Chlorine 1995

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ENVIRONMENTAL HEALTH SUMMARY
CHEMICAL EXPOSURE DATA
LOUISIANA DIVISION

DEPARTMENT: Chlorine JOB CLASSIFICATION: S. O. T. - DATE OF THIS REPORT: 1/20/75

CHEMICAL NAME	STANDARD (TLV)	CEILING	SAMPLE(S) RANGE HIGH	SAMPLE(S) RANGE LOW	NUMBER OF SAMPLES TAKEN	SAMPLE PERIOD DATE(S)	TWA
Asbestos	5 fibers >5u/cc	Same	0.33	0.029	4	October 1974	0.146

$$Em = \frac{X\ TWA}{X\ Standard} + \frac{Y\ TWA}{Y\ Standard} + \frac{Z\ TWA}{Z\ Standard} = \begin{cases} <(1) \text{ Acceptable} \\ >(1) \text{ Unacceptable} \end{cases}$$

Em - Equivalent Exposure→ Mixture

Exposure to noise (A scale) for this job classification - Equivalent Exposure Rate →

Standard(s) TWA, Ranges & Ceilings to be reported in PPM Vol. if a gas or vapor, or mg/m3 if a dust or mist. The exception is asbestos, which is to be expressed as number of fibers greater than 5 micron/cc of air sampled.

Original: Medical Department, Bldg. 2303
cc: Department File
cc: Environmental Health Committee, Bldg. 2304

RCV/ad
6-20-73

DOW CHEMICAL U.S.A.

LOUISIANA DIVISION
PLAQUEMINE, LOUISIANA 70765
504 687-4321

LOCATION: CHLORINE - 2601 BLDG.

ENVIRONMENTAL HEALTH REPORT

FILE NO. 10:-13-1

DATE 1-1-75

ASBESTOS SURVE

CHLORINE

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CHECKED Charles E. Klaphen

DATE

SUMMARY

Monitoring operations in the cell building for asbestos exposure while pulping cells has been completed. Results were favorable as they were well within the O.S.H.A. time weighted average limits for an eight-hour shift. The samples ranged from a low of .029 to a high of 0.33 fibers per cc greater than 5 microns in length which compares favorably to the O.S.H.A. eight-hour standard of 5 fibers per cc and Dow's standard of 2 fibers per cc.

Operators must be kept informed of the monitoring results and the hazards of handling asbestos. Proper handling procedure, and the wearing of proper breathing equipment should also be re-emphasized. The MSA Comfo Respirator (Type BM 2301) with the dust filter is required when handling asbestos.

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CHLORINE

Collected four samples at Chlorine using the Bendix pump set at 2 liters per minute. The samples were collected from the breathing zone with the sampler pinned on the operator's lapel.

The samples were collected while the operators were pumping cells. To pulp a cell the operators have to make up an asbestos-water slurry and pour it into the cell to plug any leaks. The operators mix dry asbestos with water in a 55 gallon drum to form the necessary slurry. The asbestos should be wet down anytime it is being handled.

The four samples ranged from a low of .029 fibers per cc greater than 5 microns in length to a high of 0.33 fibers per cc greater than 5 microns in length which is well within the standard, set by O.S.H.A., of 5 fibers per cc greater than 5 microns in length and Dow's standard of 2 fibers per cc.

Results of Survey

Sample #1	0.029 /
#2	0.10 /
#3	0.33 /
#4	0.13 /

Operators must be shown results of test and encouraged to continue following safety precautions by wetting asbestos thoroughly and wearing proper breathing apparatus when mixing slurry. The MSA Comfo Respirator (Type BM 2301) with the dust filter is required.

Another precaution that should be discussed is the necessity for being extremely careful not to get the slurry on clothing which will dry out and give off airborne asbestos particles. All partially used bags of asbestos should be kept covered with plastic to eliminate another source of airborne asbestos particles.