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**Feedback on Progress Implementing
A Framework to Foster Diversity at Penn State: 1998-2003
College of Earth and Mineral Sciences**

The review team commends the College for many of its programs that foster diversity, such as its work with primary and secondary students, GEMS, the summer internship program, the Environments of Africa course, the Philadelphia Field Project, and participating in MACA sponsored activities. Also, the format of the report is excellent. However, many portions of the report indicate an approach to diversity that is not proactive. The report describes its commitment to diversity as “maintaining fundamental values.” While the precise meaning of this phrase is unclear to the team, all members agree that it communicates a passive approach. As an example, the report states that the College identifies most climate issues on an “informal basis.” The team thinks the College’s approach could be strengthened by developing more processes that would address diversity more proactively. A more proactive stance is especially needed for LGBT and disabilities issues, which receive little attention in the report. The team also notes that some important components of the College’s 1998 strategic plan update were not mentioned in the report, such as implementation of its future plans for mentoring women in science and engineering. Finally, the report would be strengthened by the inclusion of more specific demographic data as provided by Educational Equity and the Budget Office.

***RESPONSE:** The College has been very proactive in its approach to climate issues. The College Environment Committee was established specifically to assess the working climate for all faculty, staff, and students in the College. It has conducted several climate surveys (see below). These surveys have identified no significant systemic problems. Most issues that have arisen in the last few years have involved individual problems that were brought to the attention of faculty or administrators outside of the formal assessment process.*

With regard to the 1998 plan for mentoring women in science and engineering, the report noted our participation in MentorNet. Since, 2000, the College of Earth and Mineral Sciences has been a participating and contributing member of MentorNet. We encourage our women students to participate in Mentor Net, an e-mentoring program for undergraduate and graduate women in science and engineering (DEP provides funding for our students to participate). Penn State has the highest number of participants in the Mentor-Net program. EMS participation in the MentorNet Program has increased each year. We provide financial support for the participation of Penn State as a whole. EMS currently has 39 participants in the email-mentoring program. The greatest obstacle for increasing the level of participation for EMS women was the lack of the ability of MentorNet to match our students with professionals in their field of study. To that end, EMS provided MentorNet with information on all of our female alumni since 1960 as well as targeting the e-mentoring program as a need that should be addressed by our GEMS alumni group. There are currently 50 Penn State alumni participating as mentors.

Demographic Information has been included in the appropriate sections below.

Challenge 1: Developing a Shared and Inclusive Understanding of Diversity

- ❖ The definition of diversity should reflect a fuller range of diverse groups including LGBT constituents and those with disabilities.

***RESPONSE:** Revised Definition - Embracing diversity implies an appreciation of the cultural variations of ethnicity and race, of variations of gender, age and physical ability, and of social variations of access and sexual orientation. The concept of diversity accepts the realities of differences across these groups, and respects them. At the same time, it recognizes the differences within groups and helps tear down stereotypical viewpoints. The acknowledgment, understanding, acceptance and celebration of diversity is a process. As such, the primary benefit arising from the pursuit of diversity is a focus on the individual; in pursuing diversity we create an environment that allows all individuals to reach their full potential in the classroom, laboratory, field and workplace. [EMS Diversity Plan 1995]*

The students, faculty and staff of the University reflect the diversity of Pennsylvanians and as Americans as a whole. The College of Earth and Mineral Sciences' concept accepts differences as well as similarities, strengthened by the view that the diversity offered by those from other countries and cultures, various religious and spiritual differences, differences in social class and status, variety in educational background of one's family of origin, differences in home communities, differences in age and life experience as well as geopolitical differences will increase our strength in ability to decipher and solve the critical problems of science and engineering before us. Differences in race, gender, ability and sexual orientation are protected yet benefit is gained in a more inclusive definition and practice of multiculturalism.

- ❖ The discussion of diversity initiatives occurs at various College events, and the director of Diversity Enhancement Programs appears to lead many of these discussions. This communication could be strengthened by devoting some events exclusively to the College's diversity agenda and conceptualizing the discussion as a fundamental function of all faculty, staff, and administrators.
RESPONSE: We will take this under consideration. The Dean should play a greater role in these discussions and we will ensure that the diversity agenda is presented as a fundamental function of all faculty, staff, and administrators.
- ❖ The role of the director of Diversity Enhancement Programs is prominent among students, but the position does not have responsibilities for promoting diversity among the faculty and staff.
RESPONSE: Correct. The primary role of the Director of Diversity Enhancement Programs is to work with students. The responsibility for promoting diversity among the faculty and staff rests with the Department Heads. The Department Heads, however, do consult with the Director of Diversity Enhancement Programs.
- ❖ The College has four groups that can act on diversity issues. However, this structure can dilute diversity efforts instead of enhancing them. The team recommends a separate diversity committee drawn from a broad cross-section of the College to focus and coordinate efforts.
RESPONSE: The Executive Council, The Staff Advisory Council, The Graduates of Earth and Mineral Sciences and the Office of Diversity Enhancement Programs have diversity as a central part of their missions. EMS views integration of diversity in the faculty, staff and alumni groups as vital to support student efforts. While several groups have a particular interest in diversity issues, there is a single committee that has the College climate as its central focus.

The College Environment Committee was established in 1993. "The primary duty of the Environment Committee is to foster a climate conducive to the realization of the highest achievements of the students, faculty and staff of the College. This committee shall make recommendations to the Dean on ways and means of promoting and maintaining high academic standards, and promoting a diverse makeup and giving due recognition to individual achievement. In addition, this committee shall advise the Dean on strategic issues that would help secure a healthy future for the College."

The Environment Committee has studied:

- *Recruitment and retention of under-represented students (women, African American, Hispanic American and Native American).*
- *Sexual and Racial Harassment resulting in a College Guide to Addressing Harassment Complaints and a brochure.*
- *EMS Learning Environment Studies in 1994 and 1998, which focused on undergraduate and graduate student perceptions of diversity and multiculturalism, professor's attitudes and performance, and perceptions of student learning environment.*
- *Position of faculty women in EMS in relation to the MIT study in the fall of 1999. Two studies were done. The first was done with Human Resources data gauging years since PhD, salary, differences between female and males at the department level, service and course mix and lab and/or office space. The second was commissioned to be conducted by the College's faculty advocate. The data illustrated that female faculty members in the College fared better than their male colleagues in the test areas.*
- *Decision Making in the College. The next study planned for the Environment Committee is to survey the roles that women play in the decision making process within the College and its departments and institutes.*

Challenge 2: Creating a Welcoming Campus Climate

- ❖ Some components of this section, such as the success of the College in hiring women faculty, might be better placed in other sections of the report (i.e., for women faculty, Challenge 4).
- ❖ The team commends the placement of the Office of Diversity Enhancement Programs in the student center. This move augments the visibility of this office and facilitates collaboration with other services provided by the center.
- ❖ Does the informal undergraduate social hour have a set agenda? If so, is it utilized to address issues of diversity?
RESPONSE: No. There is no formal agenda. The social hour may help promote a climate that supports diversity, but it does not address diversity issues.
- ❖ The use of supporting data could provide a better context from which to evaluate initiatives. For example, data from Educational Equity and the Budget Office indicate that the demographic profile of women faculty did not change substantially between fall 1997 and fall 2000 and actually decreased at the assistant professor and instructor ranks. A more explicit use of data would demonstrate where actual progress is being made.
RESPONSE: In recent years, the College has numbered approximately 120 - 130 tenured or tenure eligible faculty members. Over three quarters of the faculty was hired in the last 16 years.

EMS Faculty Hires Under the Present College Leadership (January 1986 – February 2002)

<i>Total</i>	<i>Women</i>		<i>Asian</i>		<i>Black</i>	
	<i>N</i>	<i>%</i>	<i>N</i>	<i>%</i>	<i>N</i>	<i>%</i>
<i>96</i>	<i>16</i>	<i>17</i>	<i>11</i>	<i>11</i>	<i>2</i>	<i>2</i>

- ❖ The College appears to mainly deals with climate by relying on informal communication after issues arise. Providing diversity education for majority groups is as important as empowering underrepresented groups to utilize available resources. Informal conversation about diversity can be overwhelming to those who are underrepresented, especially for young students or when majority groups are disproportionately large.

RESPONSE: As noted in the General Comments above, the College does not rely on informal communication. We simply point out that, because of the size of the College, the high faculty/student ratio, the success of the EMS Student Center, and effective communications between Department Heads, faculty, staff, and students, the few issues that have arisen were brought to our attention through these other avenues of communication – whereas they were not apparent from our more formal assessment processes.

- ❖ The 1998 strategic plan update indicates that the College planned to conduct climate surveys; however, the report only cites informal means of identifying climate issues. The team is unclear about the current status of formal assessments of climate in the College and recommends re-initiating climate surveys if they have been discontinued.

RESPONSE: Please refer to the above reference of the Environment Committee's work.

Challenge 3: Recruiting and Retaining a Diverse Student Body

- ❖ The College's participation in various urban programs is noteworthy. Translating these programs into substantial increases in the enrollment of undergraduate multicultural students appears to still be on the horizon. By supplementing the report with annual enrollment data, the actual effect of these programs could be better assessed. Programs for recruiting graduate multicultural students also need to be seen in the context of enrollment data.

Response:

EMS Minority Undergraduate Enrollment

<i>Year</i>	<i>Number of Students</i>
<i>1987</i>	<i>11</i>
<i>1988</i>	<i>15</i>
<i>1989</i>	<i>17</i>
<i>1990</i>	<i>18</i>
<i>1991</i>	<i>25</i>
<i>1992</i>	<i>16</i>
<i>1993</i>	<i>12</i>
<i>1994</i>	<i>16</i>
<i>1995</i>	<i>19</i>
<i>1996</i>	<i>23</i>
<i>1997</i>	<i>25</i>
<i>1998</i>	<i>25</i>
<i>1999</i>	<i>35</i>
<i>2000</i>	<i>36</i>
<i>2001</i>	<i>34</i>

Percent Minority Graduate Student Enrollment (Masters and PhD)

<i>Year</i>	<i>Number</i>	<i>Percent Enrollment</i>
<i>1987</i>	<i>8</i>	<i>1.6</i>
<i>1988</i>	<i>10</i>	<i>2.1</i>
<i>1989</i>	<i>10</i>	<i>2.1</i>
<i>1990</i>	<i>15</i>	<i>3.1</i>
<i>1991</i>	<i>11</i>	<i>2.3</i>
<i>1992</i>	<i>12</i>	<i>2.4</i>
<i>1993</i>	<i>12</i>	<i>2.4</i>
<i>1994</i>	<i>13</i>	<i>2.9</i>
<i>1995</i>	<i>16</i>	<i>3.6</i>
<i>1996</i>	<i>13</i>	<i>3.2</i>
<i>1997</i>	<i>11</i>	<i>2.9</i>

- ❖ College recruitment efforts would be improved by giving more attention to the recruitment of women and other underrepresented groups.
- ❖ The GEMS program and initiatives that stress personal contact with students are best practices, and other programs, such as the summer internship program and SROP are also significant endeavors, though again, more specific data on these programs would be useful.

RESPONSE: Recruitment and support of a diverse student body is primary to the role of the EMS Director of Diversity Enhancement Programs (equivalent to the Multicultural Coordinator in other colleges). The Director also seeks external support for diversity programs and student scholarships and organizes educational programs for underrepresented groups including people of color and women.

Recent activities of the Director of Diversity Enhancement Programs include:

Developing, implementing, and coordinating programs for middle school and high school students, both on-campus and off, for underrepresented groups in collaboration with Minority Affairs Community Affairs (MACA), Upward-Bound, Comprehensive Studies Program (CSP), Talent Search and community organizations.

Operating within the EMS Student Center to encourage integration and the recognition of the importance of diversity to all EMS students.

Conducting half of all EMS FTCAP sessions as well as half of the morning FTCAP presentations EMS is responsible for.

Coordinating efforts to monitor and positively impact the academic progress for underrepresented students.

Working with faculty designing research and/or educational experiences for underrepresented groups in externally funded research projects as well as in budgeted programs.

Representing the College in various college & university committees; developing and maintaining working relations with various organizations internal and external to the University.

Developing recruitment initiatives at the Graduate level, utilizing national conferences, graduate recruitment fairs and networking.

The College with its faculty members participates in MACA sponsored activities at University Park as well as those in Philadelphia, Pittsburgh and Harrisburg. Examples: participation in the MACA sponsored bus trips, visits to all MACA centers, meeting with high school guidance counselors in all three cities in the past two years, annual participation in the Philadelphia Honors Convocation, and directed outreach with faculty to high schools to provide experiential learning opportunities.

The Director worked with the Talent Search Program this year meeting with 500 students in Sharon and Farrell School Districts working with Earth Science, Physics, Chemistry and Science teachers. Additionally, presentations were provided by the Director to Physics classes at Valley High School in New Kensington. The Director received the Friends of AAP Award.

EMS seeks to identify potential students early. This year, a coordinated effort was made to reach more than 500 African-American, Hispanic American and Native American students nationally, who had a score of 1100 or higher on the SATs. The Schreyer Honors College was a collaborator in this effort. The students received personal letters about the College and information on potential majors from faculty.

The K-12 program is one accepted strategy for bringing students to College. EMS works with bridge programs such as HAP, Upward Bound, Take Our Daughters to Work and WISE Week to provide information and workshops for students. EMS sponsors Nittany Science Camp for Girls (middle school program), VEC-Tour (high school juniors and seniors), Weather Camp and is part of the Business, Engineering, Science and Technology (BEST) team. This summer, EMS will sponsor an additional experience for high school women, Girls Utilizing Technology and Science (GUTS).

EMS is a participating partner in the BEST program- Business Engineering Science and Technology; an Eastman Kodak funded bridge program; VEC-Tour Venture into Engineering for Young Women, piloted by EMS and the Women in Engineering Program (WEP) and Nittany Science Camp for Girls (NSCG), a middle school girls science camp.

EMS provides workshops and/or activities for a wide range of bridge and enrichment programs including but not limited to Hispanics for Academic Progress (HAP); Talent Search, Upward Bound, and McNair Scholars.

EMS works with and supports the efforts of Minority Affairs Community Affairs Admissions (MACA), through bus trips and visits to MACA Centers, and the Philadelphia Awards Convocation -- a collaboration between City of Philadelphia Public Schools and Penn State to recognize high school juniors who are honors students. Additionally, EMS is working to identify partners such as the Center for Advanced Studies (CAS) program in Pittsburgh to keep students engaged in science from grades 9-12 by providing experiential opportunities.

EMS supports the participation and activities of National Society of Black Engineers, Society of Hispanic Professional Engineers (SHPE); National Action Council for Minorities in Engineering (NACME); American Indians in Science and Engineering (AISES); Mexican Americans in Engineering and Science (MAES); and the Summer Research Opportunities Program (SROP).

EMS exhibits at national meetings such as SACNAS: Society for the Advancement of Chicanos and Native Americans in Science, AISES: American Indians in Science and Engineering, SHPE: Society of Hispanic Professional Engineers, NSBE: National Society of Black Engineers, and others where high school students are present, to increase the knowledge about EMS majors and career options with degrees rich in science, engineering and technology.

Members of the EMS alumni group, GEMS, assist the College in these efforts by representing the College at high school fairs in their home areas. Personal calls are made to underrepresented students who have been offered admission to Penn State. Example: a prospective student in Meteorology receives a phone call from the Senior Vice President of the Weather Channel to congratulate them on their offer of admission. Last spring, the GEMS group offered a professional development session for students on how to mingle and network.

All underrepresented students who are offered admission receive a card of congratulations, a letter in regard to EMS opportunities and benefits and a phone call from the Director of Diversity Enhancement Programs. Additionally, current students, faculty members and the Director of Diversity Enhancement Programs make multiple follow up contacts.

Challenge 4: Recruiting and Retaining a Diverse Workforce

- ❖ Despite efforts to recruit and retain faculty, no evidence exists that the College has had success in recruiting or retaining faculty or staff from diverse groups. The report does not identify any initiatives for recruiting or retaining diverse staff.

RESPONSE: See response to Challenge 2. The College has had some success in recruiting women, but little success in recruiting minorities. In part, this reflects the small number of minority doctoral graduates. National Science Foundation data from 2000, for example, shows that only 47 doctoral degrees in Earth, Atmosphere, and Ocean Sciences were awarded nationally for the period 1987-1997.

- ❖ The College states that the best strategy for recruiting members of underrepresented groups is to identify them and approach them directly. However since the College has so few faculty and administrators from underrepresented groups, it is not clear how this approach could be effective.

RESPONSE: We do not agree that only members of underrepresented groups can be successful in recruiting other members of underrepresented groups.

Challenge 5: Developing a Curriculum That Supports the Goals of Our New General Education Plan

- ❖ Environments of Africa, which is cross listed between the College and the Department of African and African American Studies, is an innovative approach in bringing diversity into the curriculum and should be a model for developing further courses.
- ❖ Other than for specific courses, it is not clear how diversity is woven into the broader curriculum. Examples of how this goal might be accomplished would be helpful.

RESPONSE: As noted in the College report, diversity and multiculturalism are an integral part of the undergraduate and graduate curriculum in the Department of Geography. This is also a significant research focus for many of the Department faculty.

At present, our other programs rely on individual courses and on Penn State's General Education program to weave diversity into the curriculum. We would welcome suggestions for how diversity could be integrated into all of our curricula in a meaningful fashion.

Challenge 6: Diversifying University Leadership and Management

- ❖ The response to this question is not specific enough. The College describes how faculty and staff participate in various programs without explaining how these initiatives have specifically assisted those from diverse groups to develop management and leadership skills.
- ❖ Special attention is needed for this Challenge since all academic administrators in the College are white males.

RESPONSE: We have several women professors in the College who would make excellent administrators and in the last two searches for department heads we made a considerable effort to fill these positions with members of underrepresented groups. However, the searches did not produce an acceptable external candidate, and none of the women within the departments were willing to serve.

Challenge 7: Coordinating Organizational Change to Support Our Diversity Goals

- ❖ The report states, "Earth and Mineral Sciences sees no need for organizational realignments" and "accountability for the recognition and support of diversity is the same as with any other programs or initiatives in the College." This stance could perhaps be justified if the data reflected substantial progress on diversity in the College. Rather, the data show a flat and, in some cases, regressive development in terms of recruitment, retention, and promotion of underrepresented groups.

RESPONSE: It is not clear what is meant by organizational realignment. We have no plans to change the organizational structure of the College. We do hope to increase diversity through further recruiting of women and other members of underrepresented groups. Most of our student recruiting efforts are focused on minorities and we have had some success over the last few years. We have also had some success in recruiting and retaining women faculty, whose rates of promotion and salary increases are well above the mean for the College. Being among the leaders in their fields, these women faculty are, of course, also heavily recruited by other institutions. We have had little success in recruiting minority faculty, but as the numbers from the National Science Foundation indicate, this is hardly surprising given the small number of doctoral degrees awarded in our fields.