



CHEMICAL MANUFACTURERS ASSOCIATION

May 19, 1983

To: Benzene Program Panel
From: Carol Stack 
Re: Benzene Exposure Survey

I enclose a copy of the benzene exposure survey which was developed by Roger Daniel of Dow per request at the May 10 Panel meeting. The purpose of the survey is to gather exposure information for response to anticipated OSHA rulemaking on benzene.

The target date for return of the questionnaire to CMA is June 10, 1983.^{*} In order to maintain confidentiality, any company identification accompanying the returned questionnaire will be removed and the information collated by CMA staff or legal counsel (Wilmer, Cutler and Pickering). Results of the survey will be made known to all Panel members.

* Please return to: Dr. Carol Stack
CMA
2501 M Street, NW
Washington, DC 20037

CCR 000001211

BENZENE EXPOSURE SURVEY

Indicate Category:

Producer X

User X

1. Industrial Hygiene Guideline

(a) Does your company have an internal industrial hygiene guideline (exposure limit) for benzene?

Yes X

No

If yes, what is it? 1.0 ppm

8

- HR. TWA

- Ceiling limit

2. Producer/Processor Facilities Handling Benzene

(a) Number of locations with employees with possible exposure to benzene of 1 ppm TWA or greater 4 plants.

(b) Total number of facilities (departments, plants, etc.) with employees with possible exposure to benzene of 1 ppm TWA or greater. LCCP - 2 units LAB - whole plant Baltimore - whole plant Chem. Bldg - 2 units

3. Number of employees with possible exposure to benzene of 1 ppm TWA or greater.

(a) Routine* Basis 419 (.42)

(b) Intermittent** Basis 146 (.10)

* Routine means 3 or more work schedules per week.

** Intermittent - 2 or less work schedules per week.

4. Exposure Profile - TWA and Peak

Indicate number of employees per category.

TWA, PPM			PEAK, PPM	
1-3	4-7	8-10	10-25	> 25
<u>565</u> <u>(52)</u>			<u>147</u> <u>50</u>	

NOTE: Individuals can be included in both the peak exposure category as well as the TWA category. All employees in 3(a) and 3(b) should be accounted for in this profile.

(maintenance personnel)
these exposures controlled with respiratory protection

5. Respiratory Protection

(a) Is your company using respirators to control employee exposures to benzene?

Yes X

No

If yes, is application:

Routine

Intermittent X

Both

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<u>TASK</u>	<u>TYPE RESPIRATOR*</u>	<u>ROUTINE</u>	<u>INTERMITTENT</u>
<u>Sampling</u>	<u>Air Purifying & Air Supplied</u>	<u>X 42</u>	
<u>Tank gauging</u>	<u>Air Purifying & Air Supplied</u>	<u>X 42</u>	
<u>Various Maint. Operations</u>	<u>Air line</u>		<u>X 10</u>
<u>Vessel Entry</u>	<u>Air line</u>		<u>X 10</u>

(c) Is fit testing performed?

Yes X No done in various degrees at each plant

Qualitative X-one plant Quantitative X-one plant

(d) Are respirators used to control exposure to benzene of contractor personnel on your premises*?

Yes ☒ No ☐

If yes, is application:

Routine _____
Intermittent X
Both _____

* Include barge loading/unloading

(e) Indicate task, type respirator, number of contractors using routinely and intermittently.

<u>TASK</u>	<u>TYPE RESPIRATOR</u>	<u>ROUTINE</u>	<u>INTERMITTENT</u>
Maintenance jobs	Air-line		
Vessel entry	Air-line		

(Line breaking, filter charging, etc.)

6. Engineering Controls

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(a) Is your company presently using engineering controls to minimize benzene exposure?

(b) Engineering controls is use:

Automatic leak detection systems

at most plants

Double mechanical seals

yes

Double seated valves

yes

Local exhaust systems*

Special sample points

yes

Vapor recovery systems

yes

Other (specify)

water stripping; covered
separators

* Exclude laboratory fume hoods

7. Administrative Controls

Does your company use administrative scheduling of work assignments to limit employee exposure to benzene?

Yes _____ No X

8. Training

Is there an established formal training program for employees with possible exposure to benzene?

Supervisors: Yes X No _____Workers Yes X No _____

9. Medical Surveillance

(a) Are pre-employment physical examinations available for all employees with possible exposure to benzene?

Yes X No _____

If yes, are they mandatory?

Yes X No _____

(b) Are pre-employment physical examinations mandatory for those workers who may be directly exposed to benzene?

Yes X No _____

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(c) Which of the following are included in the pre-employment physical:

Occupational History	X
Family history (blood dyscrasias)	X
Personal history (complete)	X
CBC with differential	X
Platelet count	X
Hematocrit	X
Hemoglobin	X
Red cell indices (MCV, MCH, & MCHC)	X
Serum bilirubin	X
Reticulocyte count	

(d) Are periodic physical examinations available for all employees with possible exposure to benzene.

?

Yes X No

If yes, at what frequency are they offered? at least annually
If frequency is age-adjusted, please specify. NO, it is offered to everyone
annually as part of a general exam program
Are periodic physical examinations mandatory?

Yes _____ No X _____

(e) Which of the following are included in the periodic physical:

Occupational history update	X
Personal history (complete)	X
CBC with differential	X
Platelet count	X
Hemoglobin	X
Hematocrit	X

(f) Do you periodically update medical history and perform clinical laboratory tests excluding hands-on physical examination?

Yes ☒ No ☐

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→ Physicals → exam of the body → exam of the patient → exam of the physicals → exam of the physicals and

(g) Are any biological tests used for removal purposes?

Yes _____ No X

If yes, explain. _____

(h) Do you use urinary phenols for:

(i) routine monitoring X

(ii) emergency exposure monitoring X

(iii) neither of the above _____

Is adjustment made for specific gravity? yes

If yes, state value 1.024