

**Testimony of Vernon Haltom, Executive Director of Coal River Mountain Watch**  
**“Assessing Innovative and Alternative Uses of Coal”**  
**July 24, 2018**

The mission of Coal River Mountain Watch is to stop the destruction of our communities and environment by mountaintop removal mining (MTR), to improve the quality of life in our area, and to help rebuild sustainable communities. Our previous executive director, Judy Bonds, won the 2003 Goldman Environmental Prize for North America. In 2011, she died of the mountaintop-removal-related cancer that plagues our communities. In 2015, we dedicated our office building as the Judy Bonds Center for Appalachian Preservation. This year, we installed enough solar capacity to meet our electrical needs, and we planted a half-acre of industrial hemp to demonstrate the viability of these rapidly growing, clean economic options.

The Judy Bonds Center is only 10 minutes from the site of the Upper Big Branch mine explosion, which killed 29 miners in our community in 2010. As usual, this disaster resulted from a coal company cutting corners to place profit above people, as well as lax enforcement by regulators. The CEO of Massey Energy recently spent a year in prison for his misdemeanor of conspiring to violate federal safety laws in the worst mine disaster in the US in 40 years.

Had the students of Marsh Fork Elementary School been in class the day of the disaster, they would have felt and heard the blast. As it was, these kids spent every school day within 300 feet of a coal preparation plant and just 400 yards downstream from a 2.8-billion-gallon toxic coal waste sludge dam, nearly surrounded by a 2,000-acre mountaintop removal site. After a six-year campaign, Coal River Mountain Watch secured commitments for a new school just weeks after the explosion. The students began classes in the new location in January 2013. Now, Alpha Natural Resources, which bought Massey Energy in 2011, has begun work on a mountaintop removal site that will include blasting just two miles from the new school, once again endangering the children with respirable silica dust.

From the long history of mine disasters, to the brutal suppression of miners' rights in the coal wars, to the Buffalo Creek sludge dam failure that killed 125 residents in 1972, to the ongoing public health crisis of mountaintop removal, King Coal has ruled West Virginia and central Appalachia with a cruel hand. There is no “life cycle” of coal, just a death march with misery every step of the way from extraction to disposal. None of the schemes or proposals from the other witnesses today do anything to mitigate that misery; instead, they add more steps to the death march.

Whether it's coal to Asia, coal waste to oil, coal to plastics, or coal to rainbows and unicorns, that coal is mined from the bones and the lungs of people who can never be fairly compensated for their injuries or their lives. My fellow witnesses have no proposals to improve the well-being of communities impacted by coal. Instead, they seek to build the wealth of a few at the expense of the many: the many who will pay for subsidies with their tax dollars and pay for gutted regulations with their lives. Three people will die today from diseases associated with mountaintop removal, three people died yesterday, three people will die tomorrow, and more than 1,200 will die this year.

The health impacts are no surprise to anyone living downwind of daily blasting in a state where coal companies detonate the explosive equivalent of 744 Tomahawk missiles every day except Sunday. In some communities, the equivalent of the “Mother of All Bombs” is detonated above their homes on a daily basis, but this is considered a “small blast” by West Virginia Department of Environmental Protection. The resulting clouds of silica dust coat the communities and the people’s lungs, and this fallout is a known health threat.

The public health threats of MTR have now been documented in over 30 peer-reviewed studies (<https://ohvec.org/mountaintop-removal-articles/health/>). These threats include cancer, heart disease, birth defects, and other deadly illnesses at significantly higher rates after accounting for other factors. But state and federal officials have refused to acknowledge the science.

In 2013, the Center for Health, Environment, and Justice (CHEJ) released a report entitled “Health Impacts of Mountaintop Removal (MTR) Mining,” for which CHEJ commissioned medical and scientific experts to review the existing research at the time (Statement and Executive Summary at Appendix A). The report called for “an immediate moratorium on MTR mining until health studies have been conducted that provide a clearer understanding of the associations between adverse health impacts, notably adverse reproductive outcomes, and MTR mining.” The recommendations aligned closely with the Appalachian Communities Health Emergency (ACHE) Act, first introduced in the House of Representatives in 2012 and presently in this Congress as H.R. 786.

Even the CHEJ report was not enough to prompt tangible government action. Studies continued, including an experiment published in 2014 by scientists with the Mary Babb Randolph Cancer Center of West Virginia University, wherein human lung tissue was exposed to mountaintop removal dust in the lab. The study’s title alone indicates the causation and not just correlation: “Appalachian Mountaintop Mining Particulate Matter Induces Neoplastic Transformation of Human Bronchial Epithelial Cells and Promotes Tumor Formation” (<https://pubs.acs.org/doi/abs/10.1021/es504263u>).

After years of work by Coal River Mountain Watch and allies to have our government seriously acknowledge the science and take action, the Department of Interior’s Office of Surface Mining, Reclamation and Enforcement engaged the National Academies of Science, Engineering, and Medicine to review the body of existing research. The review was to take two years and cost a million dollars. The review began in earnest, collecting evidence and testimony and holding public hearings. Then, after a series of meetings with coal industry lobbyists, DOI abruptly halted the review in August 2017. On June 7 of this year, the DOI’s Office of Inspector General found that the DOI had no specific criteria in deciding to end the study and that nearly half a million dollars had been wasted because no final product resulted.

The best innovative and alternative use of coal is to keep it in the ground “until we can figure out what’s going on.” At the very least, we need to pause new mountaintop removal permits unless and until this process can be conclusively demonstrated to be safe for neighboring communities, as called for in the ACHE Act. And before we seek new and clever ways to prop up a declining industry, we need to effectively enforce the laws and regulations meant to protect our citizens.

## Appendix A

**Center for Health, Environment, and Justice report “A Call for Congressional Action: The Health Impacts of Mountaintop Removal Coal Mining” April 2013, Statement of the National Commission on the Health Impacts of Mountaintop Removal Mining and Executive Summary. Full document available at [https://ohvec.org/blog/wp-content/uploads/2013/04/MTR Mining April 18 2013.pdf](https://ohvec.org/blog/wp-content/uploads/2013/04/MTR_Mining_April_18_2013.pdf).**

# STATEMENT OF THE NATIONAL COMMISSION ON THE HEALTH IMPACTS OF MOUNTAINTOP REMOVAL MINING

April 2013

*This report is sponsored by the Center for Health, Environment & Justice. We solicited environmental and health experts, as part of a National Commission on Health Impacts of Mountaintop Removal Mining, for their review and opinion on this report and for recommendations that will help to improve our understanding of the interactions between mountaintop removal mining, the environment, and human health. Their statement follows.*

In 2011 a group of researchers from West Virginia University and Washington State University published a study on the association between exposure to mountaintop removal (MTR) mining and the increased rate of birth defects in Central Appalachia. Birth defect rates are considered a sensitive indicator of environmental exposures, and the study by Ahern and co-authors was a significant contribution to a growing body of scientific evidence linking MTR mining to human health disparities in Appalachia. This evidence includes increases in self-reported cancer rates and chronic cardiovascular mortality rates. Despite this growing body of evidence, little attention has been paid to the adverse health impacts of MTR mining or to strategies that could mitigate such impacts.

The following report, undertaken by the Center for Health, Environment & Justice summarizes some of the major scientific findings related to the human health effects due to MTR mining in order to identify actions necessary to mitigate and eventually eliminate such health disparities. Particular attention is paid to the individual level, medically-verified health outcomes reported by Ahern and co-authors.

The Center for Health, Environment & Justice asked this Commission to review the attached document. Having done so, the Commission strongly supports the findings in the report and, based on the evidence provided, we have developed recommendations that the Commission believes will advance our understanding of the interactions between mountaintop mining and human health. The Commission's recommendations are as follows:

- 1) Preventative action in the face of uncertainty is warranted. The findings in this report make clear that there is sufficient documentation of the hazards of MTR mining to place an immediate moratorium on MTR mining until such time as health studies have been conducted that provide a clearer understanding of the associations between adverse health impacts, notably adverse reproductive outcomes, and MTR mining. In addition, during the moratorium period, appropriate safeguards including remediation and engineering controls should be implemented to mitigate air and water pollution related to MTR mining activities.
- 2) The studies conducted by Ahern (2011), Hendryx (2011a and b), and Esch & Hendryx (2011) provide sufficient evidence to warrant follow-up studies to assess the specific health impacts of MTR mining. This research could include evaluating human exposure

to toxic chemicals related to MTR mining activities and their relationships with specific health impacts.

- 3) More information is needed on human exposure to pollutants in ambient air, groundwater and drinking water that result from MTR mining activities. Future studies should evaluate environmental samples (air, soil, surface water and groundwater) from MTR-area communities as well as the fate and transport of contaminants and uptake by humans.
- 4) It is important to examine health impacts of MTR mining. Birth defects may be one important factor, but other health outcomes as well as biomarkers of exposure need to be evaluated as well. It would also be valuable to evaluate the biological mechanisms by which contaminant by-products of MTR mining might lead to adverse health outcomes including birth defects. Case control studies using birth defect registry-ascertained cases with parental interviews should be considered to obtain additional risk factor information.
- 5) Corporations involved in MTR operations benefit financially from the coal that they extract. Therefore, they have a responsibility to fund the research on the health and environmental impacts of their process and activities. Other corporate sectors have funded independent organizations such as the Health Effects Institute (HEI), which is sponsored in part by the motor vehicle industry to conduct research on the health and environmental impacts of air pollution (HEI, 2010). Such organizations have been successful in funding high-quality, independent research that is ultimately accepted for publication in peer-reviewed journals. Thus, industries involved in MTR mining should develop a mechanism to fund research on the adverse health effects and exposure routes associated with MTR mining that includes a firewall to protect the research from industry influence which will damage the credibility of the research.

This Commission believes these recommendations are necessary actions to ensure the health and safety of the residents of Appalachia who are impacted by mountaintop removal mining.

**Commission Members:**

Cynthia F. Bearer, MD, PhD, FAAP  
Mary Gray Cobey Professor of Neonatology, Department of Pediatrics  
University of Maryland School of Medicine  
Chair and Board of Directors, Children's Environmental Health Network  
Baltimore, Maryland

Jerome A. Paulson, MD, FAAP  
Professor of Pediatrics & Public Health  
George Washington University  
Medical Director for National & Global Affairs, Child Health Advocacy Institute  
Director, Mid-Atlantic Center for Children's Health & the Environment  
Children's National Medical Center  
Washington, D.C.

Benjamin M. Stout III, PhD  
Professor of Biology  
Wheeling Jesuit University  
Wheeling, West Virginia

Steven B. Wing, PhD  
Associate Professor of Epidemiology  
School of Public Health  
University of North Carolina  
Chapel Hill, North Carolina

Daniel Wartenberg, PhD  
Professor of Environmental Epidemiology and Statistics  
Environmental and Occupational Health Sciences Institute  
Robert Wood Johnson Medical School  
Member, National Academy of Sciences Committee on the Possible Biological Effects of  
Electromagnetic Fields  
Member, New Jersey Commission on Radiation Protection  
Piscataway, New Jersey

NOTE: Affiliations included for identification purposes only

## **EXECUTIVE SUMMARY**

This report was prepared to review the most significant studies on the human health impacts of mountaintop removal (MTR) mining. A group of experts on health and environment were commissioned to review this report and provide recommendations to improve our understanding of the interactions between MTR mining, the environment, and human health. The recommendations of the Commission are included as part of this report.

### **1. BACKGROUND**

MTR mining is defined as removal of all or some portion of the mountain or ridge to access one or more coal seams. It results in significant large-scale impairment to local topography compared to other types of surface or underground mining, and is highly associated with environmental pollution and degraded soil, water, and air quality. MTR mining has become the primary method of coal mining in the Appalachian Mountains, where coalfields cover about 12 million acres of land in Kentucky, Tennessee, Virginia and West Virginia.

### **2. HEALTH IMPACTS OF MOUNTAINTOP REMOVAL MINING**

Recent studies have revealed significant possible associations between MTR mining and health disparities in Central Appalachia. According to these studies, self-reported cancer rates and chronic cardiovascular mortality rates are significantly higher in areas where MTR mining occurs, even after controlling for covariates like respondent age, sex, smoking status, occupational history, or family history. One of the most pronounced health impacts associated with MTR mining is elevated rates of birth defects in Central Appalachia. Reproductive outcomes including birth defects are considered a sensitive indicator of toxic chemical exposures. Both MTR mining and poverty are independently associated with age-adjusted mortality rates, and the prevalence of mental health disorders and psychological distress is also elevated in MTR areas compared to national prevalence rates. Because MTR-exposed counties are associated with serious environmental degradation and elevated morbidity and mortality,

residents report significantly lower health-related quality of life than residents of non-MTR areas.

### **3. BIRTH DEFECTS IN COUNTIES WITH MOUNTAINTOP REMOVAL MINING**

The Ahern (2011) study found birth defect rates to be 26% higher in MTR regions of Central Appalachia compared to non-mining areas. Furthermore, the prevalence of birth defects in Central Appalachia was positively correlated with MTR mining activity. Ahern (2011) utilized individual level, medically-verified health outcomes in the form of birth defects, and the Agency for Toxic Substances and Disease Registry (ATSDR) found that “the available published evidence is sufficiently strong to warrant further epidemiological research into the potential public health impacts of mountaintop removal activities.”

Study limitations include a lack of information on human exposure to MTR mining pollutants and the use of potentially inaccurate birth certificate data in the analysis of birth defects and covariates. However, while additional research is needed to definitively link MTR mining as an independent risk factor of birth defect disparities, this study is so far the most significant demonstration of how Appalachian health disparities are concentrated in MTR areas. An elevated rate of birth defects may result in higher levels of disability for future generations. Such disabilities may hinder economic productivity and societal prosperity in a region already struggling with poverty, low levels of education, and inadequate healthcare.

### **4. RECOMMENDATIONS OF THE COMMISSION**

If the U.S. is to effectively eliminate MTR-related health disparities in Central Appalachia, investments must be made in research, regulations, and mitigation actions related to MTR mining operations. The recommendations below are offered to increase our understanding of the public health and environmental impacts of MTR mining. However, the residents of Central Appalachia should not have to continue to suffer from the impacts of MTR mining while this critical research is conducted.

- 1) Preventative action in the face of uncertainty is warranted. The findings in this report make

clear that there is sufficient documentation of the hazards of MTR mining to place an immediate moratorium on MTR mining until such time as health studies have been conducted that provide a clearer understanding of the associations between adverse health impacts, notably adverse reproductive outcomes, and MTR mining. In addition, during the moratorium period, appropriate safeguards including remediation and engineering controls should be implemented to mitigate air and water pollution related to MTR mining activities.

- 2) The studies conducted by Ahern (2011), Hendryx (2011a and 2011b), and Esch & Hendryx (2011) provide sufficient evidence to warrant follow-up studies to assess the specific health impacts of MTR mining. This research could include evaluating human exposure to toxic chemicals related to MTR mining activities and their relationships with specific health impacts.
- 3) More information is needed on human exposure to the pollutants in ambient air, groundwater and drinking water resulting from MTR mining activities. Future studies should evaluate environmental samples (air, soil, surface water and groundwater) from MTR-area communities as well as fate and transport of contaminants and uptake by humans.
- 4) It is important to examine health impacts of MTR mining. Birth defects may be one important factor, but other health outcomes as well as biomarkers of exposure need to be evaluated as well. It would also be valuable to evaluate the biological mechanisms by which contaminant by-products of MTR mining might lead to birth defects. Case control studies using birth defect ascertained cases with parental interviews should be considered to obtain additional risk factor information.
- 5) Corporations involved in MTR operations benefit financially from the coal that they extract. Therefore, they have a responsibility to fund the research on the health and environmental impacts of their process and activities. Other corporate sectors have funded independent organizations such as the Health Effects Institute (HEI), which is sponsored in

part by the motor vehicle industry to conduct research on the health and environmental impacts of air pollution (HEI, 2010). Such organizations have been successful in funding high-quality, independent research that is ultimately accepted for publication in peer-reviewed journals. Thus, industries involved in MTR mining should develop a mechanism to fund research on the adverse health effects and exposure routes associated with MTR mining that includes a firewall to protect the research from industry influence which will damage the credibility of the research.

The actions called for by the Commission are in line with recent government initiatives to protect the health of Appalachian communities. In February, 2013 Congressional Representatives re-introduced the Appalachian Communities Health Emergency (ACHE) Act. If passed this bill would require the Department of Health and Human Services to lead a federal investigation of the reported links between MTR mining and human health impacts. Until such an investigation is conducted, the ACHE Act would require a moratorium on all new MTR permits, as well as on any expansion of existing permits. Similarly, the 2012 Central Appalachian Women's Tribunal on Climate Justice, organized by the Loretto Community at the United Nations, the Ohio Valley Environmental Coalition, the Civil Society Institute and the Feminist Task Force of the Global Call to Action Against Poverty, called for immediate moratoriums on MTR mining as well as on the underground injection and surface impoundment of liquid coal sludge until a full investigation on environmental and human health impacts is undertaken.



## **Appendix B**

**Department of Interior Office of the Inspector General letter on review of DOI cancellation of NAS studies**



OFFICE OF  
**INSPECTOR GENERAL**  
U.S. DEPARTMENT OF THE INTERIOR

The Honorable Raul M. Grijalva  
Ranking Member  
Committee on Natural Resources  
US House of Representatives

JUN 07 2018

Dear Ranking Member Grijalva:

This is in response to your letter of January 10, 2018 in which you request an investigation into two halted studies being conducted by the National Academies of Science, Engineering and Medicine (NAS). We have reviewed the two studies, one on the health impacts of mountaintop removal coal mining and the other on the offshore oil and gas inspection program. We have also reviewed the rationale provided by the Office of Surface Mining Reclamation and Enforcement (OSMRE) and the Bureau of Safety and Environmental Enforcement (BSEE), explaining why these studies were halted.

In regard to a cooperative agreement between NAS and OSMRE dealing with health impacts of mountaintop mining, we found that NAS was told to cease activities on August 18, 2017. Other than a general document entitled "Secretary of the Interior's Priorities," Departmental officials were unable to provide specific criteria, used for their determination whether to allow or cease certain grants and cooperative agreements. NAS disbanded the committee working on the health study so members could return to their regular employment.

Departmental officials decided to halt the study because they did not believe it would produce any new information and felt costs would exceed the benefits. This decision was made after almost half of the \$1,003,553 had been spent. Until the work was halted, both parties had complied with the requirements. We determined that \$455,110, the amount billed, was wasted because no final product was produced. The remaining funds of \$548,443 have expired and will be returned to the U.S. Treasury when the account is officially closed on September 30, 2021. We are conducting a separate cost audit of the funds expended.

In regard to a contract between NAS and BSEE, dealing with certain aspects of BSEE's offshore inspection program, we found that BSEE issued a stop-work order on December 7, 2017. BSEE officials cited transparency and communication issues between BSEE's headquarters staff and its Gulf of Mexico Region as a reason for the stop-work order. We found regional staff did not have input into the scope of the work and had initiatives underway that were not fully implemented. BSEE headquarters staff, did not share the same concerns and stated the study was developed to look at the program from a higher-level perspective. As a result, the BSEE Director concluded the contract should be paused to incorporate regional expertise, yielding a more comprehensive study.

BSEE stated it does not intend to terminate the contract, although ultimately it still could choose to do so. A meeting is planned in July 2018 for BSEE and NAS personnel to discuss

project options that include regional input. BSEE stated its intention to modify the contract's scope of work and restart the study sometime in September 2018. NAS indicated that significant changes to the scope of work might require restarting its process, necessitating approval by the board of directors and identifying new committee members.

We determined that NAS has met all contract deliverables to date and has expended \$78,279.02 of the \$582,177 total contract value. The bulk of the expenses incurred from June through November 2017 were used to identify NAS study committee members and vet them for potential conflicts of interest. The funding for this contract is no-year money, which will not expire.

If you have any questions concerning this review, please do not hesitate to contact me at 202-208-5745, or your staff may contact Nancy DiPaolo, Director of External Affairs at 202-208.4357.

Sincerely,



Mary L. Kendall  
Deputy Inspector General