

FILE NAME: Baldwin (BALD)

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with Cover Letter

August 27, 1943

Lima Locomotive Works, Inc.
Lima, Ohio

Gentlemen:

Copy of a report submitted to me by Dewitt Huffman is enclosed for your information and guidance.

Compliance with the recommendations made by Mr. Huffman will, undoubtedly, assist materially in benefiting the health of your employees. We trust you will carry them out at your earliest opportunity.

If there is anything further this Division can do to assist you, kindly let us know.

Very truly yours,

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Superintendent

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August 27, 1943

Thos. J. Kearns, Superintendent
Division of Safety & Hygiene
Industrial Commission of Ohio
Columbus, Ohio

In re: Lima Locomotive Works, Inc.
Lima, Ohio

On August 20 a visit was made to the above named company to check dust conditions.

Contact was made with [redacted], Safety and Personnel Director, and [redacted], Safety Inspector.

The company makes castings for locomotives, power shovels, etc. in their foundry. A description of this foundry has been given in a previous report.

Some relatively high dust counts have been obtained in the cleaning room and at the shake-out when dry sand is being handled. In previous reports it has been recommended that the company acquire equipment for cleaning castings so as to eliminate their present method of sandblasting castings outside the foundry. They have ordered a sand blast. They are also keeping the shake-out exhaust running when cleaning up sand at the shake-out end of the foundry.

DUST COUNTS

- (a) A dust count was taken in the breathing area of two employees cleaning up dry sand from the floor near the shake-out with a grab bucket and dumping that sand into a sand pan. This sample contained 16 million particles of dust per cubic foot of air.
- (b) A sample was taken for a period of two minutes in the breathing area of an employee working at the shake-out when large castings were being shaken out at 9:30 P.M. This sample contained 108 million particles of dust per cubic foot of air.
- (c) Another sample was taken in the crane cab while a large casting was being shaken out. This sample was taken for a period of four minutes and the actual shake-out lasted three minutes. The sample contained 126 million particles of dust per cubic foot of air.

In shaking out castings they are lifted to a bumper or vibrator by the crane. This vibrator is approximately 12' long and 6' wide. It is about 10 feet above the floor. There is a grating in the floor through which the sand falls onto a conveyor belt. An exhaust duct or opening is located at one end of the vibrator and about 6 feet above it. It is approximately 6"x4". There is an air velocity of 2000 f.p.m. at the opening to this exhaust. The exhaust, therefore, removes about 48,000 c.f.m. There is an air velocity of 125 f.p.m. over the center of the vibrator and 50 f.p.m. at the end of it. The shake-out exhaust is not adequate to remove the dust as indicated by the high counts obtained. The company has already had one engineer visit this plant with respect to improving the exhaust at the shake-out. To correct the condition at the shake-out considerable additional exhaust ventilation is required. The design of the proper hood is an engineering problem which will require considerable thought and perhaps experimentation.

In addition to recommendations made in previous reports it is further recommended that additional exhaust ventilation be provided at the shake-out.

Respectfully submitted,

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DeRitt Huffman
Safety Engineer

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