microns in length, which was recorded while an operator was pulping cells. These results are well below OSHA's standard of five fibers per cubic centimeter and Dow's standard of two fibers per cubic centimeter, however, this standard may be lowered in the future and every effort should be made to keep exposure levels as low as possible.

Monitoring results revealed that operators working the cell area recorded the lowest asbestos exposure. (These samples were taken on routine work days when no pulping was done.) The highest exposure was a thirty minute sample or peak exposure sample taken while an operator was pulping cells. This involves mixing or wetting the asbestos down in an enclosed box and pouring the asbestos in the leaking cells. (See following sheet for monitoring results.)

Results are satisfactory, however, we must adhere strictly to safe operating procedures and good housekeeping, which supervision is responsible for enforcing.

We should re-monitor the operators working their routine jobs in the cell area and also monitor operators for peak exposures while pulping cells to insure that data is adequate and accurate.

Monitoring Results

(Results are recorded as fibers per cubic centimeter greater than five microns in length.)

<u>Result</u>	<u>Job Description</u>
1) .030	Operator working the liquifaction area performing routine duties - monitoring time was seven hours.
2) .014	Operator working the cell area performing routine duties - no pulping - monitoring time was seven hours.
3) .041	Operator working the brine area performing routine duties - monitoring time was six hours and ten minutes.
4) .005	Operator working the cell area performing routine duties - no pulping - monitoring time was seven hours.
5) .021	Operator working the power area performing routine duties - monitoring time was one hour.
6) .01	Operator working the cell area performing routine duties - no pulping - monitoring time was seven hours and thirty minutes.
7) .12	Operator pulping cells for thirty minutes. This sample represents a peak exposure sample.