

Letter Health Consultation

JOHNS-MANVILLE SITE

WAUKEGAN, ILLINOIS

DECEMBER 16, 2008

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

or

Visit our Home Page at: <http://www.atsdr.cdc.gov>

LETTER HEALTH CONSULTATION

JOHNS-MANVILLE SITE

WAUKEGAN, ILLINOIS

Prepared By:

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



Rod R. Blagojevich, Governor
Damon T. Arnold, M.D., M.P.H., Director

525-535 West Jefferson Street • Springfield, Illinois 62761-0001 • www.idph.state.il.us

#704208904H

October 6, 2008

Mr. Patrick Hamblin, Regional Project Manager
U.S. Environmental Protection Agency
77 West Jackson Boulevard
Mail Code: SRF-5J
Chicago, IL 60604-3507

Dear Mr. Hamblin:

At your request, the Illinois Department of Public Health (IDPH) has reviewed the draft Engineering Evaluation/Cost Analysis Southwestern Site Area, Sites 3, 4/5, and 6 for the Johns-Manville site, prepared by LFR, Inc. (LFR), and we have completed a health-based interpretation of the information provided. Your question was whether implementation of the proposed remedial actions at each of these sites would pose a risk of asbestos exposure to the public or workers at these sites, and you were especially concerned about the proposed remedy for Site 3.

Site Locations

Site 3 is owned by the Commonwealth Edison Company (ComEd), which operates a coal-fired power plant southeast of the site. Site 3 is south of the Greenwood Avenue right-of-way and east of North Pershing Road, near the former Johns-Manville manufacturing building. Site 3 is crossed by many buried utilities (power lines, municipal water lines, natural gas lines, and telecommunication lines). The site is accessible to the public and is most likely to be used by anglers to access Lake Michigan.

Site 4/5 is adjacent to the boundary of the Johns-Manville former manufacturing facility and is within a ComEd right-of-way. A railroad right-of-way is to the west. The site has many buried utilities (sanitary sewer, natural gas, and telecommunications lines), as well as above-ground telecommunication lines. The site is accessible to the public, but use probably is infrequent.

Site 6 is adjacent to the Johns-Manville property on the unpaved shoulders of Greenwood Avenue, and it is within the road right-of-way. The site extends from an elevated approach to Pershing Rd. on the west, to the western boundary of Site 2 (which was not evaluated by LFR, but is the most likely site to be used by anglers to access Lake Michigan). Site 6 has many buried utilities (storm sewer, municipal water line, natural gas lines, underground telecommunication lines), as well as overhead telecommunication lines. Site 6 is accessible to the public and is most likely to be used by anglers to access Lake Michigan.

Asbestos Contamination

The LFR document describes the results of soil surveys and sampling at Sites 3, 4/5, and 6, both by LFR and, for Sites 3 and 6 only, a 1999 survey and sampling event. Soil surveys consisted of visual examination for presumed asbestos-containing material (ACM). If no ACM was found, LFR sometimes or often (depending on the site) took soil samples and had them analyzed for asbestos using transmission electron microscopy.

At Site 3, visual inspection and soil sampling found scattered asbestos contamination, both at the surface and subsurface. Soil sampling found asbestos concentrations of up to 0.9% chrysotile. However, at Site 3, LFR did not take soil samples from many of the test locations where no ACM was found. Consequently, LFR did not completely characterize the extent and depth of contamination at Site 3. The available visual surveys and soil samples indicate asbestos contamination is scattered throughout Site 3, and not just along the border with Site 6, as implied in the LFR text.

At Site 4/5, visual inspection for ACM and soil sampling found widespread asbestos contamination, both at the surface and subsurface. Soil sampling found asbestos concentrations of up to 0.75% chrysotile.

At Site 6, visual inspection and soil sampling found widespread asbestos contamination, both at the surface and subsurface. Soil sampling found asbestos concentrations of up to 1.0% chrysotile, 0.2% crocidolite, and 1.0% amosite.

Health Concerns

Asbestos does not degrade, but persists in the soil. Inhalation of airborne asbestos fibers is the primary concern at Sites 3, 4/5, and 6. The soils are sandy and easily eroded, so erosion could expose subsurface asbestos. Wind or disturbance (e.g., utility servicing) of the soil could disperse asbestos into the air. Airborne sampling data are not available, either for undisturbed or disturbed (utility line servicing) conditions. Consequently, asbestos in the soil of Sites 3, 4/5, or 6 poses an indeterminate public health hazard. However, the presence of asbestos in surface soil indicates a potential health hazard. Sufficient exposure to asbestos can cause pleural plaques, asbestosis, lung cancer, and mesothelioma.

Evaluation of Proposed Remedies

LFR proposed placing a soil cap over a small part of Site 3 next to Site 6. For the rest of Site 3, they recommended conducting periodic surveys and removal of any surficial ACM. Given the incomplete assessment of soil asbestos concentrations at Site 3 and the lack of air sampling data, either for undisturbed and disturbed conditions, IDPH does not believe that LFR can conclude that periodic surveys and removal of surficial material will be sufficiently protective of public health, either for the general public or an on-site utility worker.

For Site 4/5, LFR proposed covering the entire site with a 2-foot soil cap, which would require some redistribution of soils to maintain drainage. For Site 6, LFR proposed covering the entire site with a 2-foot soil cap, along with some excavation and off-site disposal, to maintain drainage. LFR also considered a soil cap for Site 3, but did not select it. If implemented, such a

2-foot soil barrier (at any of the sites) would prevent the airborne dispersal of asbestos from the site as long as the cap is maintained and not disturbed. Given that utility lines under all three sites may need to be serviced, institutional controls would be necessary to require notification of workers of the presence of asbestos in the soil, as well as the need for dust suppression methods and air monitoring during servicing. Utility workers and remediation workers also may need respiratory protection. Dust suppression would be necessary during remediation, and long-term maintenance of the cap would be needed.

Recommendations

IDPH has the following recommendations regarding Sites 3, 4/5, and 6, as well as Site 2:

1. Consider capping the entire surface of Site 3 to prevent the possible airborne dispersal of asbestos.
2. Use dust suppression methods to minimize the airborne dispersal of asbestos during remediation.
3. Evaluate the need for respiratory protection for remediation workers, or require the use of respiratory protection, in the absence of air monitoring.
4. Provide long-term maintenance of the caps to ensure their integrity.
5. Implement institutional controls to ensure that any utility work involving disturbance of the caps minimizes the airborne dispersal of asbestos by:
 - a. Inform workers of the presence of asbestos contamination.
 - b. Use dust suppression methods to minimize the airborne dispersal of asbestos.
 - c. Clean equipment and clothing before taking them to the next work site.
 - d. Evaluate whether utility workers will need respiratory protection (or have them use respiratory protection, in the absence of sampling data).
6. Site 2 should be evaluated for asbestos contamination. If asbestos is found, action should be taken to assess potential human exposure and minimize any such human exposure.

If you have any questions, please contact me at 630-293-6800.

Sincerely,

Thomas A. Baughman, Ph.D.
Environmental Toxicologist

Cc: IDPH Central Office
Mark Johnson, ATSDR
IDPH West Chicago Regional Office



Date December 18, 2008

From Division of Health Assessment and Consultation, ATSDR

Subject Letter Health Consultation
Johns-Manville Site

To Mark Johnson
Senior Regional Representative, ATSDR, Region V

Enclosed please find 1 copy of the December 16, 2008 Letter Health Consultation on the following site prepared by the Illinois Department of Public Health under cooperative agreement with the Agency for Toxic Substances and Disease Registry (ATSDR).

JOHNS-MANVILLE SITE

WAUKEGAN, ILLINOIS

The Division of Health Assessment and Consultation requires copies of all letters used to transmit this document to the agencies, departments, or individuals on your distribution list. The copy letters will be placed into the administrative record for the site and serve as the official record of distribution for this health consultation.

Please address correspondence to the Agency for Toxic Substances and Disease Registry (ATSDR) Records Center, 1600 Clifton Road, NE (F09), Atlanta, Georgia 30333.

Freda Dumas
Manager, ATSDR Records Center

Enclosures

cc: W. Cibulas, Jr. R. Gillig C. Walcott L. Luker L. Daniel

You May Contact ATSDR Toll Free at
1-800-CDC-INFO or
Visit our Home Page at: <http://www.atsdr.cdc.gov>