MEMORANDUM

February 3, 2004

To: Nancy Barcelo, Vice President
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   David C. Hodge, Dean
   College of Arts and Sciences, Box 353765

From: Paul B. Hopkins, Professor and Chair
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Subject: Diversity Appraisal for Chemistry

I am responding to your request for a diversity appraisal concerning the Department of Chemistry at this University. Just a few decades ago, the field of chemistry world-wide was certainly not known for the diversity (as defined in your request) of its practitioners. In what I would characterize as a healthy evolution, chemists have increasingly become interested in answering questions such as, “Why the lack of diversity in our field? How do we change the situation?” And while I believe most would agree that progress could have come faster in some areas, it is reassuring that significant progress has been made in many areas, and at least some progress has arguably been made in all areas.

Because the Department of Chemistry at UW is relatively large (a combined total of about 1200 undergraduate students, graduate students, postdoctoral associates, staff, and faculty), a statistical view of our current situation is a reasonable starting point for discussion. We do not have available to us precise statistics quantifying the diversity of our 800 undergraduates or 220 graduate students by their diversity as defined herein. But we know that roughly equal numbers of male and female undergraduate students today earn the bachelors degrees in chemistry or biochemistry that we award. Not surprisingly, given national trends and our geographic area, asian students appear to be over-represented in this group relative to the U.S. population as a whole, while black, native American, and Hispanic students are underrepresented. Almost the same is seen in our graduate population, but here the male/female ratio of degree recipients is closer to 60% male/40% female. This imbalance is reflected in the graduate population overall, suggesting attrition is similar for the two genders.

The data you provided on various websites do allow one to quantify the diversity of our faculty, staff, and postdoctorals. For this report, we chose to compare to one another by this measure the UW overall (absent the College of Arts and Sciences), the College of Arts and Sciences, and Chemistry. The data show the overall UW workforce to be female dominated.The college is somewhat more balanced, with males in the majority. The
Chemistry workforce is more heavily male dominated, with the faculty even more heavily male dominated for ladder faculty. But this last statistic is changing rapidly. Two decades ago, it was not common to find even a single woman on the faculty of this nation’s premier chemistry departments. Today 10 to 12% is more typical. The fraction of females appears likely to continue to rise as the current generation of faculty retire and are replaced by hires made from a more (and ideally increasingly) diverse applicant pool.

In most other respects Chemistry, the College of Arts and Sciences, and the UW have similar levels of diversity in our workforces. Thus, blacks, Hispanics, and native Americans are underrepresented at the UW, in the College, and in Chemistry. But as noted above for the student pool, Asian Americans are well-represented in our workforce.

We are not experts in either the analysis of or the solution to the diversity dilemma. But it appears to us that efforts in our field to address the problem should focus on at least two (related) areas for improvement. The first of these is the obvious, increasing the number of black, Hispanic, and Native American students of both genders at all educational levels, choosing to study chemistry and having access to a quality education. The “pipeline” for this group appears to us to be leaking at all levels, with the result that very few such persons rise to the highest levels of accomplishment/contribution in our field. This is subtly different from the second area, encouraging females to elect to join the ranks of applicants for the highest levels positions, in our case for ladder faculty positions. In our field, the pipeline is full of roughly equal numbers of males and females through the Ph.D. But at that juncture the pipeline spring a substantial leak, with a given male Ph.D. recipient being roughly three times more likely to apply for employment at the highest level, for us appointment as Assistant Professor. The statistics above certainly support the notion that focus in these two areas is warranted.

**Student Access, Opportunities, Development, and Retention**

Attrition rates do not differ significantly by gender for undergraduate or graduate students in our program. There is thus no “smoking gun” for gender inequities in Chemistry in these programs. So far as we know, we do not have data for attritions rates broken down by race. Sadly, the numbers of blacks, Hispanics, and Native Americans are sufficiently small that such data at the Department level would be suspect in any event. It would be useful to have such data for, say, the Sciences, College, etc.

The following substantive actions are all visible reminders that this Departments supports a diverse student (and faculty and staff) population:

- Our graduate student group has taken an interest in diversity issues in our field. With financial support from the department, they have sponsored a series of seminars and panel presentations dealing with these issues. About 10% of our graduate students have elected to attend such events.

- The department several years ago outfitted and designated a small space as a “mother’s room.” This room is used by graduate students (and faculty and staff members) who are nursing mothers.
• Several years ago, we moved our seminars from a start time of 4:30 pm to 4:00 pm, in order to allow persons who pick up children at daycare (female and male!) to attend an entire seminar and pick up their children in a timely fashion.

**Staff and Faculty Diversity**

At least with respect to gender, the statistics noted above indicate our staff is relatively diverse. The bigger problem has been the faculty. Twenty years ago there were no women on our ladder faculty. Ten years ago there were two. Today, there are five (two full professors and three assistant professors). Of the last 17 hires, since 1995, a remarkable 7 out of 17 from underrepresented groups. Our department has more black persons on our faculty than any other chemistry department in the nation.

We believe it is extremely important to note that there has been no “reverse discrimination” in our hiring processes. In every case, the person we have hired has been the most qualified for the job. There is one thing that we have done that is somewhat unusual which has contributed to our success in hiring persons from underrepresented groups. We have whenever possible searched as broadly as possible with respect to academic area. We believe that this produces a more diverse applicant pool (compared to searching in one or a small number of narrowly defined academic areas), and in turn increases the chances that the most qualified applicant will be a member of an underrepresented group. This is possible because we are a large department, with extremely diverse academic interests.

**Curriculum and Research**

Chemistry is a physical science. The selection of the subject matter of our curriculum and research is thus less important in this context than is the communication of the curriculum and conduct of the research in a way that is diversity-friendly. Our faculty and staff are well aware that it is important to conduct themselves in a way that equally treats and respects persons of all races and both genders.

**Climate**

The sciences, and chemistry in particular, have historically been the bastion of white males. Over roughly the past 25 years, this culture has in many chemistry departments been turned on its head. Chemistry departments nationwide have witnessed the success as faculty members of members of historically underrepresented groups, and that having these persons on the faculty enhances recruitment of the most talented graduate students. These departments are bending over backwards to improve their diversity.

The presence of a critical mass of women (five on the tenure line) in Chemistry at UW, not to mention a very large graduate population of women, has made us all more aware of how to create a female-friendly environment. I imagine we still have much to learn about creating such a climate for other underrepresented groups. I look forward to learning thoughts and practices your committee is able to share with us concerning these next steps.