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CONFIDENTIAL

Mr. C. G. Rose
Manager
Atlanta ReNEW Center

Industrial Hygiene Survey
August 15 and 16, 1977

On August 15 and 16, 1977, I conducted an Industrial Hygiene Survey at your facility which consisted of a complete noise survey and a walk through inspection to identify areas where possible occupational health problems might arise. Air samples were taken in seven different areas to determine employe exposure to asbestos fibers. Two additional samples were taken to measure the concentration of stoddard solvent in the fuel injector pump test room.

Eleven items in this survey require follow-up by your personnel. Enclosed are copies of the Industrial Hygiene Survey Follow-up form, which should be submitted to this department at 30-day intervals from the date of this report. You can refer to the follow-up items as they are numbered in this report.

The allowable exposure to noise is based on noise intensity and exposure time. Noise is measured in decibels on the A scale (dBA). Some of the exposure limits are as follows:

Noise Intensity dB(A)	Maximum Allowable Hrs. Per Day	Noise Intensity dB(A)	Maximum Allowable Hrs. Per Day
90	8.0	102	1.5
92	6.0	105	1.0
95	4.0	110	0.5
97	3.0	115	0.25
100	2.0	Greater Than 115	0.0

The specific noise levels found in the shop are shown on the Noise Survey data sheets at the back of this report. Items 3, 5, 6, 7, 8, 9, 10 and 12 on the data sheets are all operations which generate noise levels that are not a problem because they do not exceed 90 dB(A). Item 11 exceeds 90 dB(A), but the employe exposure time to this operation is not long enough to create a health problem.

The noise level produced at the clutch disc repair bench (items 1 and 2) is of sufficient intensity and duration to exceed the health standard concerning noise. The employe working on the clutch disc repair bench must wear hearing protection while performing this operation. A sign should be posted at the work bench indicating that hearing protection is required. An audiometric test should be performed on the employe involved in this operation as soon as it can be arranged. Audiometric testing must be continued on an annual basis to insure that hearing protection is effective in reducing noise exposure.
FOLLOW-UP REQUIRED - (1)

The noise level measured in the fuel injector pump test room (items 13 and 14) also exceeds the permissible limit for noise. If the fuel injector pump tester and the injector calibrator could be isolated in areas containing sound absorbing material, it might be possible to reduce the noise levels below the permissible limits. Engineering controls should be initiated in this area if they are technically feasible.
FOLLOW-UP REQUIRED - (2)

Until the noise level in the fuel injector pump test room is reduced through engineering controls, employes working in this room must wear hearing protection when injector pumps are being tested and when injectors are being calibrated. Audiometric tests should be performed on all involved employes as soon as this can be arranged. If it is determined that engineering controls are not technically feasible, audiometric testing must be continued on an annual basis.
FOLLOW-UP REQUIRED - (3)

In the carburetor cleaning room tank #4781 was not equipped with a muffler on the pneumatic agitation system (item 4). The noise level at adjacent tanks equipped with mufflers was 85 dB(A), while the noise level at tank #4781 was 94 dB(A). A muffler should be installed on tank #4781 to reduce the noise produced by the pneumatic agitation system.
FOLLOW-UP REQUIRED - (4)

Seven specific operations were sampled for asbestos fiber. The areas which were sampled and the results of the sampling are shown on the Industrial Hygiene Collection and Analysis data sheet at the back of this report. The results are the average of two separate samples taken in each of the seven areas. Samples 1, 2, 3 and 7 are all operations which do not exceed the Threshold Limit Value (TLV) for asbestos. Unless production is changed in those areas, no additional engineering controls are required.

Samples 4, 5 and 6 exceed the TLV for asbestos by 139%, 13% and 28% respectively. Asbestos fibers when inhaled can be a serious health hazard, and the effects of such exposure may not become apparent for many years. Asbestosis, a disease of the lungs which reduces breathing capacity, and an increased incidence of lung cancer are two physiological responses which can result from excessive asbestos exposure. Based on the concentrations measured in these three areas and the toxicity of asbestos, local exhaust ventilation should be installed to reduce the concentration of airborne asbestos fibers.
FOLLOW-UP REQUIRED - (5)

Respiratory protection is mandatory for all employes who install new clutch linings and test new clutch discs. Respirators will remain mandatory for these employes until air sampling verifies the reduction of airborne concentrations of asbestos fibers due to local ventilation and vacuuming procedures. The respirators used at your operation must be approved by the National Institute for Occupational Safety and Health (NIOSH). Respirators approved by NIOSH are assigned a number prefixed by the letters TC, indicating that they are tested and certified to protect against the air contaminants listed. In addition, respiratory protection must be cleaned and maintained in proper working order. For your operation it would be more advantageous to use disposable respirators which do not require periodic cleaning and inspection. For protection against asbestos dust, the Wilson Model 1400 or the 3M Model 9900 are NIOSH approved disposable respirators well suited to your operation.
FOLLOW-UP REQUIRED - (6)

Our IH Corporate Respiratory Protective Equipment Control Program is a good reference for the proper use of respiratory equipment. The order number is IR-295, and you can obtain a copy by placing an order on Form GF-90 (copy enclosed) with IH Printing and Distribution Services in Westmont, Illinois.

Industrial hygiene studies at the Chicago ReNEW Center have demonstrated that new clutch discs must be vacuumed prior to riveting to insure that the TLV for asbestos is not exceeded. All new clutch discs used at your operation should be vacuumed prior to handling. In addition, whenever cleanup of asbestos is necessary a vacuum cleaner should be used rather than sweeping the material. A commercial type vacuum cleaner which can be lined with a plastic bag is generally adequate for this type of cleanup. When disposal of the plastic bag is necessary, it should be sealed and labeled as containing asbestos.
FOLLOW-UP REQUIRED - (7)

All employes who perform the seven operations which were sampled must be given a medical examination. Any other employes who are exposed to asbestos fiber must also be given a medical examination. This examination should consist of a chest roentgenogram, a history to elicit symptomatology of respiratory disease, and pulmonary function tests to include forced vital capacity and forced expiratory volume at one second. Employes must be re-examined on an annual basis. This examination also must be given to any employe who once worked with asbestos and is terminating employment with IH.
FOLLOW-UP REQUIRED - (8)

The OSHA standard on asbestos requires that certain procedures be followed when disposing of asbestos material. Your method for disposing of used clutch discs must be modified to comply with the standard. Usually asbestos is contained in a plastic bag before discarding. The weight and configuration of the clutch discs, however, make the use of a plastic bag impractical. To contain the used clutch discs I recommend the use of a cardboard drum. When the drum is filled with old clutch discs, it can be sealed, labeled as containing asbestos, and discarded. This method of disposal will prevent any leakage to the environment.
FOLLOW-UP REQUIRED - (9)

Acids and caustics are used frequently in the carburetor cleaning room. These chemical agents can cause serious damage to human tissue upon contact. The eye wash facility located in this area is designed to prevent damage to the eyes in the event of an accidental spill. To help prevent corrosive material from entering the eyes, either chemical splash goggles or a face shield should be worn by employes when they are loading or unloading the cleaning tanks. This personal protective equipment will greatly minimize the possibility of an accidental spill contacting eye tissue.
FOLLOW-UP REQUIRED - (10)

The battery charging area located near the storage bins was not equipped with an emergency eye wash and safety shower facility. Since batteries contain corrosive material, the possibility of accidental exposure to the skin or eyes must be considered. An emergency eye wash facility and shower should be installed in this immediate area.
FOLLOW-UP REQUIRED - (11)

Air samples were taken in the fuel injector pump test room to determine the concentration of airborne stoddard solvent. The results of the sampling indicate very low concentrations of solvent are present. The exhaust hood in the test room is adequate to remove stoddard solvent vapors; therefore, no further action is required.

If you have any questions regarding this survey, or if I can be of assistance in completing the follow-up procedure, please do not hesitate to call.

G. J. Bacci
Industrial Hygiene Consultant

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Attachments
Enclosures
cc:
Mr. M. A. Steinberg - 20
Mr. R. F. Stone - ReNEW System Central Office
Mr. T. A. Beer - ReNEW System Central Office
Mr. R. J. Black