



November 23, 2022

Chairman Joe Manchin III and Ranking Member John Barrasso

Senate Committee on Energy and Natural Resources

304 Dirksen Senate Building
Washington, DC 20510

Subject: Support for the “Mining School Act of 2022”

Dear Chairman Manchin, Ranking Member Barrasso, and Committee Members:

Colorado School of Mines strongly supports the bipartisan bill entitled the “Mining School Act of 2022” that you introduced to Congress in March. This bill represents an important step for the Nation, a recognition of the need to rebuild the American mining workforce, which has been in decline since 1980. Today, there are only 14 accredited mining engineering programs in the United States, which is down from 33 at its peak. Furthermore, over the past decade, those 14 programs collectively graduated only about 200 students each year, compared to an annual industry demand for over 500 mining engineers as well as mining related technical disciplines and mining economics specialists in the U.S. Given the need for critical materials for the Nation and the global energy transitions, the U.S. will have to significantly increase the production of critical metals and minerals to support increasing domestic renewable energy sources, expand electrification, increase battery storage capacity, expand the development and penetration of safe nuclear energy technologies, provide catalysts for hydrogen and alternative fuels, and develop related technologies.

Despite these declines in workforce and resource development capacity, the United States has great capabilities to lead the world in critical materials and mining engineering, and to drive the innovations required for sustainable resource development. This will require a much larger and more highly trained mining workforce, and Colorado School of Mines is ideally situated to help. Colorado School of Mines is consistently ranked the number 1 university in the world for minerals and mining engineering.¹

Thank you for your leadership to develop and advance this important legislative proposal. We would recommend several changes to the wording of the bill to enable achievement of the goals to which the bill aspires.

The “Mining School Act of 2022” would allow eligible colleges and universities to apply for \$10 million in grants for fiscal years 2023 through 2030. The grants are specifically focused to assist with recruiting, training and educating students and funding research to develop innovative technologies for the mining industry. The grant funds can be used for programs that cover the entire mine lifecycle ranging from exploration, mine planning, mineral processing, extraction and refining to energy use, environmental and human impacts, and recycling. Colorado School of Mines has deep strengths in these disciplines as do the other 13 U.S. mining schools. Unfortunately, as the Bill is currently written, the definition of “a geology or engineering program” is too broadly stated. So, there is a very serious threat that other colleges and universities that have “a geology or engineering program” will compete

¹ <https://www.minesnewsroom.com/news/colorado-school-mines-repeats-global-no-1-mining-engineering>



successfully for the grants to be authorized by the Act, but without having the requisite curriculum or programming directly relevant to mining and the mining lifecycle in place. This may inadvertently actually contribute to further declines of some existing mining school programs, which clearly would undermine the objectives of the Act.

The current use of the specific language “a geology or engineering program” means that educational programs that have nothing to do with mining could be eligible in the Mining Schools program under the draft bill. We recommend that the Committee and colleagues in the legislature re-consider this definition in advancing the legislation. This can be addressed by authorizing the awarding of funds to schools with an “accredited mining engineering program”, and to schools with “a geology or engineering program who have entered a formal partnership to establish a mining engineering program, collaborating in curriculum development and educational content delivery with an institution accredited for mining engineering.” Without a clarification of this sort, the bill language ultimately may not result in tangible, timely benefits to the U.S. mining sector.

Colleagues of the Colorado School of Mines and I believe that this bill is a step in the right direction. If the language is not changed, the bill certainly supports STEM, which may bring indirect benefits for mining and critical minerals, as well as for other sectors of the U.S. economy. For this bill to become a game-changer for rebuilding the U.S. mining and critical materials workforce, we recommend changes to the language defining institutional eligibility.

Again, thank you for your leadership to develop and advance this important legislative proposal. We encourage you to take appropriate action toward having this important legislation enacted.

Sincerely yours,

Walter G. Copan, Ph.D.
Colorado School of Mines

Vice President for Research and Technology Transfer

Cc: Merritt (Steve) Enders, Department Head, Mining Engineering, Colorado School of Mines