

Macdonald
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**PLAINTIFF'S
EXHIBIT**

AL-1582

August 9, 1965

State of New York
Department of Labor
Division of Industrial Hygiene
Plan Review - Engineering Section
80 Centre Street
New York, N.Y. 10013

**RE: APPROVED PLANS EP-914-65 & EP-915-65 (EAP-499-65 & EAP-500-65) for ALCOA,
MASSENA OPERATIONS, TOWN OF MASSENA, ST. LAWRENCE, BUILDINGS 124-C & 124-D,
CONDUCTOR ACCESSORY FINISH GRINDING**

Gentlemen:

In a letter (dated 7/12/65) written by me at the request of the Engineering Staff of Alcoa's Main Office in Pittsburgh, your approval was sought concerning the removal of the rectangular cross-section ductwork from the outlet of the collectors' exhausters to the outside atmosphere shown on our drawings B-69757-J and B-69847-J.

Your notices of approval for the above captioned plans reflected your decision regarding this request at that time. Conditions of approval #5 (Plan EP-914-65) and #3 (Plan EP-915-65) stated that "Discharge to the outdoors is required. Recirculation of the exhausted air can be permitted if a properly sized cloth collector is used in place of or in addition to the unit indicated."

I have sent copies of your approval notices to the Pittsburgh Office, and they have replied with information not available to me before, and the request to further pursue this matter with you.

Through the information which I have received from Mr. Ray W. Andrews, Jr. of the Mechanical Engineering Division, in Pittsburgh, and from Mr. Thomas B. Bonney of the Medical Department - Industrial Hygiene Division, also in Pittsburgh, they have indicated that approval for removing this ductwork, without the additional cloth collectors, may still be possible.

The Pittsburgh Office feels that, although the quantity of discharge ductwork is relatively small, in order to provide maximum safety and health considerations this ductwork should be eliminated. Their opinion is based on tests conducted by Alcoa in the past which have shown type N Roto-Clone Collectors, which we intend to use, to be at least 99.9% efficient in removing the combustible dust from the air stream. Their measurements indicate that more than 99% of the air-borne dust should be composed of particles about 2 microns in diameter. Further, they feel that at least 60% would be above 325 mesh (43 μ). Roto-Clone type N units will remove 97% of particles above the 2 μ size, and do a very respectable job on the smaller.

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This efficiency is such that it will hold the dust concentrations of the discharge air well below the threshold limit value of the material (15mg/M³ or 50 mppcf) and actual measurements have shown the concentration to be on the order of one (1) mppcf or less at the discharge of the unit. This would seem to virtually eliminate any environmental problems which had been envisioned. In addition, the Pittsburgh Office feels that since the dust is comprised mainly of the aluminum product and aluminum oxide abrasive, the dust would have a very low toxicity and would be classified as a "nuisance dust."

Since those particles that escape collection are extremely small, they will tend to collect on the walls of the exhaust duct. It is their opinion that the potential explosion hazard presented by an accumulation of dust on the duct walls (which may be appreciable) is of infinitely greater concern than the discharging of insignificant amounts of toxicologically "inert" dust into the working area.

In regard to the above, it was pointed out by the Pittsburgh Office that in the past Mr. J. Baliff, Mr. A. J. Burke, Mr. Arthur C. Stern, and Dr. Leonard Greenberg of the Department of Labor were consulted on several occasions regarding similar situations. These consultations involved Alcoa's Magnesium Foundry at 1880 Elmwood Avenue in Buffalo, the Alcas Cutlery Company at Olean and the Case Cutlery Company in Bradford, Pennsylvania. As a result of tests and studies made in reference to the above named installations, approval for the removal of exhaust ductwork from type N Roto-Clone units was granted in the cases in question.

The alternate suggestion of using cloth type collectors is considered to be extremely dangerous when used with combustible dusts. It was mentioned that such a unit used to collect combustible metal dust in a World War II factory building resulted in an explosion which claimed two (2) lives in Binghamton, New York, in 1946.

On the basis of the afore-mentioned arguments, we feel that stipulations #3 and #5 should be deleted. However, if this information proves to be insufficient in arriving at a further decision in this case, I am sure that representatives from our Pittsburgh Office would be pleased to meet with you to further discuss and clarify this matter.

Very truly yours,

ALUMINUM COMPANY OF AMERICA

C. F. Ames *C. F. Ames*
Mechanical Engineer

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CC: Messrs. H.H.Redder - Pittsburgh
R.W.Andrews, Jr. - "
T.B.Bonney - "
F.H.Illig - "

W. Barr - Massena
C.T.Bardo - "

File copy routed - D.R.Little - C.F.Ames

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