## Health study progress report sent

Legislators get mesothelioma studies timeline

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ST. PAUL — Ending dates for five study reports in the Taconite Workers Health Study, through early 2013 are the focus of a legislative report to the Minnesota Legislature that was released Thursday.

The report, headed by John Finnegan and Jeffrey Mandel of the University of Minnesota School of Public Health, highlighted progress made in five research areas, when they would be completed and parts that were already presented in an October review. The report was sent to chairs of the jobs and economic development, and the health and human services committees in the House and Senate, and to Iron Range Delegation members.

"We are currently moving into the critical phase of combining data from the exposure study with data from the human health studies in order to more clearly understand the lung health of workers in the taconite industry," Finnegan and Mandel said in a joint statement to legislators.

The \$4.9 million study, ongoing since mid-2008, seeks to determine whether lung disease, including mesothelioma, lung cancer and respiratory disease may be related to working in the taconite industry.

Progress and completion dates reported Thursday in the study's five areas were:

- Occupational exposure, historical and current worker exposure to dust, due mid- to late 2012: On-site measurements are complete, historical measurements are gathered, engineering controls were assessed; data are now being integrated into human health studies.
- Airborne particulates, for community air quality, due mid- to late 2012: Community sampling is completed, detailed analyses on air sampling and lake sediment are in progress.
- Mortality, causes of death among taconite workers, due late 2012: Causes of death identified; data quality control and verification, and data analysis are in progress.
- Respiratory health survey of workers and spouses, estimation of non-malignant respiratory disease, due late 2012 or early 2013: Screening is completed; data integration is in progress.
- Incidence study, comparison of occurrences among taconite workers to other groups, due late 2012 or early 2013: Cases are identified; data quality control and verification ongoing, exposures data integration progressing.

The assessment of taconite mine occupational exposure noted that "the six mines were divided into two zones (eastern and western) based on their geographical location on the Iron Range." Workers were grouped into about 30 similar exposure groups in both zones. Mineral particulates and respirable dust were found to be nearly all under regulatory limits, while silica frequently was over limit.

Engineering control systems at all mines were examined and found to be "appropriate for normal operations; miners may be exposed to dust levels at or over the regulatory limit when making repairs or performing maintenance" and respiratory protection should be used then, the study said.

In the mortality study, as was noted in October, of a population of 45,500 taconite workers born in 1920 or later, a total of 63 workers in-state and 17 who moved out of state were identified with mesothelioma, and 1,681 workers had lung cancer.

In the respiratory health survey, some results determined included 17 percent having lower amounts of forced exhaled air volume than expected, commonly seen with asthma or emphysema; 4 to 6 percent had lower amounts of air volume than expected, which is commonly seen from dust exposure; chest X-ray results showed about 15 percent of persons in the survey "had abnormalities involving the tissue surrounding the lungs"; and about 6 percent "had abnormalities involving the lung tissue," the report said.

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