

PLAINTIFF'S EXHIBIT

CAP-1641

REPORT ON ENVIRONMENTAL STUDIES

CAPCO - Ragland, Alabama

March 6, 1972

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CAPCO KIN 0001708

AMERICAN SMELTING AND REFINING COMPANY
Department of Environmental Sciences
Salt Lake City, Utah

Plant: CAPCO
Ragland, Alabama

Survey Date: March 6, 1972

Field Work: Michael O. Varner

Report Date: March 29, 1972

REPORT ON ENVIRONMENTAL STUDIES

1. Operating Conditions: Operations were normal during the survey.
2. Sampling: Airborne asbestos fiber concentrations were measured at various work areas throughout the plant. The samples were collected in the breathing zone by means of M.S.A. personal monitor pumps using membrane filters. Counts were made by the U.S. Public Health Service Laboratory with a phase contrast microscope at 400 X. Particles longer than 5 microns with a length to width ratio equal to or larger than 3:1 were counted as fibers.
3. Sampling Results: The airborne asbestos fiber concentrations are shown in the table below:

Sample No.	Location	Sampling Time (minutes)	Asbestos Concentration (fibers/cc)
1	Asbestos Fiber Charger (a.m.) (Power floor sweeper made one pass in area during sampling)	48	3.1
2	Reclaim Crusher (a.m.)	49	2.6
3	Batch Operation (sampler located on frame 15 ft. north of control panel)	44	1.0
4	Pipe Machine (located at Calendar Operator position)	71	0.8

Sample No.	Location	Sampling Time (minutes)	Asbestos Concentration (fibers/cc)
5	Located on column between Coupling Cut-Off Machine and Coupling Cutting and Finishing Machine	70	1.2
6	Located on column between Short Lathes	67	1.2
7	Tray Loading	55	0.0
8	Located on column next to Tap Coupling Machine	89	0.7
9	Pipe Lathe Area - north end	52	1.7
10	Middle of Shop Area	46	0.0
11	Next to west door of Plant Office	44	1.4
12	Located on light next to Cut-Off Saw	44	0.2
13	Reclaim Crusher (p.m.) (shut down)	57	0.1
14	Asbestos Fiber Charger (p.m.)	52	2.5
15	This sample deliberately contaminated with shavings and dust from the Short Lathes	Assumed Sampling Time 50 min.	1.5
Occupational Safety and Health Act (OSHA) 8-hour time weighted average standard			5.0

4. Comments:

Airborne asbestos fiber concentrations at all work locations were well below the OSHA 8-hour time weighted average standard of 5 fibers/cc greater than 5 microns in length.

All potential dust producing sources are controlled with local exhaust ventilation. The industrial exhaust systems are discharged through baghouses or combination baghouse-cyclone air cleaners. It is apparent from the acceptably low asbestos fiber counts that the local exhaust systems are providing effective dust control throughout the plant.

Respirators are supplied to all workers. Employees involved in baghouse cleaning operations are required to wear respiratory protective equipment on a mandatory basis.

Housekeeping conditions in most work areas should be improved. The installation of a central vacuum cleaner system would simplify housekeeping and help to further reduce atmospheric asbestos fiber concentrations, particularly near the asbestos fiber charger and the reclaim crusher. Because OSHA's asbestos advisory committee has recommended that the exposure limit for industrial workers be lowered from 5 fibers/cc down to 2 fibers/cc, it is of particular importance to improve housekeeping near the asbestos fiber charger and the reclaim crusher, where airborne concentrations of asbestos fibers exceeded 2 fibers/cc.

During the survey it was observed that employees occasionally use compressed air guns to blow dust off of parts and clothes; this practice should be discontinued.

Plant management personnel are well informed in matters concerning asbestos related industrial hygiene. They are keeping well abreast of the potential problems.

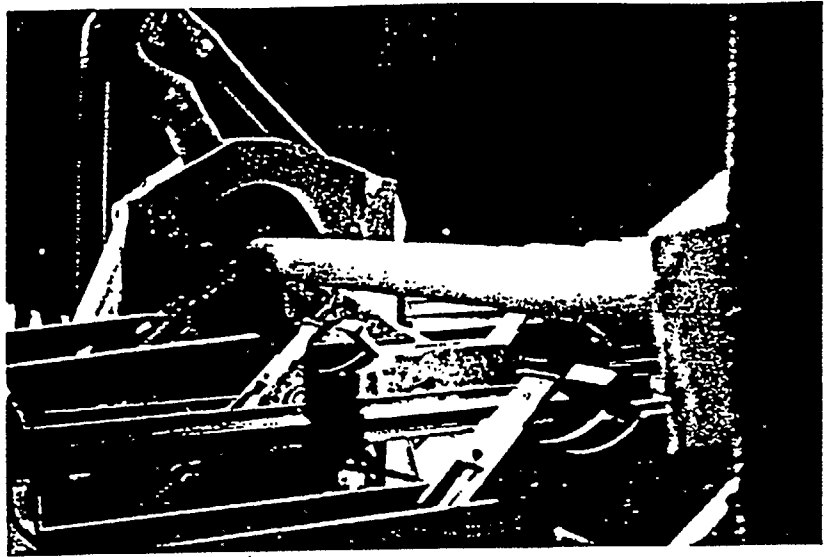
5. Recommendations:

- A. Management personnel should consider the installation of a central vacuum cleaning system. This would help improve housekeeping conditions and further reduce atmospheric concentrations of asbestos fibers.

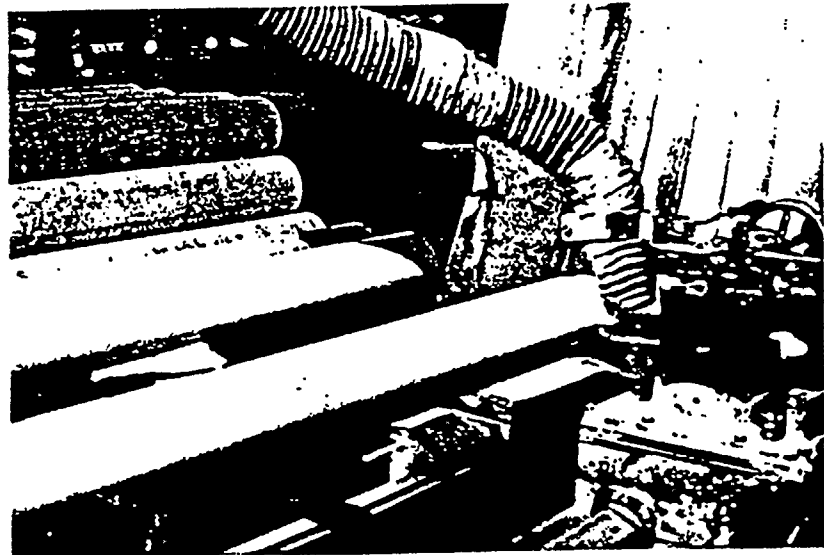
Michael O. Varner
Michael O. Varner
Environmental Scientist

MOV/bbc
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cc: WHBeasley, CAPCO (3)
MJMessel
EAFarrell
DHSoutar
RCBeckstead
EHHaug
KWNelson,



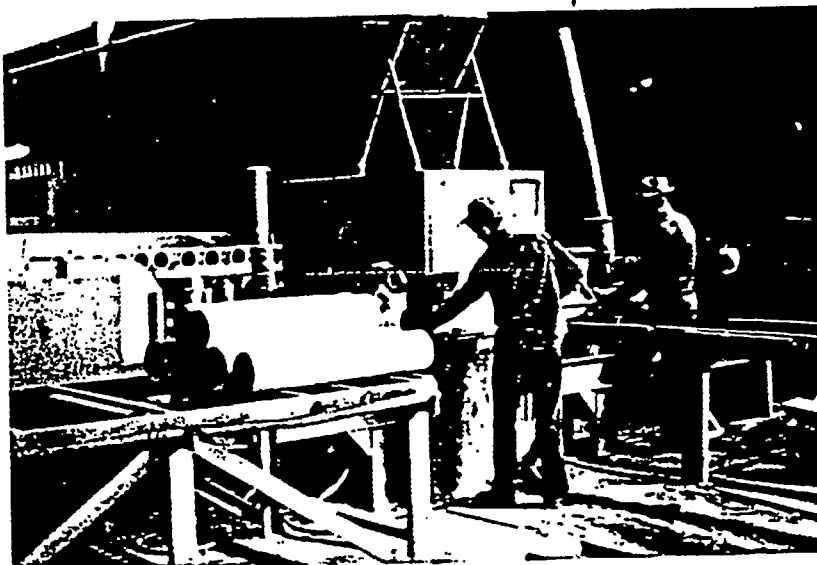
Exhaust Hood for Pipe Lathe



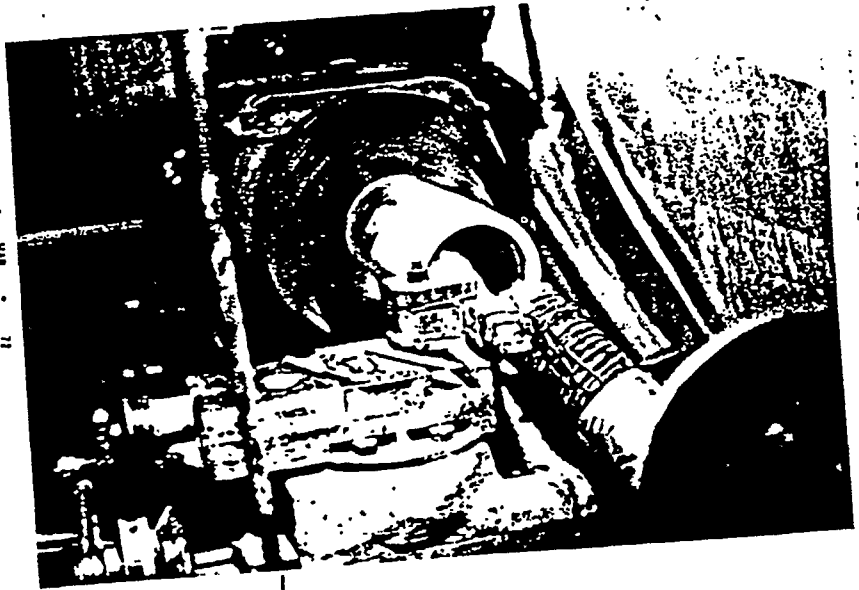
Local Exhaust Pick-up for Short Lathe



Asbestos Fiber
Charger with Exhaust
Hooding. Note air
sampler hanging from
conduit.



Cut-Off Saw.
Exhaust enclosure provides
excellent dust control.



Local Exhaust Pick-up while
Machining Coupling on Short Lathe