FILE NAME: Goodyear (GY)

DATE: 1976

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The Industrial Commission of Ohio
Division of Safety and Hygiene
2325 West Fifth Avenue • Columbus, Ohio 43204
Phone (614) 466-3385

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PAIR UP FOR SAFETY '77 IN LABOR & MANAGEMENT

Goodyear Tire & Rubber Company Risk #S.I. 2351
Akron
Ohio 44316

Attn: R.W. Modrell
Manager Corporate Industrial Hygiene

Dear Mr. Modrell:

On December 7, 1976, air samples were taken at the Goodyear plant, Logan, to re-evaluate employees' exposure to MDI (Methylene bisphenyl isocyanate) concurrent with the same air samples taken by Paul Bankovich, Industrial Hygienist, Goodyear.

The Division's samples were taken by using MSA personal sampling pumps, midget impingers, and a mixed acid solution (Marcali). Six samples were taken within the breathing zones of employees, and two were area samples.

The results of the survey are listed on the accompanying table. According to our laboratory's results, J. Johnson's (compounder) second twenty minute sample exceeded the ceiling value for MDI. Also, our laboratory informed me that no TDI was detectable by Mass Spectroscopy.

I must apologize for the delay of the sample results as the Mass Spectroscopy unit could not function temporarily.

Since the samples were not run in a timely fashion laboratory personnel stated the results may be questionable.

Now that the question of TDI content has been settled, more samples should be taken either by a different sampling technique or the same method because of the following:

> The last samples taken (12-7-76) represented only 40 minutes of the employee's day as opposed to 160 to 200 minutes of survey time used on the initial survey. (Aug. 5 & 6, 1976). Reviewing the initial results, higher levels existed when an employee was not working around

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the nozzle heads and mixer. Most the samples taken during his survey (except the compounder) were area samples and breathing zones samples near the nozzle head and mixer. Most of company samples were also near the nozzle head. If TDI was used, there may be a problem near the nozzle heads because of TDI being somewhat volatile.

However, MDI having a lower volality rate, would possibly need heat to release it from the resin. The heat found when the molds are released could be a time when MDI is released. Taking all this into consideration the results of the first survey on August 5 and 6, 1976 appear to be more indicative of the actual conditions.

Lastly, there is question as to which laboratory analyses are correct. This must be resolved. Perhaps it would be profitable to phone Ralph Weigelt, Director of the Industrial Chemistry Laboratories, Ohio Health Department 614-466-5304 to discuss the methods. The laboratory has stated that they are running the samples by the NIOSH method for isocyantes. Also, because of the interferring aspects inherent to this method, the matter may not be resolved, until a better method is found.

If you should require further assistance from Division, contact E.W. Tyler, Director, Industrial Hygiene & Engineering.

Sincerely,

Dale Selchan

Dale Selchan
Industrial Hygienist

DS:bs

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TABLE # 1

FIRM: M.D.I.

DATE(S) OF SAMPLING _____

TEST RESULTS

INDIVIDUAL OR SITE TESTED	CONTAMINANT	CONCENTRATION DETERMINED ~~(mg/M3)~~ PPM*	ACGIH** 8-HOUR TLV***
Area sample mixer 22, sun liner	MDI	more than one sample taken (a) negative (b) negative	0.02 ppm
S. Knott, foamer Lincoln	MDI	(a) negative (b) negative	"
M. Keith, foamer Sun liner	MDI	(a) negative (b) negative	"
J. Johnson Compounder	MDI	(a) negative (b) 0.08 ppm	"

1) ~~XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX~~ * PARTS PER MILLION (PPM)
2) ** AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS
3) *** THRESHOLD LIMIT VALUE

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