GLD

AIRBORNE ASBESTOS COUNTS

FOR

Michael-Walters Industries
Valier, Illinois

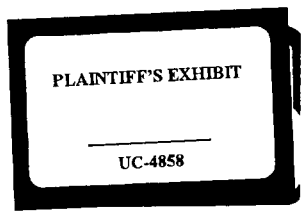
Date Sampled: January 6, 1983
Date Reported: January 12, 1983

Samples Collected By: F. L. Smith
Union Carbide Corporation

Samples Analyzed By: F. L. Smith
Union Carbide Corporation

Reported By: F. L. Smith
Union Carbide Corporation

Union Carbide Corporation
Metals Division
Niagara Falls, New York



X416638

OBJECTIVE

To monitor airborne asbestos emissions at the subject company's production facility during the use of "Calidria" HPO asbestos in manufacturing a mine stopping wall sealant.

OPERATION DESCRIPTION

"Calidria" HPO asbestos is combined with sodium silicate in a ribbon type blender to form a compound known as "Stoppit". This sealant is used on mine stopping walls to insure a tight seal at the wall to prevent leakage of circulated air. Production involved charging the blender with 6000 lbs. of sodium silicate and 700 lbs. HPO. Mixing of the resultant slurry was ∿15 minutes and canning up of the material followed immediately. Five gallon cans were used that weighed ∿60 lbs or ∿12 lbs/gal.

Personal samples were obtained from the mixer operator before, during and after the addition of HPO asbestos and reflected exposure for > 7 hours in a normal workday. Environmental Samples were collected at the mixer hopper, in a storage building adjacent to the production facility, and within an operating coal mine with a stopping wall coated with the sealant for 5 years. This environmental monitoring at the stopping involved placing monitors at the upwind and downwind ends of the wall. Also, a brushing and light scraping of the wall was done to simulate abrasion of the coating. Airflow past this location was calculated by the mine safety representative at the site to be ∿50,000 cu ft. of air/min. Another environmental sample was taken at the 13th main east air return to determine asbestos concentrations in air that had been circulated through the mine and returning to surface.

REMARKS

Samples obtained in the storage area of the production facility and at the 13th Main east return of the mining operation were moderately loaded with other non-fiberous background particulate. Due to this interfering particulate some fine fiber may have been obscured in the analysis.

X416639

SUMMARY OF FIBER COUNTS

Personal Samples

Sample No.	Air Sample Time	Minutes	Operation Description	Airborne Fiber Count (fibers/cc >5μ) Chrysotile Asbestos	Possible Amphibole Asbestos
J-15	On: 7:55 a Off:8:29 a	34	Personal sample-Randy Murry, mixer operator. Normal duties associated with preparing for batch	0.2	0.1
J-17	On: 8:30 a Off:8:59 a	29	Personal sample - Randy Murry. Addition of 20 bags (700 lbs.) HPO asbestos to mixer, stacking of 20 bags HPO for next batch, and bag disposal.	2.3	0.1
J-12	On: 9:00 a Off: 10:54 a	54	Personal Sample - Randy Murry. Post dump period. Mixing and drumming-up of material.	0.1	< 0.1
J-24	On: 10:55 a Off: 4:15 p	320	Personal Sample - Randy Murry. Normal duties about plant and deliveries to various sites.	< 0.1	< 0.1

TWA Chrysotile $\frac{80.761}{437}$ = 0.2 fiber/cc

TWA Amphibole $\frac{11.541}{437}$ = < 0.1 fiber/cc

X416640

SUMMARY OF FIBER COUNTS

Environmental Samples
Location #1

Sample No.	Air Sample Time	Minutes	Operation Description	Airborne Fiber Count (fibers/cc >5u) Chrysotile Asbestos	Possible Amphibole Asbestos
J-26	On: 8:00 a Off: 8:29 a	29	Environmental Sample- Location #1. Located ~ 5' west of Hopper and even with chute opening. Sampler placed upon bags of HPO stacked in this location.	0.1	0.1
J-27	On: 8:30 a Off: 8:59 a	29	Environmental Sample - Location #1. Addition of 20 bags (700 lbs) HPO Asbestos to mixer.	2.2	0.1
J-23	On: 9:00 a Off: 10:55 a	115	Environmental Sample - Location #1. Post dump period.	0.1	< 0.1
J-18	On: 10:56 a Off: 3:15 p	259	Environmental Sample - Location #1. Post dump period.	< 0.1	< 0.1

TWA Chrysotile $\frac{75.437}{432}$ = 0.2 fiber/cc

TWA Amphibole $\frac{8.651}{432}$ =< 0.1 fiber/cc

X416641

SUMMARY OF FIBER COUNTS

Environmental Samples

Location #2

Sample No.	Air Sample Time	Minutes	Operation Description	Airborne Fiber Count (fibers/cc >5μ) Chrysotile Asbestos	Possible Amphibole Asbestos
J-10	On: 8:05 a Off: 10:56 a	171	Environmental Sample - Location #2. Located in storage bldg. on palletized bags of HPO Asbestos 6' above floor. Activity in this area consists of fork lift traffic through building and drumming-up of oils. Static monitoring.	< 0.1	< 0.1
J-16	On: 10:57 a Off: 3:20 p	263	Environmental Sample - Location #2. Static monitoring.	< 0.1	< 0.1

TWA Chrysotile $\frac{10.653}{434}$ = < 0.1 fiber/cc

TWA Amphibole $\frac{2.933}{434}$ = < 0.1 fiber/cc

X416642

SUMMARY OF FIBER COUNTS

OLD BEN #25

Location # 1

Sample No.	Air Sample Time	Minutes	Operation Description	Airborne Fiber Count (fibers/cc >5μ) Chrysotile Asbestos	Possible Amphibole Asb.
A-17	On: 12:30 p Off: 2:25 p	115	Environmental Sample - Location #1. located at 13th Main East return shaft ~ 5 1/2' above floor.	0.1	< 0.1

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SUMMARY OF FIBER COUNTS

OLD BEN #25
Location #2

Sample No.	Air Sample Time	Minutes	Operation Description	Airborne Fiber Count (fibers/cc >5u) Chrysotile Asbestos	Possible Amphibole Asbestos
A-26	On: 12:47 p Off: 1:24 p	37	Environmental Sample - location #2. Located at 8th South and 13th East Main return shaft upwind from stopping wall and ~6 1/2" above floor.	0.1	<0.1
A-23	On: 1:25 p Off: 1:40 p	15	Environmental Sample - location #2. Brush down of wall to simulate abrasion of coating.	0.2	0.1
A-6	On: 1:41 p Off: 2:15 p	34	Environmental Sample - location #2. Post sweep down period.	< 0.1	<0.1

TWA Chrysotile $\frac{6.627}{86}$ = 0.1 fiber/cc

TWA Amphibole $\frac{3.9}{86}$ = <0.1 fiber/cc

X416644

SUMMARY OF FIBER COUNTS

OLD BEN #25
Location # 3

Sample No.	Air Sample Time	Minutes	Operation Description	Airborne Fiber Count (fibers/cc >5μ) Chrysotile Asbestos	Possible Amphibole Asbestos
A-20	On: 12:45 p Off: 1:24 p	39	Environmental Sample - location #3. Located downwind from stopping wall.	0.1	0.1
A-25	On: 1:25 p Off: 1:40 p	15	Environmental Sample - location #3. Brush down wall to simulate abrasion of coating.	0.2	0.1
A-24	On: 1:41 p Off: 2:15 p	34	Environmental Sample - location #3. Post sweep down period.	0.1	< 0.1

TWA Chrysotile $\frac{6.993}{88}$ = 0.1 fiber/cc

TWA Amphibole $\frac{4.292}{88}$ =< 0.1 fiber/cc

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