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TO: Mr. E. J. Heinz

FROM: A. R. Hancock ARH-41-80 August 19, 1980

REVIEW OF ASBESTOS MONITORING RESULTS IN SPECIAL PRODUCTS AND CELANEX

SUMMARY

A reduction in the asbestos standard for employee exposure in the work place has been proposed by several government agencies (see attached magazine article). A reduction in the eight hour time weighted average (TWA) exposure standard from 2 fibers/cc to 0.1 fibers/cc is sought. In light of this proposed new regulation, the past employee exposures to asbestos in the Special Products and Celanex Units were reviewed and summarized (see attached Tables). The average TWA exposures are below 0.1 fibers/cc in both units. TWA exposures above 0.1 fibers/cc have been reported. Slight modifications in the present handling systems may be required to continue to insure low employee exposure to asbestos should the proposed regulations be adopted.

Presently, there is nothing definite as to if or when the proposed regulation would go into effect.

DISCUSSION

A proposed new Federal regulation on asbestos exposure in the work place has been recommended by several government agencies (see attached magazine article). In light of this proposed regulation, the employee exposures to asbestos in the Special Products Unit and Celanex Unit over the past several years have been reviewed to determine the current extent of compliance with the proposed 0.1 fibers/cc exposure limit. The current OSHA 8 hour time weighted average (TWA) exposure standard is 2 fibers/cc of air. The article makes no reference to any regulation changes on the ceiling concentrations (short term exposure limits). The current ceiling concentration standard is not to exceed 10 fibers/cc of air at any time.

Employees making asbestos blends are monitored for asbestos exposure semi-annually according to Federal regulations CFR 1910.1001e, 1910.1001f. TWA exposures are calculated from the short term exposure results. Data included in this report has been previously published.

The monitoring data from the Special Products Unit is summarized in Table I.[1] Data has been summarized beginning with the third quarter, 1978. The average TWA for each sampling period was below 0.1 fibers/cc. The highest TWA reported has been 0.11 fibers/cc during the 1979 3rd quarter sampling. The highest short term exposure (6.1 fibers/cc) was also reported during this time.

The Celanex Unit monitoring data was summarized for only the past year (Table II).[2] The pre-third quarter 1979 data reflects the exposures from the old asbestos handling system prior to relocation to the top floor of the Celanex building. All TWA averages were below 0.1 fibers/cc but each sampling period had TWA exposures that exceeded 0.1 fibers/cc. The highest short term exposure was 1.90 fibers/cc.

CONCLUSIONS

The average TWA exposures are below 0.1 fibers/cc in both units handling asbestos. Slight modifications to the asbestos handling system would probably be necessary to continue to insure low asbestos exposures if the proposed regulation is adopted. At this time it is not known if any reductions in the present asbestos standard will be made or when they would take effect.

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REFERENCES

[1] A. Hancock, A. R., "OSHA Compliance Asbestos Measurements in the Special Products Unit," ARH-7-79, February 1, 1979.

B. Hancock, A. R., "OSHA Compliance Asbestos Measurements in the Special Products Unit," ARH-21-79, June 21, 1979.

C. Hancock, A. R., "Asbestos Monitoring Results in the Special Products Units," ARH-3-80, January 1, 1980.

D. Hancock, A. R., "Asbestos Monitoring Results for Special Products and Celanex Units," ARH-28-80, June 6, 1980.

[2] A. Hancock, A. R., "Asbestos Measurements in the Celanex Unit," ARH-26-79, July 5, 1979.

B. Hancock, A. R., "Asbestos Measurements in the Celanex Unit," ARH-2-80, January 11, 1980.

C. Hancock, A. R., "Asbestos Monitoring Results for Special Products and Celanex Units," ARH-28-80, June 6, 1980.

TABLE I

SUMMARY OF EMPLOYEE EXPOSURE TO ASBESTOS IN THE SPECIAL PRODUCTS UNIT

SAMPLING PERIOD[1]	AVERAGE TWA EXPOSURE FIBERS/CC[2]	HIGHEST TWA EXPOSURE REPORTED FIBERS/CC	AVERAGE STEL[3] EXPOSURE FIBERS/CC	HIGHEST STEL EXPOSURE REPORTED FIBERS/CC
3rd Quarter, 1978	0.03	0.08	0.27	0.96
1st quarter, 1979	0.02	0.05	0.15	0.68
3rd quarter, 1979	0.06	0.11	2.1	6.1
1st quarter, 1980	0.01	0.02	0.15	0.45

[1] Employees are monitored for asbestos exposure semi-annually. Monitoring and analyses are according to CFR 1910.1001e, 1910.1001f.

[2] Eight hour TWA permissible exposure - 2 fibers, longer than 5 micrometers, per cubic centimeter of air.

[3] Short term exposure limit (STEL) - 10 fibers, longer than 5 micrometers, per cubic centimeter of air.

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TABLE II

SUMMARY OF EMPLOYEE EXPOSURE TO ASBESTOS IN THE CELANEX UNIT - PRESENT SYSTEM

SAMPLING PERIOD[1]	AVERAGE TWA EXPOSURE FIBERS/CC[2]	HIGHEST TWA EXPOSURE REPORTED FIBERS/CC	AVERAGE STEL EXPOSURE FIBERS/CC[3]	HIGHEST STEL EXPOSURE REPORTED FIBERS/CC
3rd Quarter, 1979	0.07	0.37	0.29	0.71
1st Quarter, 1980	0.01	0.13	0.15	1.90

[1] Employees are monitored for asbestos exposure semi-annually. Monitoring and analyses are according to CFR 1910.1001e, 1910.1001f.

[2] Eight hour TWA permissible exposure - 2 fibers, longer than 5 micrometers, per cubic centimeter of air.

[3] Short term exposure limit (STEL) - 10 fibers, longer than 5 micrometers per cubic centimeter of air.

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