**GBI Insulation** *Safety Program*

***Asbestos Management:***

***Training and Respitory Fit Test-****GBI Insulation provides certificate training for all employees annually prior to or at the time of initial assignment. There is a respitory fit test and mask provided and training on work practice controls, work operations, to reduce exposure, & in emergencies.*

***Monitoring and Exposure limit of Asbestos****-GBI requires all employee exposure monitoring by air sampling is required of all employees engaged in activities that involve contact with asbestos, tremolite, anthophyllite, or actinolite. Monitoring must be representative of both the employee’s exposure and the are being samples. Current standards require air monitoring in any environment where there is a likelihood of the airborne asbestos concentrations exceeding the action level of .01 fibers per cubic centimeter (f/cc). Results are used to show compliance with legal requirements, to establish a baseline for worker exposure, to determine the type of respiratory equipment needed to evaluate the effectiveness of work practices, and to determine when a job is clean enough for the contractor to be released (via OSHA).*

***Engineering Controls and Work Practices****- GBI engineering and work practices maintain the exposure below TWA for each project. Some of them may be exhaust systems for hand tools, wet methods, clean-up procedures & PPE.*

*Note: TWA is based on eight hours. If sampling time does not total eight hours, one must add to the numerator of the below expression the number of hours short times a zero concentration, and then divide by eight hour.*

*TWA+ (time 1)x(Conc’n1)+(Time 2)x (Conc’n 2)=Time n)+(Conc’n)/Total Time*

*During abatement, personal sampling of eight hour TWA, plus excursion levels must be initially collected, and then periodic daily monitoring must take place. Initial sampling is done at the job start, usually a 30 minute sample to accurately determine concentrations and possible exposure. Ceiling samples must be no longer than 30 minutes and should be done during the dirtiest part of the day to determine maximum air concentrations, and daily exposure monitoring can be comprised of several samples to make up the TWA.*

*Employees are given a Respitory Fit test and Respirator to be used in the following 4 circumstances: work practice controls, work operations, to reduce exposure and in emergencies. GBI shall include coveralls, gloves, head coverings, foot coverings, face shields & vented goggles.*

*All regulated areas shall be identified by posting signs & labels in regulated work areas that meet OSHA requirements.*

*Specific information regarding limitations of the specific PPE will be discussed before all jobs and employee will be tested by an outside service for fit tests and respirator.*

**What is asbestos?**

Asbestos is the name given to a number of naturally occurring fibrous minerals with high tensile strength, the ability to be woven, and resistance to heat and most chemicals. Because of these properties, asbestos fibers have been used in a wide range of manufactured goods, including roofing shingles, ceiling and floor tiles, paper and cement products, textiles, coatings, and friction products such as automobile clutch, brake and transmission parts. The Toxic Substances Control Act defines asbestos as the asbestiform varieties of: chrysotile (serpentine); crocidolite (riebeckite); amosite (cummingtonite/grunerite); anthophyllite; tremolite; and actinolite.

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**Asbesos health effects**

Exposure to asbestos increases your risk of developing lung disease. That risk is made worse by smoking. In general, the greater the exposure to asbestos, the greater the chance of developing harmful health effects. Disease symptoms may take several years to develop following exposure. If you are concerned about possible exposure, consult a physician who specializes in lung diseases (pulmonologist).

Exposure to airborne friable asbestos may result in a potential health risk because persons breathing the air may breathe in asbestos fibers. Continued exposure can increase the amount of fibers that remain in the lung. Fibers embedded in lung tissue over time may cause serious lung diseases including asbestosis, lung cancer, or mesothelioma. Smoking increases the risk of developing illness from asbestos exposure.

Three of the major health effects associated with asbestos exposure include:

 **Asbestosis** -- Asbestosis is a serious, progressive, long-term non-cancer disease of the lungs. It is caused by inhaling asbestos fibers that irritate lung tissues and cause the tissues to scar. The scarring makes it hard for oxygen to get into the blood. Symptoms of asbestosis include shortness of breath and a dry, crackling sound in the lungs while inhaling. There is no effective treatment for asbestosis.

 **Lung Cancer** -- Lung cancer causes the largest number of deaths related to asbestos exposure. People who work in the mining, milling, manufacturing of asbestos, and those who use asbestos and its products are more likely to develop lung cancer than the general population. The most common symptoms of lung cancer are coughing and a change in breathing. Other symptoms include shortness of breath, persistent chest pains, hoarseness, and anemia.

 **Mesothelioma** -- Mesothelioma is a rare form of cancer that is found in the thin lining (membrane) of the lung, chest, abdomen, and heart and almost all cases are linked to exposure to asbestos. This disease may not show up until many years after asbestos exposure. This is why great efforts are being made to prevent school children from being exposed.

For more information on these and other health effects of asbestos exposure see the Agency for Toxic Substances and Disease Registry's Web site.

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**Where can asbestos be found?**

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| Asbestos fibers are incredibly strong and have properties that make them resistant to heat. Many products are in use today that contain asbestos. Most of these are materials used in heat and acoustic insulation, fire proofing, and roofing and flooring. In 1989, EPA identified the following asbestos product categories. Many of these materials may still be in use. asbestos-cement corrugated sheet  | asbestos-cement flat sheet  | asbestos-cement pipe  | asbestos-cement shingle  |
| roof coatings  | flooring felt  | pipeline wrap  | roofing felt  |
| asbestos clothing  | non-roof coatings  | vinyl/asbestos floor tile  | automatic transmission components  |
| clutch facings  | disc brake pads  | drum brake linings  | brake blocks  |
| commercial and industrial asbestos friction products  | sheet and beater-add gaskets (except specialty industrial)  | commercial, corrugated and specialty paper  | millboard  |
| rollboard  |