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SCHOOL OF ENGINEERING AND ENGINEERING TECHNOLOGY
DEPARTMENT OF MINING ENGINEERING

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Ref. MNE/SIMME/RES/011/ 19th September, 2025.

The Chairman,

Research Grants Committee

National Agency for Science and Engineering Infrastructure (NASENI)

Central Business District, Abuja, Nigeria

Endorsement and Supervisory Commitment for NASENI Project Application - "Reducing Comminution Energy and CO_2 in Nigerian Aggregates & Cement via Physics-Informed AI Smart Blasting"

Dear Sir/Ma,

I write in my capacity as Head, Department of Mining Engineering, Federal University of Technology, Akure (FUTA), to formally endorse the above-titled NASENI project and to confirm my willingness to serve as Supervising/Endorsing Officer for the Principal Investigator, Dr. Patrick Adeniyi Adesida. This proposal aligns strongly with Nigeria's industrialization and decarbonization priorities by targeting energy and emissions reduction across aggregates and cement value chains through physics-informed AI, smart blasting, and vibration-safe design. The Department attests to the PI's technical competence and track record in drilling & blasting optimization, rock fragmentation modelling, and field implementation with industry partners.

If awarded, the Department will provide the following support and oversight:

1. Academic & Technical Supervision: Periodic technical reviews, milestone verification, and methodological guidance across field trials, data acquisition, and model validation.
2. Facilities & Infrastructure: Access to laboratories, software, field instrumentation (where applicable), data processing suites, and secure data storage in line with FUTA policies.

3. Compliance & Governance: Assurance of adherence to HSE standards, ethical approvals (where required), procurement and financial regulations of FUTA/NASENI, and proper asset tagging & inventory for grant-funded equipment.
4. Project Management & Reporting: Monitoring against the approved workplan (e.g., data room setup, prototype development, staged site validations, and commercialization pack), with on-time technical and financial reports to NASENI.
5. Industry & Commercialization Linkages: Facilitation of site access/MoUs, stakeholder engagement with quarry and cement partners, and documentation to support technology readiness, IP management, and scale-up in collaboration with NASENI.
6. Capacity Building: Involvement of postgraduate researchers and industry trainees to ensure skills transfer and sustainability beyond the project period.

I affirm that FUTA has the institutional capacity to host and support this work and that I will personally oversee compliance, quality assurance, and delivery of outcomes as specified in the application.

Please accept the assurances of my highest regards.

Yours faithfully,

Prof. T.B. Afeni
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Cc: Dean, School of Infrastructure, Mineral and Manufacturing Engineering (SIMME);
Director, CERAD;
Bursar
Principal Investigator (Dr P. A. Adesida)