

Letter Health Consultation

ASBESTOS IN NEW LONDON APARTMENT BUILDING

NEW LONDON, WISCONSIN

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U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES

Public Health Service

Agency for Toxic Substances and Disease Registry

Division of Health Assessment and Consultation

Atlanta, Georgia 30333

Health Consultation: A Note of Explanation

An ATSDR health consultation is a verbal or written response from ATSDR to a specific request for information about health risks related to a specific site, a chemical release, or the presence of hazardous material. In order to prevent or mitigate exposures, a consultation may lead to specific actions, such as restricting use of or replacing water supplies; intensifying environmental sampling; restricting site access; or removing the contaminated material.

In addition, consultations may recommend additional public health actions, such as conducting health surveillance activities to evaluate exposure or trends in adverse health outcomes; conducting biological indicators of exposure studies to assess exposure; and providing health education for health care providers and community members. This concludes the health consultation process for this site, unless additional information is obtained by ATSDR which, in the Agency's opinion, indicates a need to revise or append the conclusions previously issued.

You May Contact ATSDR Toll Free at
1-800-CDC-INFO

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LETTER HEALTH CONSULTATION

ASBESTOS IN NEW LONDON APARTMENT BUILDING
NEW LONDON, WISCONSIN

Prepared By:

Wisconsin Department of Health and Family Services
Under a Cooperative Agreement with the
U.S. Department of Health and Human Services
Agency for Toxic Substances and Disease Registry



December 12, 2007

Gail Yest
Waupaca County Department of Human Services
811 Harding Street
Waupaca, WI 54981-2080

Dear Ms. Yest:

The Agency for Toxic Substances and Disease Registry (ATSDR), a federal agency within the U.S. Public Health Service, and the Wisconsin Department of Health and Family Services (DHFS) have been working closely with the Wisconsin Department of Natural Resources (DNR) and the U.S. Environmental Protection Agency to evaluate health hazards associated with asbestos contamination within the apartment building at 610 South Pearl Street, in New London, WI. Based on our review of the available sampling data, ATSDR and DHFS have concluded that the asbestos contamination in these apartments poses a public health hazard to the residents. We are recommending actions be taken to disassociate residents from exposure to this asbestos contamination, until the conditions in the building are mitigated and the apartments are safe to reoccupy. The justification for this conclusion is provided in this letter.

Background

Response Actions- On December 4, 2007, staff from DHFS and DNR initiated an investigation of a potential asbestos problem at a 20-unit apartment building, located at 610 South Pearl Street, in New London, Waupaca County, Wisconsin. That morning DNR received an anonymous complaint about the release of friable asbestos inside of apartments when old steam pipes and radiators were removed from apartments since June 2007 as part of a renovation of the building's heating system.

When DHFS and DNR staff visited the apartment building on December 4, 2007, a tenant invited them to inspect his apartment. Staff observed areas where steam pipes, radiators and suspect asbestos-containing pipe insulation (also known as aircell pipe insulation) were removed from the apartment, with debris on the floor in some areas. Staff also talked with another tenant who reported working over the course of three months, earlier in 2007, to remove steam pipes from several apartments. He described using a reciprocating saw to cut insulated pipes into pieces. At first this tenant was not provided with respiratory protection, but later was given a disposable, fibrous mask. He stopped removing insulation from the pipes when he learned that it may contain asbestos. Pipe, insulation, and radiator demolition debris were stored in an unoccupied apartment. Staff also visited areas where asbestos-like debris was visible. At that time DNR staff

collected 5 bulk samples of suspect asbestos-containing pipe insulation and debris, which were submitted to the Wisconsin State Laboratory of Hygiene for asbestos analysis.

On December 6, 2007, DNR requested assistance from the USEPA Emergency Response Program-Region 5 in Chicago. On December 7, 2007, EPA dispatched two On-Scene Coordinators to conduct a site assessment of the apartment building for a possible federal removal action. At that time EPA staff inspected 7 apartments, of which 4 were occupied and 3 were vacant. A passive air sample and a wipe sample were collected from each apartment.

On December 6, 2007, DHFS staff revisited the apartment building and collected 6 passive indoor air samples from 2 apartments, 2 hallways, a laundry room, and outdoor background air.

Sampling Results- Analysis of the bulk samples taken from 5 different segments of pipe insulation material that had been removed from the apartments during the original abatement indicated that 4 samples were 60% chrysotile asbestos and the other sample was 40% chrysotile and 10% amosite asbestos. All samples are considered asbestos-containing material as the asbestos content is greater than 1 %. Material containing these high levels of asbestos content requires careful containment during abatement to prevent release of asbestos fibers. Since these procedures were clearly not followed during the initial removal of the insulation materials, there was a significant potential for contamination of the living spaces with asbestos fibers.

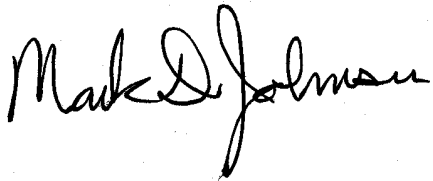
Air samples collected by DNR and analyzed by the Wisconsin State Hygiene Laboratory did not use procedures that provided a detection limit sufficient to allow for a determination of whether the residential conditions were an inhalation health hazard for asbestos. Air samples collected by USEPA used a more sensitive protocol (NIOSH 7402) and were able to demonstrate that asbestos fibers were detectable in 4 of 6 sampled apartments and in the sample of the boiler room (see Table 1). The highest concentration was 0.008 asbestos fibers per cubic centimeter of air (f/cc), which was also an occupied apartment. Although the other 3 apartment samples were lower (0.002 f/cc), all of the detections were above risk-based criteria that have been developed to be protective of chronic health effects that have been associated with exposure to asbestos, including asbestosis, mesothelioma, and lung cancer. These criteria include the clearance level for the World Trade Center response (0.0009 f/cc) and an estimated 10^{-4} cancer risk level (0.0005 f/cc) that EPA uses to trigger response actions.

Wipe samples for asbestos in dust were also collected in each apartment. Although the concentration of asbestos in the dust was not quantified, asbestos fibers were detected in 4 or 6 apartment samples, with significant amounts detected in 2 of the samples, and in the boiler room (see Table 2). Since asbestos fibers in settled dust serves as a reservoir for release of fibers into the air, inhalation of asbestos fibers would continue to occur as long as people occupied these residences.


Conclusions- Based on the detection of high concentrations of asbestos in the insulation material, detection of asbestos fibers in the indoor air of apartments at levels of health concern, and detection of asbestos fibers in dust samples within these apartments, ATSDR and DHFS concluded that these conditions pose a public health hazard for the residents. This conclusion is based on long-term health hazards, since there is a significant potential for continued exposure without a remediation of the asbestos contamination in these residences. Although this is not considered to be a public health emergency that requires immediate evacuation, we would recommend that actions be taken to alleviate their exposure as soon as can be arranged. We also recommend that the apartments not be reoccupied until a remediation of the asbestos contamination has been completed and verified as safe for occupancy

ATSDR and DHFS are available to provide technical assistance and to respond to health concerns from residents or local officials. Mark Johnson (ATSDR) can be contacted at 312-353-3436, MDJohnson@cdc.gov; Henry Nehls-Lowe (DHFS) can be contacted at 608-266-3479, nehls@dhfs.state.wi.us.

Sincerely,



Mark D. Johnson, PhD, DABT
Senior Environmental Health Scientist
Assistant Director for Science
ATSDR-Division of Regional
Operations



Henry Nehls-Lowe, MPH
Division of Public Health
Bureau of Environmental &
Occupational Health
Wisconsin Dept. of Health and Family
Services

Cc:

Amy Walden, DNR
Dennis Hibray, DHFS
Chuck Warzecha, DHFS
Shelley Bruce, DHFS
Bill Simes, USEPA
Jaime Brown, USEPA
Michael Harris, USEPA
Linda Nachowicz, USEPA
Tina Forrester, ATSDR
Clem Welch, ATSDR
Jennifer Freed, ATSDR
Alan Yarbrough, ATSDR

Table 1: Results of Air Samples collected by USEPA

	Location	Floor Level	Vacant or Occupied	Asbestos Fibers/cc	Asbestos Type	Asbestos Fibers	Asbestos % of Total fibers
SAMPLE NUMBER							
NL-120707-01	Outside-Background	NA	NA	ND	NA	NA	NA
NL-120707-02	Apartment 4	1st	Occupied	<0.002	Amosite	1	9.1
NL-120707-03	Apartment 1	1st	Vacant	ND	NA	NA	NA
NL-120707-04	Apartment 6	1st	Occupied	<0.002	Chrysotile	1	11
NL-120707-05	Apartment 5	1st	Occupied	0.008	Chrysotile	5	56
NL-120707-06	Apartment 13	2nd	Vacant	<0.002	Chrysotile	1	11
NL-120707-07	Boiler Room	Basement	NA	<0.002	Chrysotile	1	33
NL-120707-08	Apartment 11	2nd	Occupied	ND	NA	NA	NA
NL-Field Blank	NA	NA	NA	ND	NA	NA	NA
NL- Lot Blank	NA	NA	NA	ND	NA	NA	NA

Note:

Fibers/cc - asbestos fibers per cubic centimeter of air

NA- not analyzed; ND- not detected

Table 2: Results of Dust Samples collected by USEPA

	Location	Floor Level	Vacant or Occupied	Asbestos Type Detected
SAMPLE NUMBER				
NL-120707-01WP	Outside- Background	NA	NA	ND
NL-120707-02WP	Apartment 4	1st	Occupied	ND
NL-120707-03WP	Apartment 1	1st	Vacant	ND
NL-120707-04WP	Apartment 6	1st	Occupied	Chrysotile
NL-120707-05WP	Apartment 5	1st	Occupied	Chrysotile
NL-120707-06WP	Apartment 13	2nd	Vacant	Chrysotile
NL-120707-07WP2	Boiler Room	Basement	NA	Chrysotile
NL-120707-08WP	Apartment 11	2nd	Occupied	Chrysotile
NL-Field Blank	NA	NA	NA	ND
NL- Lot Blank	NA	NA	NA	ND

Note:

NA- not analyzed; ND- not detected