PLAINTIFF'S EXHIBIT WRC 1391

CAMBRIDGE

TO: T.L. Lyall

DATE: June 12, 1972

FROM: H.A. Eschenbach

SUBJECT: Dust Survey Report - Newark, California

CC: H.A. Brown
H.C. Duecker
W.R. Wright
R.E. Schneider
J.H. Huxley - Zonolite/LosAngeles
P.J. Gallagher - Newark
F.G. Serafin
R.A. Kulberg

Attached is a summary of the results of the fiber sampling done by me on 16 May 1972 at Newark. If you have specific questions concerning this data or wish to review the slides, please contact Frank Serafin at 113 or me.

Present TLV is 5 fibers longer than 5 microns (μ) per ml. The ceiling limit is 10 fibers.

H.A. Eschenbach

HAE:mh

Enclosures

15162439

03627177

NEWARK, CALIFORNIA

Sample #	Operation	Fibers per ml (Greater than 5 microns in length)	Remarks
1 NK	Monokote Mixing (HAINES)	6.0	25% chrysotile, 75% tremolite
2 NK	Monokote Bagging (HAINES)	7.0	" "
3 NK	Monokote Bagging (HAINES)	6.9	30% chrysotile, 70% tremolite
4 NK	Vermiculite Bagging	9.3	During MK Operations, 95% tremolite.
5 NK	Vermiculite Bagging	6.1	MK Out to Lunch, 95% tremolit No loose bagging for MK.
6 NK	Monckote Mixing (HAINES)	8.9	30% chrysotile, 70% tremolite
7 NK	Foreman General and Filling Ore Hoppers	11.8	100% tremolite
8 NK	Warehouse General	.4	

COMMENTS:

All levels with the exception of the warehouse exceed the present TLV of 5 fibers and 7 NK exceeds the ceiling limit of 10 fibers. The chrysotile fibers from the Monokote operations contribute only about 25% of the fiber count in those operations and almost none to those in other areas. Improved housekeeping could contribute significantly to keeping tremolite levels lower. There was a great deal of dust on the structure of the furnace which was not operating at the time of my visit. This provides a pool of recirculating fibers. Additionally, a respirator must be mandatory for the person loading the ore hoppers.

15162440

03627178

Engineering Samples

CON

Plant Location NEWARK Date of Sampling 4/28/76 Type Contaminent Sampled ASBESTOS

SAMPLING CONDITIONS:

OUTSIDE	INSIDE DRAFT	VISIBLE DUST	HOUSEKEEPING
Clear	None	None	GOOD IN WAREHOUSE
Cloudy	Slight	Slight	FAIR IN FURNACE AREA
Rain	Moderate	Moderate	
Snow	Excessive	Heavy	

REMARKS BOTH D-16's OPERATING. FURNACE #1 RUNNING LIBBY #4, FURNACE #2 RUNNING LIBBY #3 ~~[illegible]~~ (FURNACE #2 STARTED AT 11:30) HEAVY VISIBLE DUST AT TOP OF ORE PRODUCT ELEVATORS

SAMPLING DATA & EVALUATION

Pump Type & No.	Flow Rate	Sample No.	Employee	Operation/Area	Pump Off	Pump On	Sampling Time	Operating Volume	Remarks	Lab Evaluation
MICRONAIR 5547	1.5 LPM	NWK-1	T. BIGLEY	PLANT MANAGER'S OFFICE ✓	10:30	10:13	17 MIN	25.5 L		<0.13
"	1.5	NWK-2	A. SAMANIAGO	BAGGER - FURNACE #1 ✓	10:48	10:33	15 MIN	22.5 L	LIBBY #4 (Industrial #4)	0.46
"	"	NWK-3	—	FURNACE #1 - FEED PIPES	11:10	10:55	15 MIN	22.5 L	" " centered 12 inches from middle of 6 pipes	11.25
"	"	NWK-4	—	FURNACE #1 - EXPANDED PRODUCT ELEVATOR ✓	11:27	11:12	15 MIN	22.5 L	(FILTER FACING 45° ANGLE UP) MOUNTED ON EDGE OF ELEVATOR HOUSING	1.52
"	"	NWK-5	—	FURNACE #1 - ~~ORE PRODUCT~~ ELEVATOR	11:45	11:30	15 MIN	22.5 L	(150° ANGLE - FACING SIDEWAYS) MOUNTED ON TOP OF ELEVATOR HOUSING	4.26
"	"	NWK-6	R. STANDLEY	PAYLOADER OPERATOR ✓	12:05	11:50	15 MIN	22.5 L	4 SCOOPS #4 ORE	3.65
"	"	NWK-7	A. SAMANIAGO	BAGGER - FURNACE #1 ✓	12:25	12:08	17 MIN	25.5 L	LIBBY #4 (CONCRETE AGGREGATE ~~[illegible]~~)	0.13
"	"	NWK-8	F. NEVAREZ	BAGGER - FURNACE #2 ✓	12:47	12:29	20 MIN	30.0 L	LIBBY #3 (Industrial #3)	0.34
"	"	NWK-~~8~~11	—	FURNACE #2 - FEED PIPES ✓	1:05	12:48	17 MIN	25.5 L	LIBBY #3	1.34
"	"	NWK-10	—	FURNACE #2 - EXPANDED PRODUCT ELEVATOR ✓	1:21	1:06	15 MIN	22.5 L	LIBBY #3	9.42
"	"	NWK-9	—	FURNACE #2 - ORE PRODUCT ELEVATOR ✓	1:37	1:22	15 MIN	22.5 L	LIBBY #3	1.06
"	"	NWK-12	F. NEVAREZ	BAGGER - FURNACE #2 ✓	1:59	1:40	17 MIN	25.5 L	LIBBY #3 (Industrial #3)	1.07

← pump was stationary on edge of bagging hopper

ENGINEERING TEST SAMPLE

Sampling By Lynn W. Fannin Laboratory Evaluation By [signature]

Date 5-7-76

15162435

03627173

15162436

CONFIDENTIAL

Plant Location NEWARK Date of Sampling 4/28/76 4/29/76 Type Contaminent Sampled ASBESTOS

SAMPLING CONDITIONS:

OUTSIDE	INSIDE DRAFT	VISIBLE DUST	HOUSEKEEPING
Clear	None	None	(see page 1 of 2)
Cloudy	Slight	Slight	
Rain	Moderate	Moderate	
Snow	Excessive	Heavy	

REMARKS Both D-16's operating. Furn #1 - Libby #4, Furn. #2 - Libby #3
Furnace #1 shut down at 3:00 P.M. / 4/29/76 Furnace #2 running only - Libby #3

SAMPLING DATA & EVALUATION

Pump Type & No.	Flow Rate	Sample No.	Employee	Operation/Area	Pump Off	Pump On	Sampling Time	Operating Volume	Remarks	Lab Evaluation
Microhair 5547	1.5 LPM	NWK-13	—	~~Furnace #1 - Stoner Rock End~~	2:15	1:58	17 MIN	25.5 L	Libby #4 (Filter hung at mouth of rock chute)	9.39
"	"	NWK-14	—	~~Furnace #1 - Stoner: Vermiculite End~~	2:32	2:17	15 MIN	22.5 L	Libby #4 (Filter inserted into vermiculite discharge chute)	4.26
"	1.6	NWK-15	R. Stanoley ~~A. Samaniago~~	Bagger Furnace #1	2:49	2:34	15 MIN	24.0 L	Libby #4 (Concrete Aggregate)	2.00
"	1.5	NWK-16	—	Employees' Lunch room	3:05	2:50	15 MIN	22.5 L	Shut-down Furnace #1 @ 3:00 P.M.	0.15
"	"	NWK-17	—	5 ft. off floor Center of Warehouse	3:23	3:08	15 MIN	22.5 L	(Sample on MK pallet at edge of aisle) Only Furnace #2 operating - Libby #4	<0.15
"	"	NWK-18	F. Moran	Bagger - Furnace #2	4:25	3:35	50 MIN	75.0 L	Libby #3 - Industrial #3	0.18
"	"	NWK-19	—	~~Furnace #2 - Stoner Rock End~~	4:42	4:27	15 MIN	22.5 L	Libby #3 - (Sample in mouth of chute)	6.08
"	"	NWK-20	—	~~Furnace #2 - Stoner: Vermiculite End~~	9:21	9:05	16 MIN	24.0 L	Libby #3 - (Mouth of chute)	8.26
"	1.6	NWK-21	A. Samaniago	Bagger - Monokote ~~Furnace Operator~~	9:38	9:23	15 MIN	24.0 L	MK 5	<0.14
"	1.5	NWK-22	—	Monokote Bulk Vermiculite at Bagging Station (Blower)	9:59	9:40	19 MIN	28.5 L	Libby #3 (Sample in mouth of chute)	<0.12
"	"	NWK-23	—	Area in front of Furnace ~~Furnace Operator~~ #2	10:42	10:02	40 MIN	60.0 L	Libby #3	0.11
"	"	NWK-24	A. Samaniago	Bagger - Monokote	10:59	10:44	15 MIN	22.5 L	MK 5	0.91
"	"	NWK-25	—	~~Center of Warehouse~~ Baghouse - Furnace #2 (at mouth of baghouse outlet)	12:06	11:46	20 MIN	30.0 L	Libby #3	0.68

Sampling By Lynn W. Farmer Laboratory Evaluation By J. E. [illegible]

Date 5-7-76

03627174

03627175

Plant Location NEWARK Date of Sampling 4/28/76 Type Contaminent Sampled ASBESTOS

SAMPLING CONDITIONS:	OUTSIDE	INSIDE DRAFT	VISIBLE DUST	HOUSEKEEPING
	(Clear)	None	None	GOOD IN WAREHOUSE
	Cloudy	Slight	(Slight)	FAIR IN FURNACE AREA
	Rain	(Moderate)	(Moderate)	
	Snow	Excessive	Heavy	

REMARKS BOTH D-16's OPERATING. FURNACE #1 RUNNING LIBBY #4, FURNACE #2 RUNNING LIBBY #3. (FURNACE #2 STARTED AT 11:30) HEAVY VISIBLE DUST AT TOP OF ORE PRODUCT ELEVATORS

SAMPLING DATA & EVALUATION

Pump Type & No.	Flow Rate	Sample No.	Employee	Operation/Area	Pump Off	Pump On	Sampling Time	Operating Volume	Remarks	Lab Eval
MICRONAIR 5547	1.5 LPM	NWK-1	T. BIGLEY	PLANT MANAGERS OFFICE	10:30	10:13	17 MIN	25.5 L		
"	1.5	NWK-2	A. SAMANIEGO	BAGGER - FURNACE #1	10148	10:33	15 MIN	22.5 L	LIBBY #4 (Industrial #4)	
"	"	NWK-3	—	FURNACE #1 - FEED PIPES	11:10	10:55	15 MIN	22.5 L	" " centered 12 inches from middle of 6 PIPES	
"	"	NWK-4	—	FURNACE #1 - EXPANDED PRODUCT ELEVATOR	11:27	11:12	15 MIN	22.5 L	(FILTER FACING 45° ANGLE UP) MOUNTED ON EDGE OF ELEVATOR HOUSING	
"	"	NWK-5	—	FURNACE #1 - ORE [redacted] ELEVATOR	11:45	11:30	15 MIN	22.5 L	(150° ANGLE - FACING SIDEWAYS) MOUNTED ON TOP OF ELEVATOR HOUSING	
"	"	NWK-6	R. STANDLEY	PAYLOADER OPERATOR	12:05	11:50	15 MIN	22.5 L	4 SCOOPS #4 ORE	
"	"	NWK-7	A. SAMANIEGO	BAGGER - FURNACE #1	12:25	12:08	17 MIN	25.5 L	LIBBY #4 (CONCRETE AGGREGATE)	
"	"	NWK-8	F. NEVAREZ	BAGGER - FURNACE #2	12:47	12:29	20 MIN	30.0 L	LIBBY #3 (Industrial #3)	
"	"	NWK-9	—	FURNACE #2 - FEED PIPE	1:05	12:48	17 MIN	25.5 L	LIBBY #3	
"	"	NWK-10	—	FURNACE #2 - EXPANDED PRODUCT ELEVATOR	1:21	1:06	15 MIN	22.5 L	LIBBY #3	
"	"	NWK-11	—	FURNACE #2 - ORE [redacted] ELEVATOR	1:37	1:22	15 MIN	22.5 L	LIBBY #3	
"	"	NWK-12	F. NEVAREZ	BAGGER - FURNACE #2	1:57	1:40	17 MIN	25.5 L	LIBBY #3 (Industrial #3)	

← PUMP WAS STATIONARY ON EDGE OF BAGGING HOPPER

Sampling By Lynn W. Fannin Laboratory Evaluation By

Date

15162437

03627146

Plant Location NEWARK Date of Sampling 4/28/76 4/29/76 Type Contaminent Sampled ASBESTOS

SAMPLING CONDITIONS:

	OUTSIDE	INSIDE DRAFT	VISIBLE DUST
	(Clear)	None	None
	Cloudy	Slight	(Slight)
	Rain	(Moderate)	(Moderate)
	Snow	Excessive	Heavy

HOUSEKEEPING (see page 1 of 2)

REMARKS Both D-16's operating. FURN #1 - LIBBY #4, FURN. #2 - LIBBY #3
FURNACE #1 SHUT DOWN AT 3:00 P.M. / 4/29/76 FURNACE #2 RUNNING ONLY - LIBBY #3

SAMPLING DATA & EVALUATION

Pump Type & No.	Flow Rate	Sample No.	Employee	Operation/Area	Pump Off	Pump On	Sampling Time	Operating Volume	Remarks	L Eval
MICRONAIR 5547	1.5 LPM	NWK-13	——	FURNACE #1 - STONER: ROCK END	2:15	1:58	17 MIN	25.5 L	LIBBY #4 (FILTER HUNG AT MOUTH OF ROCK CHUTE)	
"	"	NWK-14	——	FURNACE #1 - STONER: VERMICULITE END	2:32	2:17	15 MIN	22.5 L	LIBBY #4 (FILTER INSERTED INTO VERMICULITE DISCHARGE CHUTE)	
"	1.6	NWK-15	R. STANOLEY	BAGGER FURNACE #1	2:49	2:34	15 MIN	24.0 L	LIBBY #4 (CONCRETE AGGREGATE)	
"	1.5	NWK-16	——	EMPLOYEE LUNCH ROOM	3:05	2:50	15 MIN	22.5 L	SHUT-DOWN FURNACE #1 @ 3:00 P.M.	
"	"	NWK-17	——	5 FT. OFF FLOOR CENTER OF WAREHOUSE	3:23	3:08	15 MIN	22.5 L	(SAMPLE ON MR NIXLE AT SIDE OF AISLE) ONLY FURNACE #2 OPERATING - LIBBY #4	
"	"	NWK-18	F. MORAN	BAGGER - FURNACE #2	4:25	3:35	50 MIN	75.0 L	LIBBY #3 - INDUSTRIAL #3	
"	"	NWK-19	——	FURNACE #2 - STONER: ROCK END	4:42	4:27	15 MIN	22.5 L	LIBBY #3 - (SAMPLE IN MOUTH OF CHUTE	
"	"	NWK-20	——	FURNACE #2 - STONER: VERMICULITE END	9:21	9:05	16 MIN	24.0 L	LIBBY #3 - (MOUTH OF CHUTE)	
"	1.6	NWK-21	A. SAMANIEGO	BAGGER - MONOKOTE ~~SCREEN: CRUSHER~~	9:38	9:23	15 MIN	24.0 L	MK 5	
"	1.5	NWK-22	——	MONOKOTE BULK VERMICULITE BAGGING STATION (BLOWER)	9:59	9:40	19 MIN	28.5 L	LIBBY #3 (SAMPLE IN MOUTH OF CHUTE	
"	"	NWK-23	——	AREA IN FRONT OF FURNACE ~~CRUSHER~~ #2	10:42	10:02	40 MIN	60.0 L	LIBBY #3	
"	"	NWK-24	A. SAMANIEGO	BAGGER - MONOROTE	10:59	10:44	15 MIN	22.5 L	MK 5	
"	"	NWK-25	——	~~CENTER OF WAREHOUSE~~ BAGHOUSE - FURNACE #2 (AT MOUTH OF BAGHOUSE OUTLET)	12:06	11:46	20 MIN	30.0 L	LIBBY #3	

Sampling By Lynn W. Turner Laboratory Evaluation By _____

Date _____

15162438

Plant Location NEWARK, CAL Date of Sampling 7-19-73 Type Contaminent Sampled FIBERS

SAMPLING CONDITIONS:

OUTSIDE	INSIDE DRAFT	VISIBLE DUST	HOUSEKEEPING
Clear	None	None	
(Cloudy)	Slight	Slight	
Rain	(Moderate)	(Moderate)	
Snow	Excessive	Heavy	

REMARKS * Comparable samples on 4/28, 4/29/76

AMPLING DATA & EVALUATION

ump Type No.	Flow Rate	Sample No.	Employee	Operation/Area	Pump Off	Pump On	Sampling Time	Operating Volume	Remarks	Lab Evaluation
5644	1.5	NWK-1	P. McCOLLUM	BAGGING COOL AGGREGATE	9:10	8:55	15 MIN	22.5	* NWK-2, 7, 15 CHIMNEY #4 - NO 1 FURNACE *	5.3
[illegible]	1.5	NWK-2	T. FOLK	BAG STITCHING COOL AGGREGATE	9:14	8:58	16 MIN	24		8.2
5614	"	NWK-3	H. CAMPBELL	BAGGING LIBBY NO 3	9:29	9:13	16 MIN	24	* NWK-5, 12, 18 NO 2 FURNACE *	3.6
[illegible]12	"	NWK-4	L. WATERS	BAGGING MK-5 (RT)	9:31	9:15	16 MIN	24	* NWK-21, 24 *	1.4
[illegible]4	"	NWK-5	[illegible]	BAGGING MK-5 (LT)	9:50	9:35	15 MIN	22.5	* *	1.1
[illegible]2	"	NWK-6	R. FOLK	MIXING MK-5	10:07	9:51	16 MIN	24	*	~~5.9~~ 1.1
5694	"	NWK-8	S. FERDIN	FEEDING NO 4 CYC INTO TANK - BAGGING - DUST	10:07	10:0[illegible]	15 MIN	22.5	VERM. GRINDING OPERATION *	11.8
[illegible]4	"	NWK-9	--	CHA. CRIP LAUNCH ROOM	11:52	10:5[illegible]	36 MIN	45	* NWK-16	1.7
[illegible]2	"	NWK-7	P. McCOLLUM	BAGGING COOL AGGREGATE	10:53	10:3[illegible]	17 MIN	25.5	CHIMNEY #4 - NO 1 FURNACE	3.7
[illegible]2	"	NWK-10	T. FOLK	BAGGING NO 4 CYC	10:45	10:30	15 MIN	22.5		~~7.7~~ 6.1
[illegible]4	"	NWK-11	H. CAMPBELL	BAGGING LIBBY NO 3	11:32	11:16	16 MIN	24	NO 2 FURNACE	~~4.3~~ ~~6.1~~ ~~5.6~~
[illegible]2	"	NWK-12	L. WATERS	BAGGING MK-5 (RT)	12:[illegible]	11:24	36 MIN	54	20 MIN. SMOKE TIME INCLUDED	.8

* WEARING MSA DUSTFOE 77 RESPIRATOR

Sampling By Peter Kostic Laboratory Evaluation By

Date

15162441

03627179

...nt Location NEWARK, CAL. Date of Sampling 7-19-73 Type Contaminent Sampled FIBERS

SAMPLING CONDITIONS:

OUTSIDE	INSIDE DRAFT	VISIBLE DUST	HOUSEKEEPING
Clear	None	None	
(Cloudy)	Slight	Slight	
Rain	(Moderate)	(Moderate)	
Snow	Excessive	Heavy	

REMARKS

MPLING DATA & EVALUATION

mp Type No.	Flow Rate	Sample No.	Employee	Operation/Area	Pump Off	Pump On	Sampling Time	Operating Volume	Remarks	Lab Evaluation
...RO-AIR 5694	1.5 LPM	NWRK-13	R. TUCK	MIXING MK-5	11:40	11:25	15 MIN	22.5		2.3
842	"	NWRK-14	G. RENDON	BAGGING MK-5 (LT)	12:06	11:50	16 MIN	24		4.3
694	"	NWRK-15	R. TURNER	OPERATING LIFT TRUCK	1:34	1:10	24 MIN.	36		0.7
842	"	NWRK-16	S. FERDIN	BAGGING VERM. DUST	1:30	1:14	16 MIN	24	GRINDING OPERATION *	7.8
842	"	NWRK-17	J. PEREZ	MISC. MAINT. WORK	1:52	1:32	20 MIN.	30	MAINT. MAN	1.1
694	"	NWRK-18	J. MILLSAP	OPER. LIFT TRUCK; BALE PAPER BALS, CHECK FURNACES	2:02	1:42	20 MIN.	30	FURNACE MAN	1.7
694	"	NWRK-19	S. FERDIN	BAGGING VERM. DUST	2:17	2:07	10 MIN	15	GRINDING OPERATION	4.6
842	"	NWRK-20	E. BIGLEY	GEN. SUPT'S. DUTIES	2:40	1:12	28 MIN	42	EXPOSURES TO OFFICE, PLANT, W HOUSE	0.2
694	"	NWRK-21	J. FOLK	BAGGING MK-5 (RT)	3:50	3:34	16 MIN	24	*	0.7
842	"	NWRK 22	T. MORAN	BAGGING MK-5 (LT)	3:51	3:35	16 MIN	24	*	2.5
694	"	NWRK 23	M. HARO	MIXING MK-5	4:09	3:54	15 MIN.	22.5	*	2.7
842	"	NWRK 24	G. SILAS	BAGGING CONCRETE AGG.	4:12	3:57	15 MIN	22.5	LIBBY NO 4 ORE	4.2

* WEARING MSA DUSTFOE 77 RESPIRATOR

Sampling By Peter Kostic Laboratory Evaluation By

Date

15162442

03627180