

Statement of Dr. Michael McCawley
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to the U.S. House Committee on Natural Resources
Subcommittee on Energy and Mineral Resources
“Health and Environmental Impacts of Mountaintop Removal Coal Mining”
1324 Longworth House Office Building
April 9, 2019, 2:00 pm

Good afternoon Chairman Lowenthal, Ranking Member Gosar, and members of the House Subcommittee on Energy and Natural Resources. My name is Dr. Michael McCawley. I have a doctorate in Environmental Health from New York University, over forty years of experience in the field, with government, academia and industry, over 60 peer-reviewed publications in my field and I currently am a Clinical Associate Professor in the West Virginia University School of Public Health. I come before this Committee to offer testimony on the state of health in the areas of Mountain Top Removal activity in Appalachia, particularly in southern West Virginia. As a scientist, my own research has concerned assessing the air pollution exposure to residents in that same area. My findings clearly show that there is causal evidence to believe the air pollution levels in this region are sufficient to account for an increased prevalence of disease. There is also ample evidence in the scientific literature, that the relationship is not simply correlative but causal. A true and unbiased review of the published scientific literature would, I believe, support that conclusion.

The exposure assessment work that was carried out there, and with which I am associated, has shown that there is a statistically significant difference between the levels of ultrafine particles in the Mountain Top Removal areas and a control area of eastern West Virginia. Dr. Michael Hendryx, who published extensively on the health of the population in Mountain Top Removal mining areas used these same areas for his health effects studies. For those unfamiliar with the term, ultrafine particles are less than 0.1 micrometer in diameter. That is approximately one thousandth the diameter of a human hair. These ultramicroscopic sized particles have been found to be highly inflammatory when living cells are exposed to them. They are in the same size range as so called “nanoparticles,” but unlike nanoparticles they are not specifically manufactured nor is their concentration carefully controlled and confined to secure laboratories. Their concentration, when found in ambient air, may be thousands to hundreds of thousands of times more concentrated than those at which nanoparticles have been measured. The inflammation that these ultrafine particles can cause are known to be associated with virtually all chronic diseases. Thus the finding of epidemic scale chronic health effects in the Mountain Top Removal areas is, unfortunately, unsurprising.

Furthermore, not only have Dr. Hendryx’s health effects studies found the Mountain Top Removal areas to have significantly higher rates of disease, but the exposure assessment work has found exposures to ultrafine particles to be sufficient to cause those observed rates. These effects are supported by dozens

of independently written and peer-reviewed scientific articles that offer similar evidence, for similar health outcomes, for similar exposures, around the country and around the world. These studies are additionally supported by laboratory toxicology studies that come to the same conclusion and help to meet the widely accepted criteria for determination of causality published by Sir Austin Hill in 1965 – In my opinion these independent studies should allow the conclusions to be considered more than simply correlative. They should be considered causal. Given the air exposures alone, it would likely be a deficient study that came to a conclusion other than those to which Dr. Hendryx came.

The coal miners working in, and the citizens living near these mountain top mine operations have suffered the consequences of these operations for too long. The introduction of the Appalachian Communities Health Emergency Act is a step in the right direction and I applaud the Subcommittee for taking a stand on behalf of the impacted citizens of Appalachia.

Thank you.