D. L. SMITH

ROCKDALE WORKS

MR. E. B. PARKER

ROCKDALE WORKS

1979-11-08

RE: ASBESTOS EXPOSURE - BUILDING 27

Attached are several letters which address themselves to the asbestos exposure situation related to pot shell cleaning in Building 27. On September 18 or 19, Potlining assumed total responsibility for pot shell asbestos removal. Following is a summary of related activities.

1979 September 19 -- Potlining employees began using paper suits to reduce personnel exposure to an unknown level of asbestos particles. This was the first reaction to an identified problem.

1979 October 08 -- Information became available showing that according to OSHA standards there was no overexposure when Maintenance people were cleaning asbestos from shells using a disc sander. Testing was done on 1979 September 14.

1979 October 08 -- Information became available showing that according to OSHA standards there was no overexposure when Potlining people were cleaning asbestos from shells using a needle gun and using a vacuum cleaner to collect loose particles. Testing was done on 1979 October 02.

1979 October 18 -- Information became available showing that according to OSHA standards there was no overexposure when Potlining people were cleaning asbestos from shells using a needle gun equipped with a hood connected to a vacuum cleaner to collect loose particles. Testing was done on 1979 October 12.

When the October 8 information became available, the decision to use protective attire was verbally rescinded. Since there was no overexposure, it seemed logical to not require extreme preventive measures. The effort to combine dust collection with the needle gun was mainly to assure ourselves that asbestos materials would be captured.

ALCOA

We presently use the needle gun and vacuum cleaner combination to remove asbestos from pot shells. Ear plugs are required because of the noise emitted by the needle gun. Dust masks are used, although not required by OSHA standards. It is anticipated that within 12 to 24 months no more asbestos will be encountered in this operation.

D. L. SMITH

DLS:dm

Attachments

Copies to:
E. W. Roberts
J. J. Congleton
J. W. Havins

E. B. PARKER

ROCKDALE WORKS

MR. D. L. SMITH

ROCKDALE WORKS

1979 October 18

RE: ASBESTOS EXPOSURE - BLDG. 27

Results of asbestos exposure tests run during cleaning of a potshell with a hooded needle gun and vacuum cleaner are tabulated below.

Name	Exposure Time (Minutes)	Asbestos Fiber Concentration (Fibers >5 μm long/cc air) Maximum During Test	Calculated 8 Hour TWA	OSHA Standard 8 Hr.TWA
E. W. Roberts	27	0.17	0.01	2.0

These results confirm that employee exposure to airborne asbestos is significantly below the OSHA standard.

Noise level readings taken during the operation suggest that hearing protection should be required during the operation.

E. B. PARKER

EBP:cw

Copy - E. W. Roberts
W. J. Drake
J. W. Havins
W. D. Essary
H. W. Brooks
J. J. Congleton
A. G. Clayton

ALUMINUM COMPANY OF AMERICA

Rockdale Works LABORATORY

REPORT TO	DATE	REPORT NO
E. C. Parker ✓	79-10-16	6807-E

SAMPLE OF AIR — Sampled 79-10-12

RECEIVED FROM — Analyzed 79-10-15

COPIES TO D. L. Smith ; J. J. Congleton

DESCRIPTION Samples taken during the removal of asbestos residue from pot shell bottoms using a needle gun with an attached exhaust hood and the Spencer vacuum cleaner

Sample No.	Sample Time (minutes)	Asbestos Fiber Concentration (fibers > 5 um long/cc)
8	27	0.17

1979 OCT 16

ANALYZED BY CHR APPROVED BY A. G. C.

SF-1633 (REV. 6-62)

ALUMINUM COMPANY OF AMERICA

Rockdale Works LABORATORY

REPORT TO	DATE	REPORT NO.
E. E. Parker	79-10-16	6207-E

SAMPLE OF AIR — Sampled 79-10-12

RECEIVED FROM — Analyzed 79-10-15

COPIES TO D. L. Smith ; J. J. Congleton

DESCRIPTION

NOTES:

1. Sample No. 6 filter worn by E. W. Robarts, 01142, S.S. No 454-52-1151.

2. Robarts wore a 3M No. 8710 respirator but did not wear the disposable plastic coverall and hood.

3. Robarts spent most of the sample time up on the pot shell operating the needle gun. He did, however, use a scraper to remove one large piece of asbestos which he placed in a plastic bag.

4. The needle gun had a hood approximately 6 inches in diameter attached to it. This hood was positioned so that when the needle gun was held vertically and was in contact with the pot shell, there was approximately ½ inch of clearance between the hood and the pot shell. The hood was then attached by a long flexible hose to the fixed vacuum cleaner.

5. No dust was visible during the operation. The suction removed small particles and dust but left any large particles on the pot shell surface. A small part of the pot shell surface was vacuumed at the end of the test. It is not known what happened to the rest of the larger particles.

1979 OCT 16

ANALYZED BY CHR APPROVED BY A. G. C.

SF-1633 (REV 8-62)

ALUMINUM COMPANY OF AMERICA

Rockdale Works LABORATORY

REPORT TO	DATE	REPORT NO.
E.L. Parker	79-10-16	6807-E

SAMPLE OF Air

Sampled 79-10-12
Analyzed 79-10-15

RECEIVED FROM

COPIES TO D.L. Smith ; J.J. Congleton

DESCRIPTION

NOTES: 1. This operation is quite noisy. The following readings were taken during the test. Roberts was wearing ear plugs.

a. 105 dBA - as close as possible to Roberts ear

b. 100-105 dBA - range obtained at perimeter of pot shell

c. 94 dBA - level in center passageway

d. 103 dBA - north wall of Bldg 27. opposite pot shell

e. 100 dBA - center of building opposite west edge of the north-south door

f. 97 dBA - south wall of Bldg 27 opposite pot shell

1979 OCT 16

ANALYZED BY CHR APPROVED BY A. G. C.

SF-1633 (REV. 6-62)

E. B. PARKER

ROCKDALE WORKS

MR. D. L. SMITH

ROCKDALE WORKS

1979 October 08

RE: PERSONAL EXPOSURE SAMPLES - ASBESTOS

The results of tests run on Tuesday, 1979 October 02 to determine personal exposure to asbestos when potshell bottoms were being cleaned with a needle gun and vacuum cleaner are tabulated below. Also, the lab report is attached.

		Asbestos Fiber Concentration (Fibers >5 μm Long/cc)		
Name	Exposure Time (Minutes)	Maximum During Test	8 Hour TWA	OSHA Std. 8 Hr. TWA
E. W. Roberts	58	0.29	.04	2.0
E. R. Dismukes	58	0.58	.07	2.0

No over-exposure to asbestos is indicated. However, the noise generated by the needle gun is loud enough to be of concern and ear protection should be required for the people performing the work.

Would you please communicate this to the people involved.

E. B. PARKER

EBP:cw
Attachment

Copy - J. W. Havins
G. H. Lantz
W. D. Essary
E. C. Remaley
A. G. Clayton
E. W. Roberts

ALUMINUM COMPANY OF AMERICA

Rockdale Works LABORATORY

REPORT TO	DATE	REPORT NO.
E. R. Parker	79-10-04	6797-E

SAMPLE OF AIR Sampled 79-10-02

RECEIVED FROM Analyzed 79-10-03

COPIES TO D. L. Smith; J. J Congleton

DESCRIPTION Sample taken during the removal of asbestos residue from pot shell bottoms using a needle gun and Spencer vacuum cleaner

Sample No.	Sample Time (minutes)	Asbestos Fiber Concentration (fibers > 5 μm long/cc)
6	58	0.29
7	58	0.58

1979 OCT 04

ANALYZED BY CHR APPROVED BY A. G. C.

SF-1633 (REV 6-62)

ALUMINUM COMPANY OF AMERICA

Pocrdale Works LABORATORY

REPORT TO	DATE	REPORT NO
E. E. Parker	79-10-04	6797-E

SAMPLE OF HIR

RECEIVED FROM

Sampled 79-10-02
Analyzed 79-10-03

COPIES TO D.L. Smith ; J.J. Congleton

DESCRIPTION

NOTES: 1. Sample No. 6 filter worn by E.W. Roberts, 01102, S.S. No. 454-52-1151.

2. Sample No. 7 filter worn by E.R. Diemuchen, 02219, S.S. No. 462-72-5246.

3. Both men wore a 3M No. 8710 respirator and disposable plastic coveralls and hood. The filter was located on the right shoulder outside the hood.

4. Roberts operated the needle gun and spent most of the time up on the pot shell either standing on one knee or bending over at the waist.

5. Diemuchen held the inlet end of the vacuum cleaner hose next to the surface of the pot shell and as close as possible to the needle gun. He also used the vacuum cleaner hose to remove material loosened by the needle gun. He spent all his time standing on the floor.

6. Only a small amount of dust was visible during the test. The dust occurred only when they removed the thicker deposits of material. Any dust created tended to stay close to the pot shell surface. The vacuum system captured most of this dust, but some of it escaped into the surrounding area.

1979 OCT 04

ANALYZED BY CHR APPROVED BY A. G. C.

SF-1633 (REV 6-62)

ALUMINUM COMPANY OF AMERICA

Rockdale Works LABORATORY

REPORT TO	DATE	REPORT NO
E. B. Parker	79-10-04	6797-E

SAMPLE OF Air

Sampled 79-10-02
Analyzed 79-10-03

RECEIVED FROM

COPIES TO D.L. Smith ; J. J. Congleton

DESCRIPTION

NOTES: 7. Two pot shells were cleaned during the test.

8. The operation is quite noisy.

1979 OCT 04

ANALYZED BY CHR APPROVED BY A.G.L.

SF-1633 (REV 6-62)

FROM E. B. PARKER

ROCKDALE WORKS

TO MR. E. C. REMALEY

ROCKDALE WORKS

1979 October 08

RE: PERSONAL EXPOSURE SAMPLES - ASBESTOS

Results of the tests run on 1979 September 14 to determine personal exposure to asbestos when potshell bottoms were being cleaned with a disc sander are tabulated below. Also, the lab report is attached.

Name	Exposure Time (Minutes)	Asbestos Fiber Concentration (Fibers >5 μm Long/cc) Maximum During Test	8 Hour TWA	OSHA Std. 8 Hr. TWA
F. Marshall	196	0.16	.07	2.0
R. Perrard	14	1.49	.04	2.0
Area Sample 2	176	0.03	.01	-
Area Sample 3	174	0.06	.02	-
Area Sample 4	177	0.05	.02	-

None of the samples indicate an over-exposure problem.

Would you please communicate these results to the people involved.

E. B. PARKER

EBP:cw
Attachment

Copy - J. W. Havins
G. H. Lantz
W. D. Essary
[redacted] Smith
A. G. Clayton

ALCOA

ARD 003763

SF 4563

ALUMINUM COMPANY OF AMERICA

Rockdale Works LABORATORY

REPORT TO	DATE	REPORT NO
E. E. Parker	79-10-01	[illegible]-E

SAMPLE OF AIR

RECEIVED FROM

COPIES TO E.C. Pemberley

Sampled 79-09-14

Analyzed 79-09-25

DESCRIPTION Sampling taken to check asbestos content of air in Bldg. 27. Sampling taken on and around maintenance personnel during the straightening of pot shells and the sanding of pot shell bottoms prior to removing damaged areas.

Sample No.	Sampling Time (min.)	Asbestos Fiber Concentration (fibers > 5 μm Long/cc)
1	196	0.16
2	176	0.03
3	174	0.06
4	177	0.05
5	14	1.49

1979 OCT 01

ANALYZED BY CHR APPROVED BY A. G. G

SF-1633 (REV 6-62)

ALUMINUM COMPANY OF AMERICA

Rockdale Works LABORATORY

REPORT TO	DATE	REPORT NO
E. P. Parker	79-10-01	6796-E

SAMPLE OF AIR

RECEIVED FROM

COPIES TO E. C. Pemberley

DESCRIPTION Samples taken to check asbestos content of air in Bldg. 27.

NOTES: 1. Sample No. 1 filter was given by Fred Hildebrandt, clock number 21123, social security number 456-74-1044. Sample was taken while he used the Elmer Wheel Press to straighten a port shell and move a 3rd into position to be straightened. He wore a 3M No. 5110 respirator during the sampling period. Approximately 15 minutes of the sample time was used to prepare the press for use. A total of approximately 25 minutes of sample time was used to move other equipment with Bldg 27 crane.

Sampling was stopped when Pottinger used the crane.

The sample period started at 8:13 A.M. and finished at 8:20 AM. It was divided into 3 sampling segments of 57, 57 and 43 minutes.

Port shell No. 1 had very little material adhering to the bottom, and no dust was visible during the straightening process. Port shell No. 2 had several large pieces of material adhering to the bottom, and no dust was visible during the straightening process. Port shell No. 3 was moved to the area of the Elmer Wheel Press, but it was not straightened because the bottom had several areas covered with a fuzzy, fibrous coating which they thought was asbestos.

2. Sample No. 2 filter was an area sample located approximately 5 feet above the floor and approximately 20 feet southeast of the Elmer Wheel Press. Sampling time corresponds with that of Sample No. 1.

3. Sample No. 3 filter was an area sample located approximately 5 feet above the floor and approximately 25 feet southeast of the Elmer Wheel Press. Sampling time corresponds with that of Sample No. 1.

ANALYZED BY C.U.R. APPROVED BY 1979 OCT 03

SF-1633 (REV 6-62)

A. U. A.

ALUMINUM COMPANY OF AMERICA

Rockdale Works LABORATORY

REPORT TO	DATE	REPORT NO
E. E. Parker	77-10-01	6796-E

SAMPLE OF Air

RECEIVED FROM

COPIES TO E. C. Romaley

DESCRIPTION Samples taken to check asbestos content of air in Bldg. 27.

NOTES: 4. Sample No. 4 filter was an area sample located approximately 5 feet above the floor and approximately 30 feet north of the Elmes 14th bed press. Sampling time corresponds with that of Sample No. 1.

5. Sample No. 5 filter was worn by Roy Pennard, clock number 21165, Social Security number 433-66-4732. Sample was taken while he sanded the bottom edge of a pot shell prior to cutting the bottom out of the shell. Wore a 3M No. 8710 respirator during the sampling period.

A moderate amount of reddish-brown dust was created during the sanding, and he always tried to stay upwind of the dust. The wind tended to blow the dust toward the east end of the building.

Due to the very short sampling period (14 minutes) and the large amount of particulate matter collected on the filter, the accuracy of this test is somewhat questionable.

1978 OCT 01

ANALYZED BY CHR APPROVED BY H. G. C.

SF-1633 (REV 6-62)

ARD 003788

D. L. SMITH

ROCKDALE WORKS

E. W. ROBERTS

ROCKDALE WORKS

1979 September 19

RE: PROTECTIVE ATTIRE FOR ASBESTOS REMOVAL

Until asbestos mill board is no longer encountered on shells removed from T-51 pots, some special precautions will be taken. These precautions must be followed to minimize individual exposure to airborne asbestos.

1. Individuals specifically assigned to asbestos removal will be issued disposable paper suits. These suits and a disposable dust mask will be worn while removing asbestos.

2. Asbestos removal will be accomplished first by using a straight hoe to remove chunks. After chunks are removed, a disc sander will be used to remove residual asbestos. There will be no asbestos adhering to the shell when done.

3. During the sanding operation all other activity in adjacent areas will have to be stopped. Experience will reveal how far from the sanding area will be considered "evacuation area".

4. Upon completion of shell cleaning, the Unit Supervisor will inspect for total removal of asbestos. When it is determined that the shell is adequately cleaned, the immediate area will be policed and swept to collect asbestos. Asbestos and sweepings will be placed into a plastic bag. The paper suit and face mask also will be removed and placed into the plastic bag. The bag will be dumped into the appropriate lug bucket.

5. Persons engaged in asbestos removal will wash hands and faces to insure that they are not bearing asbestos fibers.

D. L. SMITH

DLS:rj

Copies to:
J. W. Havins
J. J. Congleton
E. B. Farmer

DATE SAMPLED	EMPLOYEE	JOB DESCRIPTION	NUISANCE DUST* (mg/m³)	ASBESTOS (fibers/cc)	(
11-8-77	R.V. Schnider	Furnace Operator	0.15	-	
"	C. Robison	Cast Pour Helper	1.80	-	
11-9-77	E. Wilburn	Ball mill Operator	0.71	-	
11-10-77	J. Bielss	Butt Crusher Operator	1.70	-	
"	D. Perry	Anode Cleaning Machine Op.	0.44	-	
"	G. Coulder	"	0.51	-	
11-11-77	G. Hosch	Front end Loader Op.	5.37	-	
"	R. Mazae	Sweeper Operator	0.82	-	
"	R. Reyes	Fork lift Operator	3.30	-	
11-18-77	D. Brasher	Ore Bridge Operator	3.21	-	
"	H. Weems	Ore Unloader	5.00	-	
"	J. Sanders	Ore Unloader	2.27	-	
11-18-77	A. Kortis	Potliner	—	0.080	
"	S. Peevy	Potliner	—	0.115	

Standards: 1) Nuisance Dust -- respirable fraction** = 5.0 mg/m³
2) Asbestos -- 2.0 fibers/cc
3)

* - Represents 8 hour Time Weighted Average