



MAINE OIL DEALERS ASSOCIATION

TECHNICAL BULLETIN #7

OSHA BENZENE REGULATIONS

December 1987

On Friday, September 11, 1987 the Occupational, Safety and Health Administration (OSHA) of the U.S. Department of Labor promulgated a final rule concerning the occupational exposure to benzene. This rule has strong requirements for the monitoring of all employees who come into contact with benzene at gasoline bulk storage facilities. Failure to abide by this rule carries substantial penalties.

I. WHAT FACILITIES ARE INVOLVED?

All gasoline bulk storage facilities are subject to this rule.

II. WHAT EMPLOYEES ARE INVOLVED?

All employees exposed to gasoline bulk storage facilities must be involved in at least the initial round of testing in order to comply with this rule.

III. HOW DOES THE TESTING OF EMPLOYEES WORK?

Each worker involved in loading/unloading product, gauging tanks, or changing tank filters or other similar duties requiring exposure to benzene in the area of the bulk storage facility must be monitored for 15 minutes exposure to benzene.

IV. WHAT IS THE PERMISSIBLE EXPOSURE LIMIT?

The new rule lowers the Permissible Exposure Limit (PEL) for benzene from 10 ppm to 1 ppm for an eight hour shift and establishes a Short Term Exposure Limit (STEL) of 5 ppm for a 15 minute period. It also establishes an "action level" of 0.5 ppm that triggers follow-up monitoring, medical exams and other requirements.

V. WHAT IS THE LEAST EXPENSIVE METHOD TO BEGIN TESTING?

OSHA has found that there are two types of vapor monitoring badges which may be worn by employees for their initial testing. The two types of badges, lab analysis of the badges once worn and costs are as follows:

A. 3-M Company

1-800-328-1667

a. Model 3500 sells for a case of 10 for \$117.65 and does not include the cost of lab analysis.

b. Model 3510 sells for a case of 5 for \$313.35 and includes the cost of lab analysis.

B. Du Pont

1-800-344-4900

a. Model GAA sells for a case of 20 for \$176.00 and does not include the cost of lab analysis.

b. Du Pont does perform lab analysis of its badges for \$40.00 per badge.

Both manufacturers state that it takes from 3-4 weeks to receive the badges once ordered, and lab analysis takes about four weeks to get back once received by them.

VI. ARE THERE ANY LABORATORIES IN MAINE CAPABLE OF DOING THE LAB ANALYSIS ON THE BADGES?

Yes, the E.C. Jordan Co. of Portland (774-5401) will do an analysis of either the 3-M or Du Pont badges for \$75.00 per test. The test takes about three weeks to get back once received by them.

VII. HOW OFTEN DOES THE MONITORING NEED TO BE DONE?

The initial monitoring of effected employees must be done within 60 days of the effective date of the standard, which is February 8, 1988. The following schedule is to be followed depending upon the results of the initial monitoring:

Initial Results Frequency of Monitoring

Greater than 1ppm TWA* Every six months

Greater than or equal to 0.5ppm At least annually

but at or below 1ppm TWA

*TWA is Time Weighted Average

Where periodic monitoring is performed to represent more than one employee's exposure or more than one shift, the monitoring must be conducted on the employee during a shift that the highest exposure is expected.

Air monitoring can be terminated if the results of the initial monitoring reveals exposure below 0.5 ppm or if under a periodic monitoring program the results of two consecutive measurements taken at least seven days apart reveal exposures below 0.5ppm.

VIII. NOTIFICATION OF EMPLOYEES

All employees who have been monitored must be notified of the results of the monitoring within 15 days of your receipt of the results of the lab analysis of their badge (s). You may either notify the employee (s) in writing directly, or post the results in a location easily seen by the employee (s).

IX. TRAINING

All employees covered by the standard must be provided with information and annual training on benzene exposure in accordance with the requirements of OSHA's Hazard Communication Standard. Annual retraining is required if exposures exceed the "action level."

Training must include:

- a. Locations within the facility where exposure to benzene is likely to occur.
- b. Measures used within the facility to monitor and control benzene exposure.

- c. Physical and health hazards of benzene exposure.
- d. Details of the Hazard Communication Program that apply to benzene.
- e. A description of the Medical Surveillance Program.

X. MEDICAL SURVEILLANCE PROGRAM

A medical surveillance program must be introduced for the following employees:

- those with exposures at or above the "action level" for 30 days or more per year.
- those with exposures at or above the PEL for 10 days or more per year.
- those who have been exposed to more than 10ppm of benzene for 30 days or more in a year prior to the effective date of this standard.
- those exposed to benzene in an emergency situation.

The medical surveillance program consists of:

- Initial comprehensive examination.
- Annual examinations, including blood counts.
- If an emergency exposure occurs, urinalysis for urinary phenol.

XI. PENALTIES

Penalties for failure to adopt the programs required under the rule run from \$100 to \$1,000 per violation depending upon the infraction. Willful and repeated violations can carry fines of up to \$10,000.

XII. EXEMPTIONS

There are certain exemptions from this rule, as follows:

- a. Commercial and end-users and retail outlets are exempted.
- b. Loading/unloading terminals with vapor recovery systems, except for tank gauging, maintenance and filter changing.

NOTICE

This bulletin contains a brief description of the OSHA Benzene Standard and is by no means a comprehensive or detailed analysis of the full rule. You are hereby notified that you should read the entire rule in all its contents and seek clarification directly from OSHA should you have any questions. OSHA/MAINE: 622-8417