



# Health Hazard Evaluation Report

HETA 82-004-1006  
GUILFORD SCHOOL  
CINCINNATI, OHIO

## PREFACE

The Hazard Evaluations and Technical Assistance Branch of NIOSH conducts field investigations of possible health hazards in the workplace. These investigations are conducted under the authority of Section 20(a)(6) of the Occupational Safety and Health Act of 1970, 29 U.S.C. 669(a)(6) which authorizes the Secretary of Health and Human Services, following a written request from any employer or authorized representative of employees, to determine whether any substance normally found in the place of employment has potentially toxic effects in such concentrations as used or found.

The Hazard Evaluations and Technical Assistance Branch also provides, upon request, medical, nursing, and industrial hygiene technical and consultative assistance (TA) to Federal, state, and local agencies; labor; industry and other groups or individuals to control occupational health hazards and to prevent related trauma and disease.

Mention of company names or products does not constitute endorsement by the National Institute for Occupational Safety and Health.

HETA 82-004-1006  
NOVEMBER 1981  
GUILFORD SCHOOL  
CINCINNATI, OHIO

NIOSH INVESTIGATOR:  
WILLIAM N. ALBRECHT I.H.

## I. SUMMARY

On September 30, 1981, the National Institute for Occupational Safety and Health (NIOSH) received a request for Health Hazard Evaluation from Guilford School, Cincinnati, Ohio, to examine and evaluate measures enacted by a local contractor who was performing asbestos removal from pipes in the basement of the school.

A site visit was made September 30, 1981. After consultation with the NIOSH industrial hygienist, it was agreed by the contractor that work would not proceed until recommendations from NIOSH were enacted. Those recommendations included the installation of clean and dirty change areas, draft reduction barriers, and more efficient respirators. On October 1, 1981, NIOSH again visited the site and concluded that the containment and safety measures taken by the contractor were adequate to prevent health hazards associated with exposure to asbestos.

The Occupational Safety and Health Administration (OSHA) performed air monitoring during the first day of the two day removal operation. Personal and area samples were taken during the approximately six hour shift. The three locations in the school sampled were: first floor lunch room, second floor hallway near the principal's office, and the second floor service office. All samples were below the detectable limit. An analysis of bulk insulating material showed it to contain 3% chrysotile asbestos.

On the basis of the site visits and inspections made during September 30 and October 1, 1981, NIOSH concludes that measures enacted by the local contractor were adequate to prevent fugitive asbestos fibers from posing a health hazard to teachers and students in the rooms above the basement in Guilford School. Recommendations are included in the report.

KEYWORDS: SIC 8210 (elementary and secondary schools), asbestos removal, asbestos.

## II. RESULTS AND CONCLUSIONS

The insulation was thoroughly wetted approximately ten minutes prior to removal, thus allowing time for complete penetration. This procedure permits rapid removal of the insulation.

The local contractor complied with all recommendations made by the NIOSH industrial hygienist. In the opinion of the NIOSH industrial hygienist, the potential exposure situation was adequately managed. Work was not started until all NIOSH recommendations were in effect.

All regulations under the Occupational Safety and Health Administration (OSHA) regulation 29 CFR 1910.1001 were followed.

## III. RECOMMENDATIONS

To more fully contain any potential hazard, and to provide an additional margin of safety for the workers performing the tasks, the following recommendations were made:

1. Partitions are to be hung from ceiling to floor and wall to wall across any passage way between work areas. This is to include doorways to the outside. By subdividing large work area with the partitions, drafts which may entrain fugitive material will be prevented.
2. 'Clean' and 'dirty' change-of-clothes areas are to be established in the work area. Cross contamination will be prevented, as will be the chance of taking asbestos home on work clothes.
3. All duct work into the basement is to be sealed with plastic sheeting and tape.
4. Material on the ground in the basement, especially any dust, should be wetted along with the asbestos on the pipes which is to be removed.
5. NIOSH approved half-face cartridge type respirators with appropriate felt dust filters should be used in place of the paper type dust mask. The seal and filtering capability of these respirators is superior to that of the paper mask.
6. Reference is made to CFR 29, 1910.1001 which describes Occupational Safety and Health Administration (OSHA) Asbestos Regulations. Reference is also made to the document jointly prepared by OSHA and the Environmental Protection Agency which thoroughly outlines similar asbestos removal from school situations (USEPA. Asbestos-Containing Materials in School Buildings. Parts I and II. Office of Toxic Substances, Washington, D.C. 1979.). Included in this document are the Federal requirements for contractors performing this type of work. School boards awarding contracts to companies engaged in this type of work should review the containment and safety procedures outlined by the contractor in his bid before bids are awarded. They should also determine if the procedures are being carried out once the work commences.

IV. AUTHORSHIP AND ACKNOWLEDGEMENTS

Report Prepared by: William N. Albrecht  
Industrial Hygienist  
Industrial Hygiene Section

Originating Office: Hazard Evaluations and Technical  
Assistance Branch  
Division of Surveillance, Hazard  
Evaluations, and Field Studies

Report Typed By: William N. Albrecht

V. DISTRIBUTION AND AVAILABILITY OF REPORT

Copies of this report are currently available upon request from NIOSH, Division of Standards Development and Technology Transfer, Publication Dissemination, 4676 Columbia Parkway, Cincinnati, Ohio 45226. After 90 days, the report will be available through the National Technical Information Service (NTIS), 5285 Port Royal, Springfield, Virginia 22161. Information regarding its availability through NTIS can be obtained from NIOSH Publications Office at the Cincinnati address. Copies of this report have been sent to:

1. Principal, Guilford School, Cincinnati, OH.
2. Teachers Union, Guilford School, Cincinnati, OH.
3. NIOSH, Region V
4. OSHA, Region V

For the purpose of informing affected employees, copies of this report shall be posted by the employer in a prominent place accessible to the employees for a period of 30 calendar days.

DEPARTMENT OF HEALTH AND HUMAN SERVICES  
PUBLIC HEALTH SERVICE  
CENTERS FOR DISEASE CONTROL  
NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH  
ROBERT A. TAFT LABORATORIES  
4676 COLUMBIA PARKWAY, CINCINNATI, OHIO 45226

---

OFFICIAL BUSINESS  
PENALTY FOR PRIVATE USE. \$300

Third Class Mail



POSTAGE AND FEES PAID  
U.S. DEPARTMENT OF HHS  
HHS 396