Date: 08-JUL-2025

Prepared by: Brian Rashap, Ph.D., Quantum Technician Instructor

Contractor

Name: Sandia National Laboratories

Address: PO BOX 5800 MS, MS-0114

City, State, Zip: Albuquerque, NM 87185-0114

Cost: $1,195,529

Term of Contract: 50 months

Description of Service to be procured:

The Sandia National Labs (SNL) PI will be partnering with CNM Ingenuity to develop curriculum content as well as hands-on laboratory experiences to teach photonics, laser, and quantum information systems topics to the Quantum Technician Bootcamp students. The SNL PI will develop a Rb-85 magneto-optical trap (MOT) system for cold atom generation and basic qubit transformations. This system will be the cornerstone of the Quantum Learning Lab. Students ability to assembly, align, operation, and troubleshoot the Rb-85 MOT is a strong indicator of preparedness to be a quantum technician. SNL personnel will co-teach portions of the curriculum during the duration of the Elevate Quantum Tech Hub grant.

Additionally, other SNL key personnel will utilize their connections to quantum industry partners to ensure continued relevance of the Quantum Technician Bootcamp curriculum and hands-on experience.

Explanation of why this is the only available source that can meet the needs of CNM Ingenuity, Inc.

The Quantum Learning Lab and the basis for the Quantum Technician Bootcamp is designed around allowing students to have access to a cold atom generation system (the Rb-85 MOT) to demonstrate assembly, alignment, operations, and troubleshooting of an actual Quantum Information System. The only neutral atom quantum computers in New Mexico are those build by and located at Sandia National Labs. The next closest expertise with cold atom generation hardware is in the Boulder, CO area (companies such as Infleqtion). The QuLL will require weekly presence by the quantum research scientist(s) for course development and teaching. Therefore, the support needed by this sub-contract requires personnel with the proper expertise on quantum hardware and within commuting distance of the Quantum Learning Lab. Only SNL meets these two requirements.

Explanation of why the price is considered fair and reasonable.

The contract price is primarily (97%) for personnel, with the remaining 3% for travel to quantum technician workforce development conferences and meetings. Salary rates of Sandia employees are proprietary information and are not released externally. Instead, standard labor rates are used as the basis for budgeting, costing, and reporting. Because of its relationship with DOE/NNSA, Sandia operations and accounting practices are fully auditable by the DOE Inspector General (DOE IG) on a regular basis, as well as by Sandia’s Internal Audit Department.

In accordance with NM Stat § 21-28-7 (2024) and based on the facts outlined above, CNM Ingenuity, Inc. has selected the above vendor to support the fulfillment of the requirements under EDA Award Number ED24HDQ0G0419.

Kyle Lee, CEO CNM Ingenuity. 08-JUL-2025

Name and Title Date