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FOR IMMEDIATE RELEASE
Scientists Find Elevated Levels of Potentially Toxic Metals in Some Guatemalans Living Near Canadian-owned Mine, Recommend Further Studies

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Environmental health scientists from the University of Michigan find that a sample of Guatemalans who live near a controversial gold and silver mine in the country's western highlands have higher levels of potentially toxic heavy metals in their urine and blood than a sample of residents who live farther from the mine.

Looking at environmental impacts, the scientists also find significant differences in the quality of water samples taken from creeks just downstream from the mine, as compared to a site upstream and a river farther downstream. The scientists warn that metals exposure caused by the mine is likely to increase over time, and could last for decades.

"Little is known about the cumulative and combined health impacts on humans — especially children — following chronic exposure to complex, real-world mixtures," said Dr. Howard Hu of the U-M School of Public Health, co-author of the Marlin Mine report with Niladri Basu, assistant professor of environmental sciences in the School of Public Health.

"That's why it is imperative that large-scale, long-term epidemiological and ecological follow-up studies be conducted," Basu said.

The scientist's study, which was coordinated and published today by Physicians for Human Rights, examines the health and environmental impacts of the Marlin Mine, owned by Canada's Goldcorp company through its Guatemalan subsidiary, Montana Exploradora, Inc. The study finds that a sample of residents living near the mine have higher levels of mercury, copper, arsenic and zinc in their urine, and of lead in their blood, than a sample of persons living seven kilometers away.

A delegation, including the study's lead scientist, presented the findings to villagers in Guatemala today, some of whom had concerns that a range of physical ailments were caused by the mine.

The study cautions, however, that it is "not clear if the current magnitude of these elevations pose a significant threat to health." Although each metal tested is toxic at high enough levels, none of the levels in the samples exceed those considered acceptable by the U.S. Center for Disease Control and Prevention and by widely recognized scientific standards.

The Marlin Mine opened in 2005 and is expected to remain in operation for most of this decade.

The study recommends that follow-up health and environmental studies be overseen by an independent panel. "This panel would allow for a forum that is transparent and inclusive, and it would facilitate dialogue amongst the stakeholders," the report says.

In releasing this study, Physicians for Human Rights noted that the report implicitly delivered a message to the government of Guatemala regarding its obligations to its citizens. "The State is responsible not only to protect citizens from harms to their health from possible environmental contamination; it also has positive obligations to prevent new future health risks that may be caused by this mine and other mines," said Susannah Sirkin, deputy director for Physicians for Human Rights.

The authors caution that the study, based on biological samples drawn from 23 individuals during a one-week visit to the vicinity of the mine in August 2009, cannot be viewed as definitive, but rather as a preliminary baseline study. Still, the results show "qualitative and generalized trends that enable conclusions to be drawn."

Samples from creeks near the mine have significantly higher levels of pH (a measure of acidity), conductivity and temperature, as well as aluminum, manganese, cobalt and, in one creek, arsenic. Researchers also compare a sample of mine workers to a sample of non-mine workers, finding no significant difference between the levels of heavy metals in their urine and blood. Because the mine workers have access to a better diet and to medical services provided by the mine, they consider themselves to be in better general health.

The study does not find any significant association between levels of heavy metals and the severe skin rashes and respiratory illness reported by some persons living near the mine, especially children and the elderly. However, the study took no urine or blood samples from children, because of the informed consent protocol approved by the university's Institutional Review Board. Nor did it take samples from the persons who had complained. Skin rashes and respiratory effects, the study notes, are consistent with exposure to cyanide, which is used at the mine, but was not analyzed in the study.

The research was conducted at the request of the Independent International Panel on the Human Rights Impacts of the Marlin Mine, a four member panel composed of three academics from the Center for Civil and Human Rights of Notre Dame Law School and a lawyer from Oxfam Americas. The Panel will draw on the study as one component of its analysis. Funding for the study was provided by the Due Process of Law Foundation, based in Washington, DC.

The panel engaged Physicians for Human Rights and the University of Michigan team to conduct an independent and impartial analysis of the mine's health and environmental impacts. Physicians

for Human Rights mobilizes the health professions to advance the health and dignity of all people by protecting human rights. The group shared the 1997 Nobel Peace Prize.The Marlin Mine is located about 185 miles northwest of Guatemala City. It consists of two open pits and one underground mine. A cyanide leaching process is used to extract gold and silver from crushed ore.

Goldcorp is actively prospecting dozens of other sites in the region near the Marlin Mine.

Physicians for Human Rights (PHR) mobilizes the health professions to advance the health and dignity of all people by protecting human rights. As a founding member of the International Campaign to Ban Landmines, PHR shared the 1997 Nobel Peace Prize.

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