

Conclusions and Recommendations in the health consultation for the former WR Grace/Zonolite Company site in Dearborn, Michigan

Conclusions

After reviewing data for the WR Grace (WRG) Dearborn site, the Minnesota Department of Community Health (MDCH) reached the following conclusions for *workers at the site* and for *persons who lived in the same household as the workers*.

- **Former workers at the WRG Dearborn plant were exposed to Libby asbestos in air at levels above the current standards for occupational exposure.** Consistent and repeated exposure to Libby asbestos at the elevated levels estimated would increase the risk for asbestos-related disease. Therefore, this exposure pathway posed a public health hazard to those workers.
- **Members of the households of former workers may have been exposed to asbestos fibers if the workers did not shower or change clothes before leaving work.** Although data are insufficient with regard to exposure for persons living in households of workers, these persons were likely also exposed, and this exposure pathway represents a past public health hazard. This conclusion is generally supported by patterns noted at other sites that processed vermiculite from Libby, Montana.
- The presence of material contaminated with asbestos in the plant's main building posed an indeterminate public health hazard to persons working for Die, Mold and Automation Components, Incorporated, at the Dearborn site before the material was removed from the building in December 2003. In addition, household contacts of those workers could have been exposed. The exposure pathway for household contacts, prior to December 2003, posed an indeterminate public health hazard. These airborne concentrations were found to be quite low, and the potential exposure from this pathway is lower than that from other historical pathways of exposure. **Currently, this pathway represents no apparent health hazard for workers or their household contacts.**
- **Areas of residual contamination of Libby asbestos remain in on-site soil at the former WRG facility.** Exposure of workers, visitors, trespassers, and others to on-site soil contaminated with Libby asbestos poses an indeterminate public health hazard. Changes in the condition or use of the property may exacerbate on-site exposures.

MDCH concludes the following for *people in the community surrounding the Dearborn site*.

- **People living in the community around the site during the time the plant processed Libby vermiculite could have been exposed to Libby asbestos fibers** in the following ways:
 - by disturbing soil on the site or soil in waste piles
 - from plant emissions
 - from waste rock brought home for personal use
 - from indoor household dust that contained Libby asbestos from one or more outside sources

Insufficient information is available to determine whether these exposures occurred, and if they occurred, how often they occurred and what the concentrations were for asbestos in air. This information may never be available. Because critical information is lacking, these past exposure pathways have been designated as indeterminate public health hazards. Plans to perform sampling in the surrounding neighborhood are ongoing and may lead to a re-evaluation of this hazard category as appropriate.

- **The Dearborn plant no longer processes vermiculite at the site.** The pathways for current or future community exposure to airborne Libby asbestos from facility emissions and to on-site waste piles have been eliminated, yet there remains an indeterminate health hazard from on-site soil. A small but potential risk still exists from residual asbestos contamination in soil on the site, either from off-site migration of the soil or from community members being exposed while visiting unrestricted areas of the Dearborn site. Plans to perform sampling in the surrounding neighborhood are ongoing and may lead to a re-evaluation of this hazard category as appropriate.
- Residential indoor exposure to household dust containing Libby asbestos fibers from past plant emissions or from waste rock brought home for personal use is considered no apparent health hazard for present and future community members. **A small but potential risk still exists from off-site migration of the residual asbestos contamination in on-site soil.** The ongoing plans to perform sampling in the surrounding neighborhood may lead to a re-evaluation of this hazard category.
- Currently, individuals in the community could be exposed to airborne Libby asbestos from waste rock used as fill material, for gardening, or for paving driveways. This exposure pathway is an indeterminate public health hazard because insufficient information is available to determine the extent to which waste material is used in the community. Ongoing interviews and data collection from the neighborhood may lead to a re-evaluation of this hazard category.

Recommendations

- Provide former workers and their household contacts with health education materials and encourage medical monitoring.
- Provide current workers who were employed prior to December 2003 and the household contacts of these workers with health education materials and encourage medical monitoring.
- Provide health education materials and encourage medical monitoring to individuals who may have been exposed as children through playing on the waste piles on the site.
- Verify that areas inside the main building that had been contaminated with asbestos have been appropriately cleaned up. Verify remediation results with post-cleanup indoor air sampling or other appropriate techniques.
- Characterize the extent and magnitude of remaining asbestos contamination in on-site soil, including the soil beneath the parking lot. Use the results of the characterization to develop a plan to eliminate or reduce future exposure.
- Characterize the degree and magnitude of remaining contamination in off-site soil in the neighborhood immediately surrounding the former WRG facility.

- Review site-specific information as it becomes available and utilize any new information to re-evaluate indeterminate exposure pathways.
- As the information becomes available, review ongoing initiatives and data collection efforts of other sites that processed Libby vermiculite ore. Use any new information to re-evaluate indeterminate exposure pathways.

Public Health Action Plan

The purpose of the public health action plan is to ensure that public health hazards are not only identified, but also addressed. The public health action plan for this site describes actions that EPA, ATSDR, MDCH, or other government agencies plan to take at the site to mitigate and prevent adverse human health effects resulting from exposure to hazardous substances in the environment. ATSDR and MDCH will also follow up on the plan to ensure implementation of the recommended public health actions.

Actions completed

- EPA conducted a site visit in February 2000 and collected environmental samples at the site in January 2003. ATSDR and MDCH staff members conducted a site visit in September 2002 and accompanied EPA staff members during sample collection at the site in January 2003. MDCH staff members conducted a site visit in February 2004.
- ATSDR, NIOSH, and EPA developed fact sheets on vermiculite attic insulation. The fact sheets are available at www.epa.gov/asbestos/insulation.html or by calling MDCH at 1-800-MI-TOXIC (or 1-800-648-6942). EPA has begun implementing a consumer awareness campaign for vermiculite attic insulation.
- Remediation of the current Die, Mold and Automation Components facility was performed in December 2003. This remediation consisted of removing material containing asbestos from the work area.

Actions ongoing

- EPA is considering actions to characterize and potentially remediate contaminated soils. (Lead agency: EPA; support agencies: ATSDR, MDCH, Michigan Department of Environmental Quality [MDEQ])
- ATSDR is conducting health statistics reviews for selected sites across the nation that received asbestos-contaminated vermiculite from Libby, Montana. The results of these reviews will be published in a series of annual reports. (Lead agency: ATSDR)
- ATSDR and MDCH are collecting information from former workers and neighborhood residents as it becomes available. This information will be used (as applicable) to update the evaluation of any indeterminate public health hazards associated with the former WRG facility. (Lead agency: ATSDR; support agency: MDCH)
- ATSDR has developed an integrated Communication and Education Plan for the National Asbestos Review project, and components of this plan are currently being tailored for use at the Dearborn site as appropriate. (Lead agency: ATSDR; support agency: MDCH)

Actions planned

- EPA, ATSDR, MDCH, and MDEQ will coordinate efforts for any additional environmental sampling, which may include sampling of neighboring off-site areas. Information gained from analysis of the samples will be used (as applicable) to update indeterminate public health hazards associated with the former WRG facility. (Lead agency: EPA; support agencies: ATSDR, MDCH, MDEQ)
- EPA, ATSDR, MDCH, and MDEQ will consider the use of air dispersion modeling to characterize past fiber migration off the site. This information could be used to update the evaluation of indeterminate public health hazards associated with the former WRG facility and to assist with the selection of locations for future off-site environmental sampling. (Lead agencies: MDCH, MDEQ; support agencies: ATSDR, EPA)
- MDCH and ATSDR will review any new site-related data to gauge health risks, if any, to workers and nearby residents. (Lead agency: MDCH; support agency: ATSDR)
- MDCH and ATSDR will review any new data from other sites around the country that processed Libby vermiculite ore to gauge health risks, if any, to workers and nearby residents. (Lead agency: ATSDR; support agency: MDCH)
- ATSDR and MDCH are conducting research and determining the feasibility of conducting worker and household contact follow-up activities in a collaborative manner. Childhood exposures via waste piles will also be addressed through this process. (Lead agency: ATSDR; support agency: MDCH)
- Former workers, current workers employed prior to December 2003, and household contacts of both worker cohorts will be provided with health education materials by MDCH and encouraged to seek long-term medical monitoring for asbestos-related disease. (Lead agency: MDCH; support agency: ATSDR)