

PLAINTIFF'S EXHIBIT

SH-2434

Safety Awareness Bulletins
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ASBESTOS

Asbestos is a mineral silicate occurring naturally as a variously colored fiber. It is non-combustible, non-conducting, and resistant to deterioration and chemical attack. Because of these properties, it has found widespread use in thermal insulation, asbestos floor tile, roofing and transite materials, gaskets, coatings, plastics, and brake linings. Because of its fibrous nature, it can be woven into cloth, or used to add strength to other materials.

Asbestos is a health hazard when taken into the system in excessive amounts. The asbestos fibers are associated with a variety of diseases, including (1) Asbestosis-a non-malignant scarring of the lungs; (2) Bronchogenic Carcinoma-a malignancy (cancer) of the lung; (3) Mesothelioma-a malignancy of the lining of the chest cavity; and (4) cancer of the stomach, colon, and rectum. These diseases develop slowly, and usually do not become evident until many years after initial exposure. Asbestos fibers can enter the system via the breathing process or via eating/drinking. The lightweight, small asbestos fibers are easily "airborne" and can contaminate the work area.

The permitted exposure level for asbestos fibers, as established by the existing OSHA health standard, is 2 fibers per cubic centimeter of air, as an 8-hour time weighted average; and a ceiling limitation of 10 fibers per cubic centimeter, as determined by a 15-minute sample.

Asbestos is most frequently encountered within the Complex as insulation on pipes and structures. While purchase of new insulation containing asbestos has been discontinued, asbestos insulation will be encountered in older units for many years to come.

Engineering controls, such as isolation, enclosure, exhaust ventilation, and dust collection shall be used to meet the exposure limits. When these measures are not feasible, or do not sufficiently reduce the asbestos exposure, respiratory devices are an approved method of protecting the employee. The approved respirator devices for airborne asbestos fibers include the 3-M brand single use type 8710 respirator, which is stocked by the Refinery and Chemical Plant tool rooms.

Whenever possible, asbestos materials should be handled in a wet state to prevent or minimize the formation of airborne asbestos fibers. Work areas shall be wet-cleaned; dry sweeping or blowing create the hazard of airborne asbestos fibers.

Identifying labels shall be applied to waste asbestos or asbestos-containing debris if there is a likelihood that airborne concentrations of asbestos fibers could result. This label shall state, "CAUTION-CONTAINS ASBESTOS FIBERS-AVOID CREATING DUST-BREATHING ASBESTOS MAY CAUSE SERIOUS BODILY HARM". If working at a task where exposure to airborne asbestos fibers is likely, coveralls shall be worn.

Asbestos waste shall be collected and disposed of in sealed plastic bags. These bags shall be labeled as containing asbestos, and placed in labeled drums. Bags, tags, and ties are available in both tool rooms. The drums shall be stored in a designated central location pending disposal.

All asbestos materials will be disposed of via landfill at an approved location.