



From JOE DAMIANO
PITTSBURGH OFFICE - 6

To DR. D. M. JAFFE
PITTSBURGH OFFICE - 6

1993 March 29

RE: HAZARDOUS MATERIALS IN ALCOA

Here is a list of the hazardous materials common to many Alcoa operations meeting the following criteria:

- * Exposures can exceed 10-30% of the PEL.
- * Exposures can occur via skin contact and absorption.
- * The material is a sensitizer.
- * The material is a commonly accepted carcinogen or reproductive toxin.

Table 1 is not all inclusive. Nevertheless, I believe Table 1 covers 90-95% or more of the significant exposures in Alcoa.

JOE DAMIANO

/pdn

cc: R. M. James, Pittsburgh - 6

File IH Health Standards

PLAINTIFF'S
EXHIBIT
AL-1086



ALCOA

794960 0041

TABLE 1
HAZARDOUS MATERIALS IN ALCOA

- * Total and respirable dust, present as aluminum, aluminum oxide, magnesium, magnesium oxide and bauxite
- * Coal tar pitch volatiles
- * Asbestos...historical exposures
- * Man-made mineral fibers, including refractory ceramic fibers, fiberglass, rock wool, slag wool
- * Glycol ethers...skin absorption concern, present in many coatings. This category includes 2-methoxyethanol, 2-methoxyethyl acetate ester, 2-ethoxyethanol, 2-ethoxyethanol acetate ester, 2-butoxyethanol, 2-butoxyethyl acetate
- * Lead....primarily associated with demolition of structural steel
- * Chromium IV: metal treatment operations
- * Silica...quartz and cristobalite in refractories
- * Fluorides: Particulate fluoride (exposure via inhalation, ingestion)..smelters and aluminum fluoride plants
- * Hydrogen fluoride and sulfur dioxide...present in potroom, concurrent exposures to fluoride dust and alumina
- * Welding emissions...ozone, iron oxide, copper, nickel, chromium (III & IV), manganese, molybdenum, and zinc
- * Isocyanates...primarily associated with spray painting operations and some use of polyurethane foam. This category includes TDI, MDI, and HDI.
- * Formaldehyde...arising from lubricant pyrolysis and component of some coatings
- * Chlorine and hydrogen chloride....primarily associated with molten metal fluxing
- * Lubricant emissions: Aliphatic hydrocarbons, perhaps containing condensed ring aromatic products of pyrolysis...occurring as a vapor and mist. The lubricants include mineral spirits, naptha, haxane, Stoddard solvent, kerosene, and many Alcoa formulated mixtures with special additives.

TABLE 1 (Continued)
HAZARDOUS MATERIALS IN ALCOA

Few/single location exposures:

- * Organic solvent vapors associated with coating operations. Peak exposures to mixtures may approach or exceed short-term limits during mixing or clean-up. Some solvents absorbed through the skin; glycol ethers are the major concern.
- * Beryllium...alloying metal
- * Carbon monoxide...Soderberg potrooms, etc.
- * Wood dust...window manufacturing, box shops, etc.
- * Epoxy resins, 4,4 methylene dianiline and methylene chloride in Alcoa Composites (Monrovia, Ca).
- * Vanadium pentoxide....machining titanium forgings in Cleveland
- * Ammonia....magnesium slag off gas
- * Coal dust...power generation

Joe Damiano

Excellence through Quality

To:

Bob

Please review; let's discuss

Joe

3/30/93

*Joe: urgent
we stop a
meeting to review
this subject
RATS*



1501 Alcoa Building
Pittsburgh, PA 15219

794960 0044

To: Dr. Dan Jaffe
Pittsburgh 06

From: Joe Damiano
Pittsburgh 06

1993 March 29

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Table 1 is not all inclusive. Certainly some materials have not been listed that maybe present at significant levels in a single or perhaps a several locations. Nevertheless, I believe Table 1 covers 90 to 95% or more of the significant exposures in Alcoa.

Joe Damiano

med3.jd

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