MEMORANDUM OF UNDERSTANDING

BETWEEN

THE UNITED STATES DEPARTMENT OF LABOR

AND

THE UNITED STATES DEPARTMENT OF ENERGY

I. Background and Purpose

This Memorandum of Understanding (MOU) between the United States Department of Energy (DOE), including DOE's Hydrocarbons and Geothermal Energy Office (HGEO) and Office of Critical Minerals and Energy Innovation (CMEI), and the United States Department of Labor (DOL), including DOL's Mine Safety and Health Administration (MSHA), establishes an arrangement for cooperation to integrate artificial intelligence (AI), automation, advanced sensors, and other emerging technologies that can enable safe and efficient mining operations.

The overarching goal is to reduce mining costs per ton, enhance worker safety, and minimize health hazards across the nation's mining operations. The information gathered through this collaborative effort may be used by governments, investors, academia, and the research and development community to better understand the future demand of, and challenges related to, the rapid evolution of technologies and their applications to achieve safety and productivity gains in mining.

DOE and DOL may be referred to individually as "Participant"and jointly as "Participants."

II. Legal Authority

DOE has authority to enter into and perform such contracts, leases, cooperative agreements, or other similar transactions with public agencies and private organizations and persons to carry out DOE functions (Department of Energy Organization Act [Pub. L. 95-91], codified as amended at 42 U.S.C. §§ 7101 et seq.; Section 646 of Pub. L. 95-91, codified at 42 U.S.C. § 7256).

The Secretary of Labor, in coordination with the Secretary of the Interior, may initiate studies and research on new technology to improve mandatory safety standards (30 U.S.C. § 861(b)). The Secretary of Labor, in coordination with the Secretary of the Interior and the Secretary of Health and Human Services, may enter into contracts with, and make grants to, public and private agencies, organizations, and individuals for such studies and research (30 U.S.C. § 951(c)). The Secretary of Labor may accept lands, buildings, equipment, and other contributions from public and private sources and prosecute projects in cooperation with other Federal agencies and State or private entities (30 U.S.C. § 962).

III. Funding

The Participants intend to coordinate their activities under this MOU with each Participant providing funding for its own activities. In general, each party is expected to bear the costs of its participation in this collaboration. This MOU is subject to the availability of funds. This agreement also does not obligate funds or authorize a transfer of funds between the parties. This agreement does not authorize parties to expend or obligate funds. The parties may not expend or obligate funds in excess or in advance of appropriations. 31 U.S.C. § 1341.

IV. Specific Projects

The work performed under this MOU may include the following:

- DOE and DOL may collect and share relevant non-proprietary data and publications related to mining operations. This effort may include research, strategies, discussions and interactions with multiple government agencies, universities, and other organizations.
- DOE and DOL may work together to develop research and strategies to better understand mining technology deployment-related challenges. Such plans could include:
  - Fostering collaborative research, development, and demonstration projects for AI, automation, and sensor technologies for mining operations
  - Capitalizing on expertise and partnerships from DOE's National Energy Technology Laboratory Coal Center of Excellence
  - Integrating advanced technologies into existing and new safety protocols to proactively identify and mitigate hazards, reduce the frequency and severity of accidents, and improve emergency response
  - Using technological advancements to optimize mining processes, to reduce operational costs on a cost-per-ton basis or other appropriate measures, and to increase resource recovery
  - Identifying future workforce needs in the mining sector due to technological adoption and collaborating on training and education initiatives to prepare miners for new roles and responsibilities
  - Establishing mechanisms for the effective exchange of data, best practices, and lessons learned between the DOE, DOL, industry stakeholders, and academic institutions
  - Using cross-agency subject matter expertise to facilitate reviews associated with funding opportunity announcements
  - Expanding the collection and sharing of data that are needed to better characterize mine sites, particularly in federally managed areas, and make datasets available to the public
  - Working with stakeholders to help digitize legacy data
  - Holding workshops, training, and data/knowledge sharing avenues for Federal and state land-management agencies
- The Participants and other parties working under this MOU may publish findings and results of the research and strategies described above in technical journals or other appropriate scientific publications.

V. Intellectual Property

The Participants do not expect or intend this MOU to result in any new intellectual property (including copyright, trademark, or patent) other than data, which is to be handled in accordance with Section VII below. If either Participant believes or has reason to believe that intellectual property might be created through the activities under this MOU, they will immediately notify the other Participant to establish a formal intellectual property agreement. The Participants intend that any intellectual property owned or controlled by a Participant before the start of cooperation under this MOU, or which is acquired or developed by either Participant during this MOU, is to remain at all times owned or controlled by said Participant.

VI. Third Party Claims

Each Participant is responsible for claims, losses,damages, and expenses that are proximately caused by the acts or omissions of that Participant or its employees, agents, or representatives acting within the scope of their employment. The Government's liability is governed by the provisions of the Federal Tort Claims Act (28 U.S.C. §§ 1346(b), 2671-2680), as amended, and the appropriate Agency regulations.

VII. Information Sharing

A. Any data produced under this MOU will be managed and controlled by the Participant who generated the data. *Control* includes decisions related to sharing, publishing, third-party uses of and third-party claims against the produced data. The Participants can select a Participant to exercise control over any jointly produced data.

B. All data produced under this MOU will be available for use by DOE, DOL, and the United States Government in connection with their ongoing programs. This sharing includes publication of results, where appropriate, except in cases prohibited by patenting, proprietary, or security considerations. If any such considerations are present, the Participant seeking to publish must inform the other Participant of the desire to publish with sufficient time for the Participants to determine a mutually agreeable path forward, including filing a patent application.

C. The Participant transmitting the data and information under paragraph A of this section is responsible for informing the receiving Participant of any restrictions or caveats that apply to or protect that data and for marking the data with any proper restrictive marking, prior to transmission. The sending Participant acknowledges that if it fails to include restrictive markings or caveats on the transmitted data, then that party may be liable under the Trade Secrets Act (18 USC § 1905).

D. Each Participant agrees to comply with the markings and caveats, confidentiality requirements, restrictions on transfer, and information handling and protection requirements that apply to any information shared with such Participant.

E. All information provided to the Participants will be handled in accordance with all applicable Federal laws, rules or regulations, including but not limited to the following laws: the Trade Secrets Act (18 U.S.C. § 1905), the Federal Records Act (44 U.S.C. § 3101 et seq.), and the Freedom of Information Act (5 U.S.C. § 552) (FOIA).

VIII. Communications

The Participants have designated the points of contact listed below:

DOE Contacts

Derek Cohen
Associate Principal Deputy Assistant Secretary
U.S. Department of Energy
Hydrocarbons and Geothermal Energy Office (HGEO)
Washington, DC 20585
Email: Derek.Cohen@doe.gov

Madeleine Bugel
Deputy Assistant Secretary for National Battery Strategy
U.S. Department of Energy
Office of Critical Minerals and Energy Innovation (CMEI)
Washington, DC 20585
Email: Madeleine.Bugel@doe.gov

DOL Contact

Joseph Burgese
Senior Advisor
U.S. Department of Labor
Email: Burgese.Joseph.C@dol.gov

The points of contact serve as the communication link between the Participants and coordinate activities conducted under this MOU to ensure their effective implementation. Participants are encouraged to keep each other apprised of any changes in the points of contact or contact information.

IX. Administrative Provisions

A. This MOU does not impose any legally binding obligations on either Participant; it is an internal tool between the two parties to document a common understanding made in good faith. Nothing in this MOU prevents either Participant from taking steps that it feels are necessary to comply with its legal obligations. This MOU neither expands nor contracts the legal authorities of either Participant, or restricts in any way the authority of the Participants to pursue independent efforts under their own authorities (including in the same subject matter). It has no legal effect and is not binding on either of the Participants. Neither the Participants nor any other third person has any private right or cause of action to enforce any of its terms. This MOU cannot be enforced by anyone in any court of law. Any disputes between the Participants should be attempted to be resolved at the lowest possible level. If a dispute cannot be resolved at lower levels, points of contact should escalate the matter up to their respective hierarchies.

B. This MOU does not authorize the transfer of any personnel to work for another Participant. Any such transfers or temporary details must be done by separate agreement.

C. This MOU does not create an actual or implied intention, nor does it require DOE or DOL to enter into a contract or an assistance agreement (e.g., grant or cooperative agreement).

D. The Participants intend to cooperate, as feasible, to release jointly to the public the data or interpretations resulting from these activities. To the extent that any inquiries about this MOU or efforts thereunder are received—through the Freedom of Information Act, Privacy Act, a media inquiry, a subpoena or warrant, or any other mechanism—the Participants agree to use best efforts to coordinate with the other Participant before responding.

E. The Participants intend to acknowledge their cooperation in publications resulting from collaborative activities under this MOU and when presenting material in advance of publication. If a Participant intends to separately publish such information, that Participant should seek prepublication review where the non-publishing Participant must provide within 30 days any written objections to be considered by the publishing Participant and provide a courtesy copy of any such publication to the other Participant within 30 days of its release.

F. The data produced under this MOU may be subject to the requirements of the Office of Science and Technology Policy (OSTP) February 22, 2013, memorandum titled, "Increasing Access to the Results of Federally Funded Scientific Research," and the Office of Management and Budget (OMB) January 15, 2025, memorandum M-25-05 titled, "Phase 2 Implementation of the Foundations for Evidence-Based Policymaking Act of 2018: Open Govt Data Access and Management Guidance."

X. Commencement, Modification, and Discontinuation

A. Cooperative activities under this MOU may begin with the last signature of the Participants and continue for a 5-year period. It may be renewed in writing at least 30 days before this MOU expires or terminated in accordance with paragraph C of this section. The signatories to this MOU may sign separate signature pages, which has the same effect as if they had signed on the same page. Both electronic signatures and ink signatures are valid.

B. This MOU may be modified in writing by the Participants' mutual consent.

C. Each Participant may discontinue its cooperation under this MOU at any time. AParticipant that wishes to discontinue its cooperation under this MOU must provide 30 calendar days written notice to the other Participant. Terminating this MOU does not require either Participant to return information that the other Participant has already transferred.

ACCEPTANCE:

FOR United States Department of Energy

BY: Chris Wright

Christopher Wright
U.S. Secretary of Energy

DATE: 7/21/26

FOR United States Department of Labor

BY: [illegible]

Keith Sonderling
Acting U.S. Secretary of Labor

DATE: 7/21/26