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FACSIMILE TRAFFISION

Date:	
Message to: Jose Lluch, Dean, College of Engineering.	
Attached is the information Nestor R. Ortiz promis	ed you.
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This message consists of page(s) [exclude Message from: Dora Gunckel for Nestor Ortiz	ling cover sheet] (505)844-6005
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-Sandia National Laboratories-

TÎTLE:

Alliance in \underline{Ma} thematics, \underline{S} cience, and \underline{E} ngineering (AMASE) - Memorandum of Understanding and Intent

BACKGROUND:

The purpose of this Memorandum of Understanding (MOU) and Intent is to develop a sustained program with the combined efforts of the participating institutions to increase the participation of underrepresented groups in the mathematics, science, and engineering fields. Alliances between minority universities and government institutions have demonstrated success in improving the infrastructure of the universities and increasing student participation in the above fields. This MOU establishes such an alliance among the University of New Mexico, New Mexico Highlands University, Ana G. Mendez University System, University of Puerto Rico, National Aeronautics Space Administration, Air Force Phillips Laboratory, and Sandia National Laboratories.

The collaboration that will develop from this Alliance will expand and increase the capacity of the Nation's engineering and scientific programs. It will also assist in the development of strong infrastructure for mathematics and science education and academic/research programs in minority universities. The Alliance is anchored in the understanding that these institutions must develop and sustain competitive science and engineering programs that will meet the requirements of the peer review.

There are alliances that primarily serve the major universities and research organizations. Unfortunately, minority institutions are not included in these alliances. We have adopted this existing model of alliance collaboration that has placed and maintained the United States of America at the forefront of science, engineering and mathematics, and science education for educators in the world.

We have selected a clear goal to attain and sustain excellence in mathematics, science, and engineering collaborating and pooling resources whenever appropriate and necessary.

DESCRIPTION:

This MOU establishes a collaborative program in mathematics, science, and engineering with a focus on attracting members from underrepresented groups. The principal components of this effort are listed below:

- Joint faculty/staff appointments and exchanges at respective institutions, e.g., adjunct faculty, summer faculty, visiting staff scientists, will be encouraged to enhance research programs and instructional programs in mathematics, science, and engineering at member institutions.
- The Alliance participants will collaborate in the development of precollege programs, undergraduate, and graduate curricula including PhD and research programs at the participating laboratories and institutions.

- Academic research programs and projects will be developed and/or enhanced through collaboration with the participating laboratories and universities.
- 4. The Alliance participants will (a) identify high-achieving graduate and undergraduate students who will participate in summer and cooperative education programs; (b) develop and support science and mathematics education programs for educators at the primary and secondary levels; (c) develop cooperative education programs in mathematics, science, and engineering to include student teaching; and (d) provide guidelines for all aspects of the cooperative education programs, e.g., respective institutional responsibilities, credit contact-hours, schedules, requirements, evaluations, etc.
- 5. The participating laboratories will provide personnel to teach courses and lecture in mathematics, science, and engineering at the participating educational institutions as allowed under corporate or laboratory policies and applicable terms and conditions in the management and operating contracts for the laboratories.
- 6. The Alliance participants will make available scientific support services to other Alliance members at the lowest appropriate cost.
- 7. The participating laboratories will provide, as available, shortand long-term loans of equipment to the participating universities
 to meet their needs for enhancing mathematics, science, and
 engineering education and research programs subject to any
 restrictions or conditions in appropriations or the terms and
 conditions in any management and operating contract for the laboratories.
- 8. Faculty and students from Alliance universities will receive appointments under established summer and academic year research programs with Alliance laboratories if available.
- 9. The Alliance participants will cooperate in the development and/or enhancement of undergraduate and graduate programs in mathematics and science education and mathematics, science, and engineering. This includes the development and/or enhancement of courses, minicourses, lectures, workshops, and infrastructure.
- 10. A funding base for the Alliance will be developed.
- 11. The Alliance members will share research facilities and personnel to establish collaborative research programs.
- 12. The participating universities will assist the laboratory members in the recruitment of underrepresented groups of scientists and engineers for regular employment and internship programs by the laboratories and government agencies.

- 13. Commitments herein set forth are subordinates to their operating contractor's contractual requirements with DoD, DOE, and NASA. Participation in this program for the above-mentioned entities shall be subject to and in compliance with (1) any applicable contracts and agreements between the contractors operating such a laboratory and DoD, DOE, or NASA and (2) any statutes, regulations or policies applicable to DoD, DOE, NASA, or their operating contractors. Such participation shall also be subject to the availability of appropriated funds and DoD, DOE, and/or NASA approval, where required.
- 14. Participation by institutions in this program shall be subject to and in compliance with (1) the policies and bylaws duly adopted by the respective boards of trustees or other government bodies, (2) any Corporate Charter or State Constitution, laws, or regulations applicable to such institutions, (3) appropriations of funds by a cognizant governmental authority where applicable.

Alliance in Mathematics, Science, and Engineering (AMASE) Memorandum of Understanding and Intent

APPROVALS:

University of New Mexico Na

National Aeronautics Space Administration

New Mexico Highlands University

Air Force Phillips Laboratory

Ana G. Mey dya University on Aurabo

Sandia National Laboratories

University of Pyerto Rico at Mayaguez