PLAINTIFF'S EXHIBIT

UC-3856

(21)

21(a)

UNION CARBIDE

UNION CARBIDE CORPORATION
P. O. BOX 8004, SOUTH CHARLESTON, WV 25303
Specialty Chemicals

Received By: Barry Jones

Date: 4/16/87

April 16, 1987

Mr. P. D. Jones
Area Director
Occupational Safety and Health Administration
500 Eagan Street Room 206
Charleston, West Virginia 25301

Re: Employee Complaint #3381

Dear Mr. Jones:

This is a response to your letter of March 13, 1987 regarding the above referenced complaint. That complaint noted employee concerns in Building 303 of the Union Carbide Corporation South Charleston plant for potential exposure to asbestos and potential inhalation exposure and/or fire hazards while drumming 2,4-pentanedione and ethyl acetate. Employees also expressed concern for the operability of Building 303's continuous monitor.

First let us address the asbestos issue. Building 303 is an old building dating back to the 1930's. There is a wide variety of piping and equipment, some of which is insulated with asbestos insulation. Recent surveys identified areas where the insulation barrier was damaged. On March 21 and March 28, 1987, an outside contractor repaired these areas. Industrial hygiene monitoring was performed for airborne asbestos in the general area and on employees before and after insulation repairs were made. Personnel samples averaged 0.0042 F/cc, TWA_8, before repairs were made and 0.0033 F/cc, TWA_8 after repairs were made. Both measurements are well below the established PEL of 0.2 F/cc, TWA_8.

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(1) Much of the information provided in this document contains business confidential and trade secret information and is being supplied in accordance with the restrictions on unauthorized disclosure provided by Section 15 of the Occupational Safety & Health Act, 29 USC Section 655 et. seq. and the trade secrets provision of OSHA's regulation implementing that Section at 29 C.F.R. §1903.9 and Part 1913.

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The second employee concern was exposure to 2,4- pentanedione and ethyl acetate. On March 6 and again on March 10, 1987 a total of 3 employees were exposed to 2,4- pentanedione vapors while in the general drumming area. They complained of burning eyes and irritation of the throat during and after exposure. Each employee reported to the plant dispensary for medical examination. All symptoms have apparently disappeared and no other ill effects are expected.

The source of the vapors was originally thought to have been the drumming operation. On March 9, 1987, a valve at the filling scale was replaced and the scale drain was washed with high pressure water. Contrary to expectations, when drumming started again on the evening of March 10, 1987, the odor returned after approximately 3 drums were filled. 2,4- pentanedione has an odor threshold level on the order of 0.025 ppm, so that the levels smelled could have been extremely low. The drumming operations were shut down at that point and the building aired out. The source of the odor was traced to a gasket failure in the piping downstream of the drumming scale just outside of Building 303. The vapors from the leak migrated into the building via a trench that acts as a conduit for the 2,4-pentanedione line and other lines that feed a tank car loading rack south of Building 303. The leaky section of piping was isolated on March 10, 1987 by hand valves to prevent further leakage.

2,4-pentanedione was drummed again on March 12, 13, and 19, 1987 with the damaged section of line isolated. Industrial hygiene monitoring was performed during these runs to establish exposure concentrations. These sample concentrations averaged 4.3 ppm, TWA_8, of 2,4-pentanedione and historical sample data for 2,4-pentanedione drumming are very similar. 2,4- pentanedione has no OSHA PEL or ACGIH TLV. Union Carbide has recently adopted an internal exposure standard of 20 ppm, TWA_8, for this chemical, well above the average levels detected in Building 303.

The OSHA PEL in 29 C.F.R. 1910.1000 and the ACGIH TLV for ethyl acetate are both 400 ppm, TWA_8. Ethyl acetate drumming runs were performed on March 20 and March 23, 1987. During these two runs, area sampling and personnel samples were taken to establish exposure concentrations. Each of the samples measured concentrations less than the sensitivity of the analytical and sampling procedure, which was 10.5 ppm, TWA_8. These tests indicate exposure levels approximately 40 times below the PEL and TLV for ethyl acetate.

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Finally, let us address the continuous monitor issue. The continuous monitor referenced in the complaint is a Davis Instruments Diffusion Head Combustible Gas Detector. The system was installed in late 1964 to sound an alarm if combustible mixtures were present at the filling scales. It has been removed after consultation with the Safety and Fire Protection Branch of our Corporate Engineering Department. They indicated that combustible gas detectors are not a requirement nor a recommended practice for this application. Building 303 is equipped with emergency alarm boxes and a sprinkler system. Union Carbide does not feel that employee safety is compromised in the absence of a continuous combustible gas detector, particularly in light of the levels monitored. The Distribution Department has at its disposal a portable combustion detector that will be used when conditions merit.

We hope this satisfactorily responds to the concerns raised.

Sincerely yours,

M. J. Shoger
Safety Director

MJS:yc
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