02/17/12

INITIAL EXPOSURE ASSESSMENT
29 CFR 1926.1101(f)(2) and (f)(2)(iii)(A)

Class of work: Class II

Type of Asbestos Containing Material: ACM compressed sheet pipe gasket

Condition of ACM: Intact

Type and percent of asbestos: Chrysotile, 55 – 85%

Indicate Specific or Alternative Control Methods: Specific Control Methods

Describe Control Methods: The work must be supervised by a Competent Person as defined in 29 CFR 1926.1101(b). The area where the removal will take place must be regulated by posting with appropriate signage and controlled for access and activities by authorized persons only. As the gasket is being exposed, it must be wetted with amended water or foam and kept wet throughout the removal procedure. Use hand removal methods only, such as a putty knife or stiff blade. If brushing is required, use a stiff bristle brush such as nylon. Do not use a wire brush or mechanical buffer. After removal of the gasket, wipe the fitting clean with a cloth and amended water or foam. Promptly contain the removed gasket while wet in a leak-tight container, along with the wipe cloth and any other waste. Label the waste container with the appropriate OSHA "Danger" label for ACM waste. Clean the immediate work area with a HEPA filtered vacuum or by wet wiping with amended water or foam. Do not use dry sweeping or dry cleanup.

Employee's Training: Class II

Environmental Conditions: This objective data was generated indoors.

THIS ASSESSMENT IS NEGATIVE. Employee exposure during the operation is expected to be consistently below the PELs.

OSHA Permissible Exposure Limits: Time Weighted Average: 0.1 f/cc
Excursion Limit: 1.0 f/cc

Competent Person responsible for developing this Negative Exposure Assessment and overseeing the development of this objective data:

William T. Cavness, The Asbestos Institute
U.S. EPA Contractor/Supervisor, The Asbestos Institute F1026, 01/06/11

Project: Gasket removal for the development of objective data to verify NEA
University of Georgia
December 20 – 22, 2011

Signature of Competent Person:

02/17/12

NEGATIVE EXPOSURE ASSESSMENT
OBJECTIVE DATA

Who produced the objective data?
The objective data were produced by personnel from Bureau Veritas North America, Inc., Kennesaw, GA. The air sampling program was developed and executed by Charles L. Blake, CIH, V.P. and Director of Technical Services for Bureau Veritas. During the testing Mr. Blake was assisted by industrial hygienists also from Bureau Veritas.

When were the Objective Data produced?
The air sampling program which produced the objective data ran over a 3-day period, December 20, 2011 through December 22, 2011. Analysis of collected air and bulk material samples was performed by Bureau Veritas' AIHA and NVLAP accredited laboratory in Kennesaw, GA. Analysis of samples began concurrently within this time period and continued directly thereafter.

Geometric Means (over air sampling periods): *

TWA: 0.007 f/cc **EL: 0.009 f/cc**

Daily Average 8-hr TWA's: 0.001 - 0.008 f/cc

Are the Objective Data statistically reliable?
One hundred forty-four (144) separate personal air samples were collected and analyzed. Thirty (30) of these were 3-hr duration for determination of job period TWA airborne fiber concentrations. The remaining 114 air samples were run for 30-minute periods and collected sequentially for evaluation of excursion level airborne fiber concentrations. Statistical analysis of available results showed a log normal distribution with the following 95th percentile upper confidence limits.

3-hour Samples	**30-minute Samples**
0.014 f/cc	**0.019 f/cc**

Attach Objective Data including pump calibration data.
The objective data are maintained and available at the Arizona Chapter of The Environmental Information Association, and is available by contacting them through their website at www.eia-az.org or by telephone at (602) 864-6564.

The Objective Data represented here are intended to be used for a Negative Initial Exposure Assessment in any mechanical room or area where flange gasket removal may be done, as the work underlying this NEA represents worst case situations.

The gasket removal and air sampling were done in an abandoned mechanical room on piping systems estimated to be approximately 50 years old. The adjacent pipe insulation which was contacted frequently in the course of the gasket removal was sampled and found to be ACM. The valve flanges, bolts and nuts were extremely rusted, requiring much physical labor including hammer and chisel work to open the flanges. No glovebag or other temporary enclosures were utilized, nor was local exhaust ventilation.

It is anticipated that the same work under modern conditions in operating mechanical rooms would yield much lower air monitoring results.

* OSHA Permissible Exposure Limits: TWA: 0.1 f/cc; EL: 1.0 f/cc