

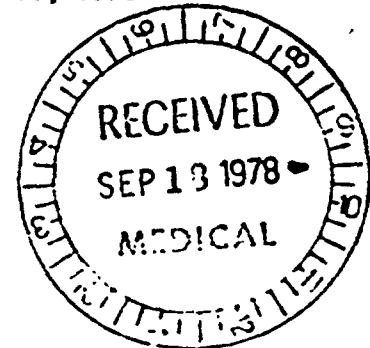


DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
PUBLIC HEALTH SERVICE
CENTER FOR DISEASE CONTROL

PLAINTIFF'S
EXHIBIT
BRK-8

NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH
ROBERT A. TAFT LABORATORIES
4676 COLUMBIA PARKWAY, CINCINNATI, OHIO 45226

September 11, 1978
HE 77-11
HE 77-11A



Mr. DuWain Boivin
Assistant Director
Health & Safety
Inland Division, GMC
2727 Inland Avenue
Dayton, Ohio

Dear Mr. Boivin:

NIOSH has been in the process of conducting a Health Hazard Evaluation (HE 77-11) of the Wet Rubber Process at Plant #4 Inland Division, GMC in Dayton Ohio since January, 1977. During this period, environmental evaluations of the workplace have been conducted in July and October 1977 and March 1978.

Attached for your information are the results of environmental sampling for airborne contaminants in the areas being evaluated. Also attached is a chart containing the current recommended and legal occupational single substance exposure criteria. (Please note that some compounds identified do not have exposure criteria.)

The environmental results indicate that a hazard to the health of the employees did not exist on the dates of the surveys based on the present single exposure criteria for the airborne contaminants identified. However, the additive and/or synergistic effects of the substances are not known, thus the complaints of the employees of symptoms of eye irritation, infections, etc. could be due to a combination of the substances if they elicit similar physiological responses or to an agent which was not identified during the evaluation dates.

These environmental results and the medical findings will be discussed in the final Toxicity Determination Report, however as you know that final report will not be available until the medical-legal issues are resolved.

If you have any questions please feel free to contact me at AC 513-684-2736.

Sincerely,

Gary L. White
Project Officer
Hazard Evaluations & Technical
Assistance Branch

cc: Mr. Hubert Abney
Dr. M. Gibson

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Department 464
Inland Division, EMC

Results (mg/m³)

Sample Number	Time	Description and Job Code	nBA ¹	C ²	IPA ³	PG ⁴	Ethyl Benzene	TCE ⁵	Toluene	Xylene
CT-1	0647-1541	Personal Sample (P.S.) Straight Table Mold Operator 0762	--	--	0.75	--	6.7	1.6	27	19
SG-1	0647-1541	P.S. Straight Table Mold Operator 0762	0.71	N.D.**	--	0.12	--	--	--	--
CT-2	0658-1548	P.S.	--	--	3.2	--	6.1	37	40	17
SG-2	0658-1548	P.S.	0.24	N.D.**	--	N.D.**	--	--	--	--
CT-3	0710-1551	P.S.	--	--	2.5	--	6.7	35	24	19
SG-3	0710-1551	P.S.	0.59	N.D.**	--	0.12	--	--	--	--
CT-4	0717-1545	P.S.	--	--	1.9	--	6.6	39	24	18
SG-4	0717-1545	P.S.	0.64	N.D.**	--	N.D.**	--	--	--	--
CT-5	0725-1553	P.S.	--	--	1.3	--	8.1	1.8	21	18
SG-5	0725-1553	P.S.	0.49	N.D.**	--	0.12	--	--	--	--
CT-6	0700-1433	P.S. Rotary Table Foam Press Operator 0762	--	--	1.2	--	7.6	N.D.**	26	21
CT-7	0748-1437	P.S.	--	--	0.75	--	9.2	N.D.**	22	26
SG-6	0724-1437	P.S.	0.47	N.D.**	--	N.D.**	--	--	--	--
CT-8	0753-1100	P.S.	--	--	0.20	--	9.6	N.D.**	24	27
	1200-1441									
SG-10	0753-1441	P.S.	N.D.**	N.D.**	--	N.D.**	--	--	--	--
CT-9	0748-1439	P.S.	--	--	1.1	--	9.8	29	21	27
SG-7	0748-1439	P.S.	N.D.**	N.D.**	--	0.12	--	--	--	--
CT-10 ⁶	0726-1300	P.S.	--	--	0.48	--	8.3	N.D.**	14	--
	1324-1435									
SG-9	0726-1435	P.S.	0.14	N.D.**	--	N.D.**	--	--	--	--
SG-8	0702-1433	P.S.	N.D.**	N.D.**	--	N.D.**	--	--	--	--

*Approximate milligrams of substance per cubic meter of air
 **Not Detected - The detection limit for these samples was 0.01 mg/cube

n-Butyl Acetate

²Cellulosolve/2-ethoxyethanol

Isopropyl alcohol

Proylene glycol

51.1.1-Trichloroethane

5 Sample pump failed and was replaced

Results of Sampling for Airborne Organic Vapors
 Department 464
 Inland Division, GMC
 Dayton, Ohio
 HE 77-11
 October 16, 1977

Sample Number	Time	Description and Job Code	Results (mg/M ³)									
			ngal	C ²	1PA ³	Ethyl Benzene	PG ⁴	TCF ⁵	Toluene	Xylene	Ethyl Benzene/Xylene	
CT-21 ⁶	0703-1015	Personal Sample (P.S.) Rotary Table Mold Foam Operator 0762	--	--	6.8	8.1	--	83*	24	22		
SG-81	1022-1438	P.S. Rotary Table Mold Foam Operator 0762	0.5	0.1	--	--	N.D.***	--	--	--		
CT-22	0703-1438	P.S. Counter 0762	--	--	1.9	9.7	--	1.0	29	26		
	0659-0942											
	1042-1054											
SG-82	1129-1434	P.S. 0762	0.42	N.D.***	--	--	N.D.***	--	--	--		
CT-23	1129-1434	P.S. Rotary Table Mold Foam Operator 0762	--	--	7.4	8.1	--	35	23	22		
SG-83	0707-1435	P.S. 0762	0.37	N.D.***	--	--	N.D.***	--	--	--		
CT-24	0720-1442	P.S. Trim Line Miscellaneous Bench 0752	--	--	1.6	6.4	--	37	28	23		
SG-84	0722-1201	P.S. 0752	0.69	N.D.***	--	--	N.D.***	--	--	--		
CT-25	0712-1100	P.S. 0752	--	--	1.5	9.8	--	53	36	26		
	1134-1440											
SG-85	1134-1440	P.S. 0752	0.5	N.D.***	--	--	N.D.***	--	--	--		
CT-26	0722-1046	P.S. Framer Operator 0271	--	--	1.9	8.3	--	14	25	22		
	1112-1349											
SG-86	1112-1349	P.S. 0271	N.D.***	N.D.***	--	--	N.D.***	--	--	--		
CT-27	0727-1433	P.S. Foam Service Attendant Rotary Table 0276	--	--	--	--	--	2.3	20	18	37	
SG-87	0727-1433	P.S. 0276	--	--	--	--	--	--	--	--		
CT-28	0735-1440	P.S. Rotary Table Mold Foam Operator 0762	--	--	1.7	7.4	--	33	12	20		
SG-88	0735-1440	P.S. 0762	N.D.***	N.D.***	--	--	N.D.***	--	--	--		
CT-29 ⁷	0736-1444	P.S. 0762	--	--	--	--	--	0.92	20	18		
SG-89	0736-1444	P.S. 0762	--	--	--	--	--	--	13	14		
CT-30	0743-1413	P.S. 0762	--	--	20	5.4	--	N.D.***	--	--		
SG-90	0743-1413	P.S. 0762	N.D.***	N.D.***	--	--	N.D.***	--	--	--		

- * Approximate milligrams of substance per cubic meter air
 ** Minimum amount of substance present due to possible breakthrough on backup section of tube
 *** Not Detected - the detection limit for these samples was 0.01 mg/tube
1. n-Butyl Acetate
 2. Cellulosolve/2-ethoxyethanol
 3. Isopropyl alcohol
 4. Propylene glycol
 5. 1,1,1-Trichloroethane
 6. Pump failed and was replaced
 7. Sample was analyzed for aliphatic amines, the detection limit for those samples was 0.05 mg/tube
 8. Substance present

October 19, 1977

5. 1,1,1-Trichloroethane
6. Pump off during lunch period
7. Pump off during lunch and medical examination
8. Unidentifiables <0.03 mg/tube
9. Pump failed and was replaced

Table XIV
Results of Sampling Airborne Organic Vapors
Department 464
Inland Division, CMC
Dayton, Ohio
HE 77-11
October 19 and 20, 1977

Sample Number	Time	Description and Job Code	Results (mg/M ³) ^a									
			nBA ¹	C ²	IPA ³	Ethyl Benzene	P.G. ⁴	TCE ⁵	Toluene	Xylene	Ethyl Benzene/ Xylene	
CT-88	1940-2225	General Area (G.A.) Straight Table Press Bench	--	--	--	+	--	--	29	+	21	
SG-28	1940-2225	G.A. Straight Table Press Bench	0.5	--	--	--	--	--	46	46		
CT-89	1940-2230	G.A. Straight Table Foamer Panel	--	--	--	+	--	--	32	+	28	
SG-29 ⁷	1940-2230	G.A. Straight Table Foamer Panel	--	--	--	--	--	--	46	46		
CT-34	0725-1439	Personal Sample (P.S.) Miscellaneous Bench Mold Operator 0762	--	--	2.2	10	--	17	4.9	30		
SG-24 ⁸	0725-1334 1341-1439	P.S. Miscellaneous Bench Mold Oper. 0762	NO ⁹	0.32	---	---	NO ⁹	--	--	--		
CT-35	1223-1440	P.S. Straight Table Foam Service Attendant 0276	--	--	10	6.6	--	134	19	18		
CT-79	2015-0049	G.A. Foamer Area	--	--	6.6	+	--	39	22	+	18	
SG-35	2015-0049	G.A. Foamer Area	--	--	6.5	--	--	--	46	46		
SG-39 & 40	1930-2045	G.A. Samples in Series Wash Basin Area	--	--	65	--	--	--	--	--		
CT-76	0001-0148	G.A. Mixer Being Cleaned	--	--	--	+	--	9.1	8.6	+	16	
SG-57 ⁷	0001-0148	G.A. Mixer Being Cleaned	--	--	46	--	--	--	46	46		
SG-53	0047-0147	G.A. Wash Basin Area	--	--	140	--	--	--	46	46		

- ^a Approximate milligrams of substance per cubic meter air.
- ¹ n-Butyl Acetate
- ² Not Detected - The detection limit for these samples was 0.01 mg/m³.
- ³ Cellosolve/2-ethoxyethanol
- ⁴ Isopropyl Alcohol
- ⁵ Propylene Glycol
- ⁶ 1,1,1-Trichloroethane
- ⁷ Substances present - not quantitated
- ⁸ Samples analyzed for aliphatic amines - The detection limit was 0.1 µg/sample
- ⁹ Pump failed and was replaced.

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