Letter Health Consultation

HUNTING POINT ON THE POTOMAC RESIDENTIAL ASBESTOS SITE

ALEXANDRIA, VIRGINIA

DECEMBER 4, 2014

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Agency for Toxic Substances and Disease Registry
Division of Community Health Investigations
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.

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LETTER HEALTH CONSULTATION

HUNTING POINT ON THE POTOMAC RESIDENTIAL ASBESTOS SITE

ALEXANDRIA, VIRGINIA

Prepared By

Agency for Toxic Substances and Disease Registry
Division of Community Health Investigations
Eastern Branch

DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service

Agency for Toxic Substances
and Disease Registry
Atlanta GA 30333

December 3, 2014

Mr. Harry Daw
Associate Division Director
Land and Chemicals Division
Office of Toxics and Pesticides
USEPA - Region 3, Mailcode: 3LC60
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

Dear Mr. Daw:

Thank you for including the Agency for Toxic Substances and Disease Registry (ATSDR) in the U.S. Environmental Protection Agency's (EPA's) discussions regarding the response to a potential asbestos release at the Hunting Point on the Potomac apartment complex in Alexandria, Virginia.

You requested that ATSDR review post-cleaning asbestos air sampling results and provide a public health determination regarding residential units and common areas cleaned at the Hunting Point apartment complex. The Hunting Point apartment complex consists of two 8-story buildings (1202 and 1204), each with common areas and approximately 530 apartment units ranging in size from studio to 2-bedrooms. In April 2014, EPA issued a "stop-work" order at the complex due to improper asbestos abatement measures conducted in 283 of the 530 residential units. The 258 units reviewed in this health consultation are part of the 283 affected units; ATSDR also reviewed 14 additional *unaffected* units not included in the "stop-work" order. Of the remaining *affected* 25 residential units—23 units have refused access to the building owner for the purposes of asbestos-related cleaning and sampling; and two units were cleaned and sampled but the data were not available for this review. The remaining 23 of 25 affected units will be cleaned, inspected, sampled and cleared when the current leases for these units expire (last Unit lease expires in May 2015), and the results for the 25 units will be submitted to EPA and ATSDR for review. The 247 out of the 530 total residential units that did not have any improper abatement work conducted within the apartment complex are not part of the current EPA-negotiated cleaning/clearing project. Most of the 247 residential units will be abated in the future under full containment in accordance with appropriate regulations well as site-specific clearance plans. Fourteen of the 247 *unaffected* units were cleaned, inspected, sampled and cleared in accordance with a clearance plan negotiated between EPA. Asbestos structures were identified in one of these sixth floor *unaffected* units (see Table 1).

Residents currently live in most of the 258 out of 283 cleaned and sampled apartment units; a small number of these units are vacant now but will be occupied in the future. The buildings were constructed in the 1950s and have been undergoing renovation since November 2013 after

being purchased by a new owner. Under oversight from EPA and the Commonwealth of Virginia, the building owner conducted asbestos air sampling in these 258 apartment units (18 units in 1202 and 240 units in 1204) and 79 common areas (45 areas in 1202 and 34 areas in 1204) in the spring, summer and fall of 2014. Air agitation was incorporated during the sampling to simulate normal human activities within apartment units and common areas. Sampling locations were selected based on whether units/common areas had undergone asbestos-disturbing renovations. Multiple air samples were collected from each unit and common areas selected for sampling, resulting in over 1,000 post-cleaning air samples from the entire apartment complex. The post-cleaning air sampling was conducted with air agitation to help address the concern raised as to whether carpets or other household items remaining in the units may have retained any residual asbestos fibers (if asbestos fibers had been released during abatement activities). Limitations of ATSDR's public health review of the post-cleaning data include (1) the asbestos air sampling data represent a limited time frame under a defined set of conditions (e.g., units and common areas were generally only sampled on a single day); and (2) only units or common areas where asbestos removal occurred during the period of time identified with improper abatement work were sampled. Based on the reported post-cleaning air sampling results, the concentrations of asbestos in the air do not appear to be high enough to harm the health of people who breathe this air for short or long (e.g., 30 years) periods of time. ATSDR recommends that any further renovations to Buildings 1202/1204 should follow appropriate asbestos abatement procedures to ensure health protection of building occupants, workers, and visitors.

Description of Building and Activity Status

The Hunting Point on the Potomac apartment complex consists of two 8-story buildings (1202 and 1204), with a total of approximately 530 apartment units ranging in size from studio to 2-bedrooms. The buildings were constructed in the 1950s and have been undergoing renovation. In Building 1204, all but two units have had the windows replaced. In Building 1202, several units on the 8th floor have recently undergone window replacement, but no units on any other floors have had windows replaced. As apartments are vacated, kitchen and bath renovation involving work with floor tile is being performed.

In March 2014, an EPA inspection identified the window caulk and the materials associated with the floor tiles as containing asbestos. EPA identified issues involving improper handling of these asbestos containing materials and insufficient notification, and ordered the building owners to stop the renovations work. In April 2014, at EPA's request ATSDR reviewed available initial sampling results for asbestos from the apartment complex. ATSDR concluded that although these initial results did not indicate an immediate public health concern, the uncertainties in the information made it difficult to say there was no long-term risk from exposure to low levels of asbestos that might remain in the building. ATSDR noted that cleaning units and common areas using wet methods and HEPA vacuuming could effectively mitigate the potential for long-term exposures, and we recommended post-cleaning air sampling to ensure that any remaining

airborne asbestos was below appropriate long-term residential health-based benchmark levels.[1] EPA subsequently directed the owners of the Hunting Point on the Potomac apartment complex to adequately clean (using wet methods) and conduct asbestos air sampling in apartment units and common areas that may have been impacted during asbestos removal activities. Under oversight from EPA and the Commonwealth of Virginia, the building owner conducted post-cleaning asbestos air sampling of 258 apartment units (18 units in 1202 and 240 units in 1204) and 79 common areas (45 areas in 1202 and 34 areas in 1204), as well as some wipe samples in building elevators.

Results

The results of the post-cleaning sampling and analyses show that the concentrations of asbestos in all air samples collected from the building complex are less than the 30-year residential occupancy benchmark of 0.0009 phase contrast microscopy equivalent (PCMe) structures per cubic centimeter (s/cc) developed in the wake of the World Trade Center disaster.[2] Asbestos was identified in some of the samples at levels below this benchmark (see Table 1). In addition, non-asbestos structures (i.e., gypsum) were identified in some of the samples. Based on the reported post-cleaning asbestos air sampling results available to ATSDR, the concentrations of asbestos in the air do not appear to be high enough to harm the health of people who breathe this air for short or long (e.g., 30 years) periods of time.

Of the 272 (258 affected and 14 unaffected) individual apartment units sampled, asbestos structures were found in eleven residential units. One of the eleven units is an *unaffected* sixth floor unit which is not part of the 283 units in the EPA "stop work" order. It was also asbestos air sampled and three chrysotile structures were reported. Of the 79 common areas sampled, asbestos structures were found in three common areas. The resulting air concentrations for all of these sampling results were <0.0009 PCMe s/cc.

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1 Agency for Toxic Substances and Disease Registry. Hunting Point on the Potomac Letter Health Consultation to Mr. Harry Daw, Land and Chemicals Division, U.S. Environmental Protection Agency, Region 3, from Dr. Jill Dyken, Division of Community Health Investigations. April 2014. http://www.atsdr.cdc.gov/HAC/pha/HuntingPointonPotomacResidentialAsbestosSite/LHC-HuntingPointVA-forwebposting-noaptnumbers.pdf.

2 Contaminants of Potential Concern (COPC) Committee of the World Trade Center Indoor Air Task Force Working Group. World Trade Center indoor environment assessment: selecting contaminants of potential concern and setting health-based benchmarks. Contributors from U.S. Environmental Protection Agency, New York City Department of Public Health and Mental Hygiene, Agency for Toxic Substances and Disease Registry, New York State Department of Health, and Occupational Safety and Health Administration. May 2003.

Table 1: Summary of Number/Type Asbestos Structures Identified in Air Samples from 272 Apartment Units and 79 Common Spaces for TEM analysis via ISO 10312 in Buildings 1202 and 1204.

Building	Floor	Number/Type Asbestos Structures Identified in Air Samples
1204	Ground	One unit with 1 chrysotile & 1 crocidolite structure*
1204	Ground	One unit with 1 chrysotile structure*
1204	Ground	One unit with 1 chrysotile structure*
1204	First	One unit with 1 chrysotile structure*
1204	Third	One unit with 1 chrysotile structure*
1204	Fourth	One unit with 1 crocidolite structure*
1204	Fourth	One unit with 1 anthophyllite structure*
1204	Fifth	One unit with 1 chrysotile structure*
1204	Fifth	One unit with 1 chrysotile structure*
1204	Sixth	One (*unaffected*) unit with 3 chrysotile structure*
1204	Seventh	One unit with 1 chrysotile structure*

(Table 1, continued)		
Building	**Floor**	**Asbestos Structures Identified in Air Samples - Common Areas**
1204	Twelfth	1 anthophyllite structure in Penthouse*
1204	Ground	1 chrysotile structure in lobby*
1202	Sixth	2 chrysotile structures from Sixth Floor Hallway-South*
1202/1204		**Asbestos structures not detected in all other air samples.**

*resulting air concentration <0.0009 PCMe s/cc.

The following is a list of common areas sampled in Buildings 1202 and 1204:

Building 1202 – 45 Common Area samples:

Basement: Lobby, Maintenance Shop, Hallway-North, Hallway-East, Porter Room and Boiler Room.
Ground Floor: North Hall, South Hall, East Hall, West Hall, Lobby, and Mail Room.
First Floor: Hallway-South, Hallway-North, Hallway-East, and Hallway-West.
Second Floor: Hallway-North, Hallway-South, Hallway-East, and Hallway-West.
Third Floor: Hallway-North, Hallway-South, Hallway-East, and Hallway-West.
Fourth Floor: Hallway-North, Hallway-South, Hallway-East, and Hallway-West.
Fifth Floor: Hallway-North, Hallway-South, Hallway-East, and Hallway-West.
Sixth Floor: Hallway-North, Hallway-South, Hallway-East, and Hallway-West.
Seventh Floor: Hallway-North, Hallway-South, Hallway-East, and Hallway-West.
Eighth Floor: Hallway-North, Hallway-South, Hallway-East, and Hallway-West.
Twelfth Floor: Penthouse

Building 1204 – 34 Common Area samples:

Basement: Gym, Boiler Room, Laundry Room, Hallway-North, Hallway-South, and Hallway-East.
Ground Floor: Convenience Store, Lobby, Mail Room, Hallway-North, Hallway-South, Hallway-East, and Hallway-West.
First Floor: Hallway-North, Hallway-South, Hallway-East, and Hallway-West.
Second Floor: Hallway-North, Hallway-South, Hallway-East, and Hallway-West.
Third Floor: Hallway-North, Hallway-South, Hallway-East, and Hallway-West.
Fifth Floor: Hallway-North, Hallway-South, Hallway-East, and Hallway-West.
Sixth Floor: Hallway-North, Hallway-South, Hallway-East, and Hallway-West.
Twelfth Floor: Penthouse

The air inside building elevators was not sampled. However, asbestos was not identified in wipe samples that were collected from surfaces inside building elevators. Additionally, hallway air samples were collected near the elevators and asbestos structures were not identified in these common area samples.

The following *cleaning activities* were performed in the apartment units prior to air sampling:

- All surfaces in the unit were thoroughly wiped/washed clean using amended water or pre-moistened wipes and/or thoroughly decontaminated with a HEPA-filtered vacuuming device.
- Cleaning included all items in the open including some personal effects of the tenants, which were moved temporarily to accomplish appropriate cleaning, but did not generally include particularly fragile or valuable items unless authorized by a Site representative. In addition, electronic items were HEPA-vacuumed only to avoid damaging those items.
- All accessible vertical and horizontal surfaces were addressed including but not limited to ceiling fan blades, window sills, door frames, large appliances (e.g., refrigerators), and flooring. These surfaces were cleaned using the most appropriate method, including using ladders to reach higher areas or wands/other attachments to get hard-to-reach areas.
- Soft surfaces including carpets and curtains, if present, were HEPA-vacuumed.
- Areas with particularly heavy clutter were cleaned to a "no visible dust" standard as best as practicable.
- A negative air machine with HEPA filter was operated constantly from the start of cleaning until initial clearance was confirmed by PCM samples analyzed via NIOSH 7400.

  Note: the interior of cabinets and sealed boxes were not cleaned.

After asbestos mitigation cleaning activities were conducted, an inspection followed. The following *inspection activities* occurred prior to clearance air testing:

- A Virginia-licensed Asbestos Project Monitor inspected each Unit in accordance with an agreement negotiated between the building owners and EPA.
- If the Unit failed the visual inspection for any reason, additional cleaning was required until compliance with the Clearance Plan was achieved.
- If the Unit passed the visual inspection, clearance sampling proceeded in accordance with the Clearance Plan.

Clearance Testing Activities

All sample collection was performed by a Virginia-licensed Asbestos Project Monitor. All air monitoring and testing was performed in accordance with a clearance plan negotiated between EPA and the building owner, as described below.

Initial Clearance - Phase Contrast Microscopy (PCM) Sampling and Analysis

Initial post-cleaning air sampling clearance of each unit was conducted using PCM via NIOSH 7400 to a concentration of at least 0.005 fibers per cubic centimeter (f/cc). Any PCM sample that resulted in a calculated fiber count greater than 0.005 f/cc was immediately upgraded to Transmission Electron Microscope (TEM) analysis via ISO 10312 as discussed below. If the PCM sample results were >0.005 f/cc for a specific unit and did not show structures at levels of concern in TEM analysis, then the other PCM sample results lower than 0.005 f/cc for that unit were similarly assumed not to be of health concern. **(Note, regardless of the *initial* clearance PCE results, for *final* clearance every Unit included at least one TEM sample, as described in more detail below).**

Sampling procedures for the *initial* PCM samples included a Virginia-licensed Asbestos Project Monitor collecting at least one sample in every room and a minimum of two samples in each unit in conformance with NIOSH Method 7400. Prior to sampling, an oscillating fan was installed in each room and operated continuously during the sampling. Additionally, a negative air machine equipped with a HEPA filter also ran continuously during the sampling.

In units with carpeting, the carpet was vacuumed as part of sampling activities with a conventional vacuum cleaner three times during the clearance sampling event (immediately prior to beginning the sampling, approximately half-way through the sampling, and just before sample collection). Each vacuuming lasted approximately 15 minutes for a total of approximately 45 minutes over the course of the sample. The minimum sample volume collected was 2,000 liters of air. Note, there were four carpeted units in Building 1204 (two on third floor and two on fourth floor) where the vacuuming was not the full 45 minutes as described in the cleaning complex protocol. As such, there was less activity/disturbance during air sampling of these units. We do not know why these units were vacuumed less than 45 minutes but subsequent post-cleaning air sampling results for this carpeted units were below the residential 30-year occupancy benchmark of 0.0009 PCMe s/cc.

Final Clearance - Transmission Electron Microscopy (TEM) Analysis

Final clearance for long-term risk analysis in the referenced units (for those with no upgraded PCM samples) included submitting one sample from each unit for TEM analysis via ISO 10312. Typically, the sample was selected randomly from the samples in each unit; however, if a unit had carpets, a sample from a carpeted room was selected for TEM analysis. TEM analysis was conducted using the same cassette that underwent PCM analysis by NIOSH 7400.

The samples were analyzed for PCMe structures via modified ISO 10312 (i.e., modified width from 0.2 micrometers (µm) to 0.25 µm). The modification included counting only structures that were greater than 5.0 µm in length and between 0.25 and 3.0 µm in width that have a 3:1 length to width aspect ratio (note: laboratory also included structures with >3 µm width in the results). The detection limit met the 0.0009 PCMe s/cc benchmark.

Discussion

ATSDR generally evaluates stationary air samples for asbestos using a long-term health-based benchmark such as the residential 30-year occupancy benchmark of 0.0009 PCMe s/cc developed in the wake of the World Trade Center disaster. This benchmark represents a risk of 1 excess cancer in 10,000 people exposed for a 30-year period. The air concentrations of asbestos in all post-cleaning air samples analyzed at the Hunting Point on the Potomac complex are less than the 30-year residential occupancy benchmark of 0.0009 PCMe s/cc.

Conclusions and Recommendations:

Based on the reported post-cleaning air sampling results, the concentrations of asbestos in the air are not high enough to harm the health of people who breathe this air for short or long (e.g., 30 years) periods of time. ATSDR recommends that any further renovations to Buildings 1202/1204 should follow appropriate procedures whenever asbestos containing material is suspected to ensure health protection of building occupants, workers, and visitors.

Thank you for including ATSDR in your site work. Please do not hesitate to contact me if you have any questions or concerns. I can be reached at (215) 814-3149 or by email at kvm4@cdc.gov.

Sincerely,

Karl V. Markiewicz, PhD
Senior Toxicologist
Division of Community Health Investigations

cc:
Nardina Turner, EPA Region 4, Superfund Division
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Dr. Sharon Williams-Fleetwood, ATSDR/EB
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