AFFIRMATIVE ACTION PLAN PAMS, NCSU

The School of Physical and Mathematical Sciences of North Carolina State University reaffirms its determination to insure that its policies with regard to recruitment, hiring, and personnel practice do not discriminate on the basis of sex, race or creed. Beyond this, moreover, the School plans to "make additional efforts to recruit, employ, and promote qualified members of excluded groups, even if that exclusion cannot be traced to discrimination."*(In this document, the term "excluded groups" will be taken to mean women and racial minorities). The School asserts its good faith in making efforts to insure the rectification of any past discrimination, and plans to establish procedures and policies which will both make it transparently clear that no discriminatory practices now exist in the School, and also to provide for an established grievance procedure for any faculty or staff associated with the School who feel that they have suffered on the basis of discrimination. As will be outlined in detail below, the existing grievance procedure will be supplemented and a detailed statement of the new process will be developed. Furthermore, certain requirements will be made of department heads in the School concerning careful documentation of their efforts in recruitment, hiring, promotions, and salary adjustments, so that a file of such activities, particularly with regard to possible allegations of discrimination, will be available in all cases. Several changes in recruitment and hiring policy practices are suggested which should help stimulate the employment of qualified members of excluded groups, and specific goals for such employment are also given.

Before the detailed statement of School's Affirmative Action Plan

* HEW wording

is given, it is perhaps best to describe certain constraints to which the School is subject in hiring any substantial number of members of excluded groups. First, it is fair to say (see Tables 1 and 2), that there is a particularly small pool of qualified persons in the Physical and Mathematical Sciences who are classified as women, blacks, or other minority ethnic groups, and those who are qualified are in great demand. This provides a challenge to the School of Physical and Mathematical Sciences for the training of persons belonging to these excluded groups to reach professional status in our fields; on the other hand, the fact that not many qualified persons from those groups are available in these disciplines makes it difficult to recruit them in large numbers. Second, the School of Physical and Mathematical Sciences will have relatively few academic positions available for filling in the immediate future. For the last four years, there has been an average net increase of faculty of seven per year, though the figures are decreasing. Clearly, no large scale change in the relative percentage of excluded groups can take place unless there are substantial numbers of positions that might be filled. Finally, in its zeal to change such relative percentages, the School must not err in the direction of reverse discrimination which might lead to the selection of unqualified persons. As is mentioned in the letter of October 1, 1972 from Mr. Pottinger to college and university presidents, "to take such action on grounds of race, ethnicity, sex or religion constitutes discrimination in violation of the Executive Order."

Accordingly the School of Physical and Mathematical Sciences plans to institute the following policies:

1. In making known the availability of any new positions, the department heads will state specifically that applications from members of excluded

groups are welcome. A typical phrase to be used might be "N. C. State U. follows Affirmative Action guidelines." Any Search Committees appointed to reach and screen applicants for a specific position will act in consultation with the departmental EEO officer (see below). Efforts will be made to publicize any vacancy in professional journals and employment registers,through a broad selection of other universities, and in any fashion the committee may decide will help to spread the information as widely as possible.

2. The department heads will keep a complete file on all correspondence involving potential employees of their department, including information as to sex or race of the applicant wherever available. Unsolicited applications will be given full attention.

3. In the event that a member of an excluded group is not selected for a particular position, the department head should be able to document on the basis of qualifications the decision made in passing over the candidate from the excluded group.

4. A current file of salary and rank status, and the actions taken concerning these, of faculty and staff members should be kept and reviewed annually by department heads and by the school dean to see if any discriminating practices are in effect.

5. Equal Employment Opporturnity (EEO) officers will be appointed in each department. The existence and functions of this office should be made clear to all faculty and staff members in the departments of PAMS.

6. A School of PAMS Grievance Committee will be appointed to whom the EEO officers may report, and to serve as liaison with the University Grievance Committee. This committee should also maintain a cumulative account of progress in regard to hiring and promoting, based on data

received from department heads, and will provide annual reports to the
dean concerning the School's progress in meeting the goals specified in
this plan.

7. A school committee will be appointed with the goal of recommending
   policies and practices which will increase the number of members
   of excluded groups who study physical and mathematical sciences both
   at the graduate and undergraduate levels, with the aim of entering these
   as a profession. The committee will include a member of each department
   in the school. The committee will consult with national professional
   societies in determining suitable methods for recruiting students, and with
   the university Department of Information Services for help in publicizing
   its efforts. The committee will make annual progress reports to the dean
   of the school. Table 3 gives the current graduate enrollment in the school
   broken down by excluded groups.

8. In view of the small number of SPA employees in PAMS (see Table 4), it is
   deemed impractical for the School to provide training programs to help
   them advance.

9. Specifically, the School of Physical and Mathematical Sciences sets the
   following goals:

   a. Currently, the breakdown by race and sex among academic employees
      is given in Table 4. We propose that four females and one black
      male be recruited in the next three years. One of these should be at
      the Professor level. One reason why the salary of excluded groups
      is lower than the School average is that such members are in relatively
      lower ranks. This is one reason why our goal includes the recruitment
      of a woman or a Black at the Full Professor level.

   b. The breakdown by race and sex for non-academic personnel is shown
      in Table 5, to be compared with local availability figures given

in Table 6. Our proposal is that three black female clerical personnel
be added in the SPA ranks in the next three years.

10. If our goals are met precisely (assuming the appointments were for
    nine month contracts) the relevant percentages for EPA personnel
    would be raised from seven to ten percent for white females and from
    one to two percent for black males. A study of Tables 1 and 2 will
    indicate that these percentages are above the national availability
    figures for the Physical and Mathematical Sciences.

SCHOOL Physical and Mathematical Sciences
COMPLETED BY J. D. Memory
DATE January 9, 1974

N. C. STATE UNIVERSITY
AFFIRMATIVE ACTION PLAN
SPA PERSONNEL

TABLE I
PRESENT SPA COMPLEMENT

TABLE II
PROJECTED SPA COMPLEMENT FOR
ACADEMIC YEAR(S) 1973-74
(Reflecting Anticipated Promotions
and your Projected Hiring Goals)

FULL-TIME	WHITE M	WHITE F	BLACK M	BLACK F	OTHER M	OTHER F	TOTAL M	TOTAL F		WHITE M	WHITE F	BLACK M	BLACK F	OTHER M	OTHER F	TOTAL M	TOTAL F
Officials & Managers	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0
Professionals	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0
Technicians	10	8	1	0	1	0	12	8		10	8	1	0	1	0	12	8
Sales	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0
Clerical	3	46	0	2	0	0	3	48		3	45	0	3	0	0	3	48
Craftsman	3	0	0	0	0	0	3	0		3	0	0	0	0	0	3	0
Operations (semi-skilled)	0	0	0	0	0	.0	0	0		0	0	0	0	0	0	0	0
Laborers	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0
Service Workers	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0
SUB-TOTAL	16	54	1	2	1	0	18	56		16	53	1	3	1	0	18	56
*PART-TIME																	
Officials & Managers	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0
Professionals	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0
Technicians	0	1	0	0	0	0	0	1		0	1	0	0	0	0	0	1
Sales	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0
Clerical	0	2	0	0	0	0	0	2		0	2	0	0	0	0	0	2
Craftsman	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0
Operations (semi-skilled)	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0
Laborers	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0
Service Workers	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0
SUB-TOTAL	0	3	0	0	0	0	0	3		0	3	0	0	0	0	0	3
TOTAL	16	57	1	2	1	0	18	59		16	56	0	0	0	0	18	59

*PA individuals working at least ½-time in a permanently established position.

SCHOOL Physical and Mathematical Sciences

COMPLETED BY   J. D. Memory

DATE   January 9, 1974

N. C. STATE UNIVERSITY

AFFIRMATIVE ACTION PLAN

SPA PERSONNEL

TABLE I
PRESENT SPA COMPLEMENT

TABLE II
PROJECTED SPA COMPLEMENT FOR
ACADEMIC YEAR(S) 1974-75
(Reflecting Anticipated Promotions and your Projected Hiring Goals)

FULL-TIME	WHITE M	F	BLACK M	F	OTHER M	F	TOTAL M	F		WHITE M	F	BLACK M	F	OTHER M	F	TOTAL M	F
Officials & Managers	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0
Professionals	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0
Technicians	10	8	1	0	1	0	12	8		10	8	1	0	1	0	12	8
Sales	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0
Clerical	3	46	0	2	0	0	3	48		3	44	0	4	0	0	3	48
Craftsman	3	0	0	0	0	0	3	0		3	0	0	0	0	0	3	0
Operations (semi-skilled)	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0
Laborers	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0
Service Workers	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0
SUB-TOTAL	16	54	1	2	1	0	18	56		16	52	1	4	1	0	18	56
*PART-TIME																	
Officials & Managers	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0
Professionals	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0
Technicians	0	1	0	0	0	0	0	1		0	1	0	0	0	0	0	1
Sales	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0
Clerical	0	2	0	0	0	0	0	2		0	2	0	0	0	0	0	2
Craftsman	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0
Operations (semi-skilled)	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0
Laborers	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0
Service Workers	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0
SUB-TOTAL	0	3	0	0	0	0	0	3		0	3	0	0	0	0	0	3
TOTAL	16	57	1	2	1	0	18	59		16	55	0	0	0	0	18	59

*SPA individuals working at least ½-time in a permanently established position.

SCHOOL _Physical and Mathematical Sciences_
COMPLETED BY _I. D. Memory_
DATE _January 9, 1974_

N. C. STATE UNIVERSITY
AFFIRMATIVE ACTION PLAN
SPA PERSONNEL

TABLE I
PRESENT SPA COMPLEMENT

TABLE II
PROJECTED SPA COMPLEMENT FOR
ACADEMIC YEAR(S) _1975-76_
(Reflecting Anticipated Promotions
and your Projected Hiring Goals)

FULL-TIME	WHITE M	WHITE F	BLACK M	BLACK F	OTHER M	OTHER F	TOTAL M	TOTAL F		WHITE M	WHITE F	BLACK M	BLACK F	OTHER M	OTHER F	TOTAL M	TOTAL F
Officials & Managers	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0
Professionals	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0
Technicians	10	8	1	0	1	0	12	8		10	8	1	0	1	0	12	8
Sales	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0
Clerical	3	46	0	2	0	0	3	48		3	43	0	5	0	0	3	48
Craftsman	3	0	0	0	0	0	3	0		3	0	0	0	0	0	3	0
Operations (semi-skilled)	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0
Laborers	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0
Service Workers	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0
SUB-TOTAL	16	54	1	2	1	0	18	56		16	51	1	5	1	0	18	56
*PART-TIME																	
Officials & Managers	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0
Professionals	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0
Technicians	0	1	0	0	0	0	0	1		0	1	0	0	0	0	0	1
Sales	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0
Clerical	0	2	0	0	0	0	0	2		0	2	0	0	0	0	0	2
Craftsman	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0
Operations (semi-skilled)	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0
Laborers	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0
Service Workers	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0
SUB-TOTAL	0	3	0	0	0	0	0	3		0	3	0	0	0	0	0	3
TOTAL	16	57	1	2	1	0	18	59		16	54	0	0	0	0	18	59

*SPA individuals working at least ½-time in a permanently established position.

SCHOOL Physical and Mathematical Sciences

COMPLETED BY   J. D. Memory

DATE January 9, 1974

WORK SHEET FOR TABLE II

FULL-TIME	Estimated Number of Positions Expected to Become Vacant (1973 - 1974)	Estimated Number of Newly Created Positions (1973 - 1974)	Total Positions to Be Filled (1973-1974)	Projected Hiring Goals (based on the total positions to be filled) (1973 - 1974) WHITE M	F	BLACK M	F	OTHER M	F	TOTAL M	F
Officials & Managers	0	0	0	0	0	0	0	0	0	0	0
Professionals	0	0	0	0	0	0	0	0	0	0	0
Technicians	0	0	0	0	0	0	0	0	0	0	0
Sales	0	0	0	0	0	0	0	0	0	0	0
Clerical	2	0	2	0	1	0	1	0	0	0	0
Craftsman	0	0	0	0	0	0	0	0	0	0	0
Operations (semi-skilled)	0	0	0	0	0	0	0	0	0	0	0
Laborers	0	0	0	0	0	0	0	0	0	0	0
Service Workers	0	0	0	0	0	0	0	0	0	0	0
SUB-TOTAL	2	0	2	0	1	0	1	0	0	0	0
TOTAL	2	0	2	0	1	0	1	0	0	0	0
*PERMANENT PART-TIME											
Officials & Managers	0	0	0	0	0	0	0	0	0	0	0
Professionals	0	0	0	0	0	0	0	0	0	0	0
Technicians	0	0	0	0	0	0	0	0	0	0	0
Sales	0	0	0	0	0	0	0	0	0	0	0
Clerical	0	0	0	0	0	0	0	0	0	0	0
Craftsman	0	0	0	0	0	0	0	0	0	0	0
Operations (semi-skilled)	0	0	0	0	0	0	0	0	0	0	0
Laborers	0	0	0	0	0	0	0	0	0	0	0
Service Workers	0	0	0	0	0	0	0	0	0	0	0
SUB-TOTAL	0	0	0	0	0	0	0	0	0	0	0
TOTAL	2	0	2	0	1	0	1	0	0	0	0

Note: A + B = C
      C = D

*SPA individuals working at least ½-time in a permanently established position.

AFFIRMATIVE ACTION PLAN

SCHOOL Physical and Mathematical Sciences   SPA PERSONNEL
COMPLETED BY J. D. Memory

DATE January 9, 1974

WORK SHEET FOR TABLE II

FULL-TIME	Estimated Number of Positions Expected to Become Vacant (1973 - 1975)	Estimated Number of Newly Created Positions (1973 - 1975)	Total Positions to Be Filled (1973-1975)	Projected Hiring Goals (based on the total positions to be filled) (1973 - 1975)							
				WHITE		BLACK		OTHER		TOTAL	
				M	F	M	F	M	F	M	F
Officials & Managers	0	0	0	0	0	0	0	0	0	0	0
Professionals	0	0	0	0	0	0	0	0	0	0	0
Technicians	0	0	0	0	0	0	0	0	0	0	0
Sales	0	0	0	0	0	0	0	0	0	0	0
Clerical	4	0	4	0	2	0	2	0	0	0	0
Craftsman	0	0	0	0	0	0	0	0	0	0	0
Operations (semi-skilled)	0	0	0	0	0	0	0	0	0	0	0
Laborers	0	0	0	0	0	0	0	0	0	0	0
Service Workers	0	0	0	0	0	0	0	0	0	0	0
SUB-TOTAL	4	0	4	0	2	0	2	0	0	0	0
TOTAL	4	0	4	0	2	0	2	0	0	0	0
*PERMANENT PART-TIME											
Officials & Managers	0	0	0	0	0	0	0	0	0	0	0
Professionals	0	0	0	0	0	0	0	0	0	0	0
Technicians	0	0	0	0	0	0	0	0	0	0	0
Sales	0	0	0	0	0	0	0	0	0	0	0
Clerical	0	0	0	0	0	0	0	0	0	0	0
Craftsman	0	0	0	0	0	0	0	0	0	0	0
Operations (semi-skilled)	0	0	0	0	0	0	0	0	0	0	0
Laborers	0	0	0	0	0	0	0	0	0	0	0
Service Workers	0	0	0	0	0	0	0	0	0	0	0
SUB-TOTAL	0	0	0	0	0	0	0	0	0	0	0
TOTAL	4	0	4	0	2	0	2	0	0	0	0

Note: A + B = C   *SPA individuals working at least ½-time in a permanently established position.
      C = D

SCHOOL/DEPARTMENT __PAMS__   EPA FACULTY   DATE __January 11, 1974__
COMPLETED BY __J. D. Memory__

TABLE I

PRESENT FACULTY COMPLEMENT
(According to June 15, 1973 Tabulation)

TABLE II

PROJECTED FACULTY COMPLEMENT
FOR ACADEMIC YEAR 1975-76
(Reflecting Anticipated Promotions and your Projected Hiring Goals)

	White		Black		Other		Total			White		Black		Other		Total	
FULL-TIME	M	F	M	F	M	F	M	F		M	F	M	F	M	F	M	F
Department Head	6	0	0	0	0	0	6	0		6	0	0	0	0	0	6	0
Professor	56	0	0	0	2	0	58	0		66	1	0	0	2	0	68	1
Associate Professor	37	0	0	0	1	0	38	0		44	1	0	0	5	0	49	1
Assistant Professor	50	3	0	0	3	0	53	3		37	7	1	0	0	0	38	7
Instructor	11	6	1	0	0	0	12	6		8	4	1	0	0	0	9	4
Lecturer	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0
SUB-TOTAL	160	9	1	0	6	0	167	9		161	13	2	0	7	0	170	13
PERMANENT PART-TIME																	
Professor	2	0	0	0	0	0	2	0		1	0	0	0	0	0	1	0
Associate Professor	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0
Assistant Professor	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0
Instructor	1	0	0	0	0	0	1	0		1	0	0	0	0	0	1	0
Lecturer	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0
Visiting	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0
SUB-TOTAL	3	0	0	0	0	0	3	0		2	0	0	0	0	0	2	0
TOTAL	163	9	1	0	6	0	169	9		163	13	2	0	7	0	172	13

*PERMANENT PART-TIME - Individuals working less than full-time and being paid accordingly but hired for term of 12 months or more or for a stated term of one academic year or more. This does not include joint appointments which should be reported as full-time by their major departments. The numbers which need to be filled in here are not supplied in the October tabulation and will need to come from your own

SCHOOL Physical and Mathematical Sciences   SPA PERSONNEL
COMPLETED BY J. D. Memory   DATE January 9, 1974

WORK SHEET FOR TABLE II

FULL-TIME	Estimated Number of Positions Expected to Become Vacant (1973 - 1976)	Estimated Number of Newly Created Positions (1973 - 1976)	Total Positions to Be Filled (1973-1976)	Projected Hiring Goals (based on the total positions to be filled) (1973 - 1976)							
				WHITE		BLACK		OTHER		TOTAL	
				M	F	M	F	M	F	M	F
Officials & Managers	0	0	0	0	0	0	0	0	0	0	0
Professionals	0	0	0	0	0	0	0	0	0	0	0
Technicians	0	0	0	0	0	0	0	0	0	0	0
Sales	0	0	0	0	0	0	0	0	0	0	0
Clerical	6	0	6	0	3	0	3	0	0	0	0
Craftsman	0	0	0	0	0	0	0	0	0	0	0
Operations (semi-skilled)	0	0	0	0	0	0	0	0	0	0	0
Laborers	0	0	0	0	0	0	0	0	0	0	0
Service Workers	0	0	0	0	0	0	0	0	0	0	0
SUB-TOTAL	0	0	0	0	0	0	0	0	0	0	0
TOTAL	6	0	6	0	3	0	3	0	0	0	0
*PERMANENT PART-TIME											
Officials & Managers	0	0	0	0	0	0	0	0	0	0	0
Professionals	0	0	0	0	0	0	0	0	0	0	0
Technicians	0	0	0	0	0	0	0	0	0	0	0
Sales	0	0	0	0	0	0	0	0	0	0	0
Clerical	0	0	0	0	0	0	0	0	0	0	0
Craftsman	0	0	0	0	0	0	0	0	0	0	0
Operations (semi-skilled)	0	0	0	0	0	0	0	0	0	0	0
Laborers	0	0	0	0	0	0	0	0	0	0	0
Service Workers	0	0	0	0	0	0	0	0	0	0	0
SUB-TOTAL	0	0	0	0	0	0	0	0	0	0	0
TOTAL	6	0	6	0	3	0	3	0	0	0	0

Note: A + B = C   *SPA individuals working at least ½-time in a permanently established position.
        C = D

AFFIRMATIVE ACTION PLAN
EPA FACULTY

SCHOOL/DEPARTMENT _____ PAMS _____   DATE _____ January 11, 1974 _____

COMPLETED BY _____ J. D. Memory _____

		TABLE III TOTAL FACULTY COMPLEMENT (According to June 15, 1973 Tabulation) See Table I							TABLE IV PROJECTED FACULTY COMPLEMENT (For Academic Year 1975-76) See Table III					
	Availability Percentages(a)	Full Time		Part Time		Total		See Note(e)		Full Time		Part Time		Total	
		No.	%(b)	No.	%(c)	No.	%(d)			No.	%	No.	%	No.	%
White Male		160	91	3	100	163	91			161	88	2	100	163	88
White Female		9	5	0	0	9	5			13	8	0	0	13	8
Black Male		1	1	0	0	1	1			2	1	0	0	2	1
Black Female		0	0	0	0	0	0			0	0	0	0	0	0
Other Male		6	3	0	0	6	3			7	3	0	0	7	3
Other Female		0	0	0	0	0	0			0	0	0	0	0	0
TOTAL		176	100%	3	100%	179	100%			183	100%	2	100%	185	100%

(a) These percentages should be taken directly from the charts you completed in questions #2 or #4 of Form I.
(b) These percentages should be computed on the basis of total number of full-time.
(c) These percentages should be computed on the basis of total number of part-time. Visiting full-time
(d) These percentages should be computed on the basis of total number of full-time plus part-time. Visiting full-time + part-time
(e) In this column: place a + (plus) if the percentage in the column marked Total in Table III is higher than the percentage in the corresponding column marked Availability or place a - (minus) if the percentage in the column marked Total is lower than the percentage in the corresponding column marked Availability.

SCHOOL/DEPARTMENT ___PAMS___

COMPLETED BY ___J. D. Memory___

AFFIRMATIVE ACTION PLAN
EPA NON-FACULTY

DATE ___January 11, 1974___

TABLE V
PRESENT NON-FACULTY COMPLEMENT
(According to June 15, 1973 Tabulation)

TABLE VI
PROJECTED NON-FACULTY COMPLEMENT
FOR ACADEMIC YEAR 1975-76
(Reflecting Anticipated Promotions
and your Projected Hiring Goals)

FULL-TIME	White		Black		Other		Total			White		Black		Other		Total	
	M	F	M	F	M	F	M	F		M	F	M	F	M	F	M	F
Officials & Managers	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0
Professionals	9	0	0	0	0	0	9	0		10	0	0	0	0	0	10	0
Technicians	0	2	0	0	0	0	0	2		0	2	0	0	0	0	0	2
SUB-TOTAL	9	2	0	0	0	0	9	2		10	2	0	0	0	0	10	2
PERMANENT PART-TIME																	
Officials & Managers	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0
Professionals	3	0	0	0	0	0	3	0		1	0	0	0	0	0	1	0
Technicians	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0
SUB-TOTAL	0	0	0	0	0	0	0	0		1	0	0	0	0	0	1	0
TOTAL	12	2	0	0	0	0	12	2		11	2	0	0	0	0	11	2

AFFIRMATIVE ACTION PLAN
EPA NON-FACULTY

SCHOOL/DEPARTMENT _____ PAMS _____   DATE _____ January 11, 1974 _____

COMPLETED BY _____ J. D. Memory _____ .

TABLE VII
TOTAL NON-FACULTY COMPLEMENT
(According to June 15, 1973 Tabulation)
See Table I

TABLE VIII
PROJECTED NON-FACULTY COMPLEMENT
(For Academic Year 1975-76)
See Table III

	Availability Percentages	Full Time		Part Time		Total			Full Time		Part Time		Total	
		No.	%	No.	%	No.	%		No.	%	No.	%	No.	%
White Male		9	82	3	100	12	86		10	83	1	100	11	85
White Female		2	18	0	0	2	14		2	17	0	0	2	15
Black Male		0	0	0	0	0	0		0	0	0	0	0	0
Black Female		0	0	0	0	0	0		0	0	0	0	0	0
Other Male		0	0	0	0	0	0		0	0	0	0	0	0
Other Female		0	0	0	0	0	0		0	0	0	0	0	0
TOTAL		11	100%	3	100%	14	100%		12	100%	1	100%	13	100%

TABLE I

DOCTORATES AWARDED TO WOMEN 1960 – 1969

Field	Total number of Doctorates earned	Total number of Doctorates earned by women	% of Doctorates earned by women
Mathematical Sciences			
Mathematics	5,538	348	6.46
Statistics	781	53	6.79
Physical Sciences			
Chemistry	12,983	881	6.82
Geology	2,143	53	2.47
Geophysics	203	3	1.48
Meteorology	245	2	.82
Oceanography	222	4	1.80
Physics	8,415	168	2.00
Computer Sciences (1964 – 1969 only)	99	3	3.03
Subtotals	30,629	1,515	4.95
National totals in all fields	154,111	17,929	11.63

Source: Data prepared June 1971 by the Council for University Women's Progress at the University of Minnesota.

Note: A recent study (The Woman Doctorate in America, by Helen Austin) indicated that 91% of women doctorates were working, 81% full-time. (Only 81% of all men are in the labor force. Of men with doctorates, only 69% work full-time in their field of study.)

TABLE I (b)

DOCTORATES AWARDED TO WOMEN BY THE LARGEST DEGREE
GRANTING INSTITUTIONS AND THE BEST RANKED DEPARTMENTS IN THE FIELD 1967 – 1969

Department	Total Women	% Women
Chemistry	179	8.5
Computer Sciences	2	6.0 (1968-69)
Geology & Geophysics	17	4.9
Mathematics	55	5.5
Physics	40	2.4
Statistics	8	5.2

Table 2

Black American PhD's in Physical and Mathematical Sciences, 1958 – 1970

Year PhD Awarded

Field of Doctorate	58	59	60	61	62	63	64	65	66	67	68	69	70	58-70 Total	% of Total Black PhD's [*]
Physics and Astronomy	0	2	1	.2	4	4	3	10	7	1	2	6	2	44	2.0%
Chemistry	10	7	8	12	15	16	18	17	19	17	18	20	18	195	9.0%
Biochemistry	3	0	5	7	2	1	4	9	9	3	4	5	4	56	2.6%
Mathematical Sciences	2	2	3	2	2	6	4	2	9	9	8	11	4	64	3.0%
Earth Sciences	0	1	1	1	0	1	1	1	0	0	2	2	0	10	0.5%
PMS Subtotals	15	12	18	24	23	28	30	39	44	30	34	44	28	369	17%
Yearly totals in all fields	120	115	114	142	139	169	166	158	177	178	217	218	255	2168[*]	
Percentage	12.5	10.4	15.8	16.9	16.5	16.6	18.0	24.7	24.9	17.0	15.7	20.2	11.0		

[*] Total of Black Americans PhD's awarded in all fields (1958 – 70) = 2168

Additional Items Relevant to the Information in Table 2

1. As of 1969, there were approximately 2300 black Ph.D.'s in the U. S., representing less than 1% of the country's earned doctorates[*].

2. Between 1876 and 1969, approximately 650 blacks received natural science doctorates, less than 1% of the doctorates awarded in natural sciences[*].

3. Of 1,096 black respondents to a Ford Foundation survey, 29% earned their doctorates in Education, 26% in the Social Sciences, 13% in Biological Science, 12% in Physical Science, 12% in the Humanities, and 8% in the other fields[*].

4. About 80% of Negro doctorates, who are employed by colleges and universities, are employed at predominately black institutions[*].

5. In the Mathematical Sciences, of 1281 doctorates awarded by U. S. universities in 1971-72, information on the race and sex of recipients was obtained for 848. Of the 848, 9 were blacks (approximately 1%)[**].

[*]Information summarized from a Ford Foundation Survey: <u>Black American Doctorates</u> and <u>Negroes in Science</u>: <u>Natural Science Doctorates, 1876-1969</u>.

[**]<u>Notices of the American Mathematical Society</u>, October 1972.

Table 3

GRADUATE STUDENT DISTRIBUTION, PAMS

		men		women	
		white	black	white	black
Biochem.	Ph.D.	10	1	9	1
	MS	1	0	2	1
Physics	Ph.D.	35	0	3	0
	MS	18	0	5	0
Chem.	Ph.D.	19	2	2	0
	MS	22	0	1	0
Math.	Ph.D.	18	1	2	0
	MS	29	3	6	0
Statistics	Ph.D.	23	0	5	1
	MS	12	0	6	0
Comp. Sci.	MS	3	0	1	0
Geosci.	Ph.D.	4	0	0	0
	MS	24	0	3	0
Total		218	7	45	3

Table 4

Academic Employees in PAMS with Nine Month Contracts

	White-Male	White-Female	Black-Male
Number	119	9	1
Percent	92%	7%	1%
Average Salary	$16,366	$10,522	$9,200

Academic Employees in PAMS with Twelve Month Contracts

	White-Male	White-Female	Black-Male
Number	43	2	0
Percent	95%	5%	0%
Average Salary	$19,435	$13,900	$ -

Table 5

Non-Academic Employees in PAMS

White-Male	White-Female	Black-Male	Black-Female
11	48	0	2

Table 6

OCCUPATIONS OF WAKE COUNTY LABOR FORCE* BY SEX AND ETHNIC CLASSIFICATIONS, 1972†

| | WHITE | | | | BLACK | | | | OTHER MINORITIES | | | | |
| | MALE | | FEMALE | | MALE | | FEMALE | | MALE | | FEMALE | | |
	N	%	N	%	N	%	N	%	N	%	N	%	TOTAL
Officials & Managers	10,188	81.3	1,748	14.0	407	3.2	133	1.1	31	0.2	18	0.1	12,525
Professionals	5,947	44.9	5,749	43.4	453	3.4	1,016	7.7	56	0.4	33	0.2	13,254
Technicians	9,186	76.3	2,201	18.3	301	2.5	246	2.0	87	0.7	12	0.1	12,033
Sales	6,922	66.0	3,126	29.8	168	1.6	273	2.6	6	0.1	0		10,495
Clerical	5,541	20.3	19,379	71.1	887	3.3	1,357	5.0	27	0.1	48	0.2	27,239
Craftsman	10,396	78.0	663	5.0	2,087	15.6	178	1.3	12	0.1	0		13,336
Operations (semi-skilled)	6,397	43.7	3,493	23.9	2,775	19.0	1,883	12.9	64	0.4	10	0.1	14,622
Laborers	1,954	43.2	260	5.7	2,067	45.7	183	4.0	60	1.3	0		4,524
Service workers	5,489	27.2	4,722	23.4	3,548	17.6	6,357	31.5	57	0.3	23	0.1	20,196
TOTAL	62,020	48.4	41,341	32.2	12,693	9.9	11,626	9.1	400	0.3	144	0.1	128,224

*Figures include persons employed in 1972 and persons with experience but unemployed.
†Numbers are based on 1972 figures, percentages are based on 1970 census data.

DATE: January 10, 1974

<u>AVAILABILITY STUDY REPORTING FORMS</u>   Form No. 1, page one

School/Department: <u>Department of Chemistry</u>

Individual Completing Form: <u>R. H. Loeppert</u>

PART I - AVAILABLE POOL OF PROSPECTIVE FACULTY MEMBERS

1. State below the requirements as to education, experience, and
achievement for members of your faculty at each academic rank. Can-
didates for faculty positions must normally have a Ph.D. in Chemistry,
experience at least as a teaching assistant, and aptitude for teach-
ing and research as indicated through references.

Normally new faculty members are hired at the rank of assistant
professor. Appointments to higher levels are made through promotions
from within the faculty.

2. How many people in the United States meet the requirements in No. 1?
(Complete the chart below for each type of appointment described above.

	Number	Percent
White Male	27,767	92.55
White Female	1,393	4.65
Black Male	258	0.86
Black Female	12	0.04
Other Male	543	1.81
Other Female	27	0.09
TOTAL	30,000	100%

3. Explain how you arrived at the figures in the chart on page one.

    a. List sources of data:

        Ref. 1: 1973 Report of Chemists' Salaries and Employment
            Status, Office of Manpower Studies, American Chemical
            Society.

        Ref. 2: American Science Manpower 1970, A Report of the
            National Register of Science and Technical Personnel,
            National Science Foundation.

        Ref. 3: Chemical and Engineering News, Jan. 8, 1973,
            page 25.

    b. Describe the method(s) used for arriving at the figures
recorded in the chart on page one. If you based your figures
on a representative sample, please explain below: Percentages were
based on numbers given in reference 1 for total Ph.D's in the chemical
sciences: 46,000 total; 415 black; 875 total of oriental, Spanish
surnamed, and American Indians. It was assumed that the percentage
females in each ethnic group is the same as the overall percentage
(4.8%).
Since the total number of Ph.D.'s from Reference 1 includes chemical
engineers, biochemists and other "chemical scientists" whose training
would not be appropriate for our faculty, the numbers given in the
chart were based on the total number of Ph.D. chemists given in Ref. 2
    c. Evaluate the accuracy and/or completeness of the data you   (29,985).
have used: Although the data are the best we could obtain they
should not be considered reliable. The numbers in the "other"
ethnic group are based on totals of oriental, American Indians and
those with Spanish surnames as given in reference 1 and is probably
higher than the true number. The percentage females used is some-
what higher than that given in reference 2. (4.1%). The number of
blacks is somewhat higher than that given in reference 3 (225-250).

    d. Indicate particular problems encountered in trying to ascertain
availability information: Data on ethnic groups is meager.
Only recently has it been fashionable (or even legal) to
designate ethnic groups in personnel files.

SCHOOL/DEPARTMENT Chemistry
COMPLETED BY   R. H. Loeppert

DATE Jan. 10, 1974

TABLE I

PRESENT FACULTY COMPLEMENT
(According to October 1973 Tabulation)
June 15, '73

TABLE II

PROJECTED FACULTY COMPLEMENT
FOR ACADEMIC YEAR 1975-76
(Reflecting Anticipated Promotions
and your Projected Hiring Goals)

FULL-TIME	White M	White F	Black M	Black F	Other M	Other F	Total M	Total F		White M	White F	Black M	Black F	Other M	Other F	Total M	Total F
Department Head	1									1						1	
Professor	14						15			19	0					19	0
Associate Professor	9						9			7	0					7	0
Assistant Professor	7						7			6	1					6	1
Instructor	3	2					3	2		1	2					1	2
Lecturer																	
SUB-TOTAL	34	2					34	2		34	3					34	3
*PERMANENT PART-TIME																	
Professor																	
Associate Professor																	
Assistant Professor																	
Instructor																	
Lecturer																	
Visiting																	
SUB-TOTAL	0	0					0	0									
TOTAL	34	2					34	2		34	3					34	3

*PERMANENT PART-TIME - Individuals working less than full-time and being paid accordingly but hired for
a term of 12 months or more or for a stated term of one academic year or more. This does not include
joint appointments which should be reported as full-time by their major departments. The numbers which
need to be filled in here are not supplied in the October tabulation and will need to come from your own

AFFIRMATIVE ACTION PLAN
EPA FACULTY

SCHOOL/DEPARTMENT Chemistry   DATE Jan. 10, 1974

COMPLETED BY R. H. Loeppert

	TABLE III TOTAL FACULTY COMPLEMENT (According to October 1973 Tabulation) See Table I								TABLE IV PROJECTED FACULTY COMPLEMENT (For Academic Year 1975-76) See Table III					
	Availability Percentages	Full Time		Part Time		Total		See Note(e)		Full Time		Part Time		Total	
		No.	%(b)	No.	%(c)	No.	%(d)			No.	%	No.	%	No.	%
White Male	92.55	34	94.4			34	94.4	+		34	91.9			34	91.9
White Female	4.65	2				2	5.6	+		3	8.1			3	8.1
Black Male	0.86	0				0	-	-		0	-			0	-
Black Female	0.04	0				0	-	-		0	-			0	-
Other Male	1.81	0				0	-	-		0	-			0	-
Other Female	0.09	0				0	-	-		0	-			0	-
TOTAL	100	36	100%		100%	36	100%			37	100%		100%	37	100%

(a) These percentages should be taken directly from the charts you completed in questions #2 or #4 of Form I.
(b) These percentages should be computed on the basis of total number of full-time.
(c) These percentages should be computed on the basis of total number of part-time.
(d) These percentages should be computed on the basis of total number of full-time plus part-time.
(e) In this column: place a + (plus) if the percentage in the column marked Total in Table III is higher than the percentage in the corresponding column marked Availability or place a - (minus) if the percentage in the column marked Total is lower than the percentage in the corresponding column marked Availability.

SCHOOL/DEPARTMENT _PAMS_ Chemistry_____
COMPLETED BY ——J. D. Memory————

DATE _January 11, 1974_

TABLE V
PRESENT NON-FACULTY COMPLEMENT
(According to June 15, 1973 Tabulation)

TABLE VI
PROJECTED NON-FACULTY COMPLEMENT
FOR ACADEMIC YEAR 1975-76
(Reflecting Anticipated Promotions
and your Projected Hiring Goals)

FULL-TIME	White M	White F	Black M	Black F	Other M	Other F	Total M	Total F		White M	White F	Black M	Black F	Other M	Other F	Total M	Total F
Officials & Managers																	
Professionals																	
Technicians		2						2			2						2
SUB-TOTAL		2						2			2						2
PERMANENT PART-TIME																	
Officials & Managers																	
Professionals																	
Technicians																	
SUB-TOTAL		0									0						
TOTAL		2									2						

AFFIRMATIVE ACTION PLAN
EPA NON-FACULTY

SCHOOL/DEPARTMENT __PAMS- Chemistry__   DATE __January 11, 1974__

COMPLETED BY __J. D. Memory__

TABLE VII
TOTAL NON-FACULTY COMPLEMENT
(According to June 15, 1973 Tabulation)
See Table I

TABLE VIII
PROJECTED NON-FACULTY COMPLEMENT
(For Academic Year 1975-76)
See Table III

	Availability Percentages	Full Time No.	Full Time %	Part Time No.	Part Time %	Total No.	Total %		Full Time No.	Full Time %	Part Time No.	Part Time %	Total No.	Total %
White Male														
White Female		2	100			2	100		2	100			2	100
Black Male														
Black Female														
Other Male														
Other Female														
TOTAL		2	100%		100%	2	100%		2	100%		100%	2	100%

DATE: January 10, 1974

<u>AVAILABILITY STUDY REPORTING FORMS</u>   **Form No. 1, page one**

School/Department: Computer Science

Individual Completing Form: N. F. Williamson

PART I - AVAILABLE POOL OF PROSPECTIVE FACULTY MEMBERS

1. Indicate below the requirements as to education, experience, and achievement for members of your faculty at each academic rank.

      See attached sheet

2. How many people in the United States meet the requirements in #1?
Fill in the chart below for each type of appointment described above.

	Master's		Ph.D.	
	Number	Percent	Number	Percent
White Male	10840	86	1472	92
White Female	739	6	64	4
Black Male	123	1	6	.4
Black Female	62	.5	2	.1
Other Male	431	3.5	48	3
Other Female	123	1	8	.5
TOTAL	12318	100%	1600	100%

1.

Instructor - Master's degree or equivalent professional experience. Evidence
of potential in teaching, or research in computer science.
Acceptability as a graduate school candidate in computer science
or a related field.

Assistant Professor - Ph.D. or equivalent professional experience. Evidence of
ability or definite promise as a teacher, or research scholar in
computer science.

Associate Professor - Ph.D. or equivalent professional experience. Distinction
as a teacher, or independent research scholar in computer science.
Ability to supervise teaching and research in computer science.

Professor - Ph.D. or equivalent professional experience. Outstanding reputation
as a teacher, or independent research scholar in computer science.
Experience in supervising teaching, or research in computer science.
Participation in institutional affairs. Established reputation
within the field of computer science.

3. Explain how you arrived at the figures in the chart on page one.

    a. List sources of data:

        See attached sheet

    b. Describe the method(s) used for arriving at the figures
    recorded in the chart on page one. If you based your figures
    on a representative sample, please explain below:

        See attached sheet

    c. Evaluate the accuracy and/or completeness of the data you
    have used:

        As accurate and complete as available survey information allows.

    d. Indicate particular problems encountered in trying to ascertain
    available information:

        No available survey information for the years 1972 and 1973.
        Difficulty in trying to estimate the number of computer related
        personnel trained before 1965.

3. a. and b.

Year(s)	Masters Degree	Ph.D.
1965-70[1]	3828	270
1970-71[2]	2070	335
1971-72[3]	2500	400
1972-73[3]	2800	450
Sub-total	11198 *	1455 *
	1120	145
Total	12318	1600

The approximate percentages used for minorities were taken from reference 4. The percentages listed were adjusted to take into consideration the fact that they were based on the whole Information Processing population, whereas we are concerned only with master's and Ph.D. level training.

1. The State of the Computer Industry in the U. S. AFIPS Press, Montvale, N. J., 1973, p. 30.

2. Sources of Trained Computer Personnel - A Quantitative Survey. AFIPS Conf. Proceedings, Vol. 40, AFIPS Press, Montvale, N. J., p. 639.

3. Estimates based on Table XII, p. 638 of 2.

4. Summary report of the 1971 AFIPS Information Processing Personnel Survey. AFIPS Press, Montvale, N. J. (Charts 2 and 3).

* Estimate based on 10% to allow for previously trained personnel for the time period prior to 1965.

SCHOOL/DEPARTMENT __Computer Science__
COMPLETED BY __N. F. Williamson__

DATE __January 10, 1974__

TABLE I

PRESENT FACULTY COMPLEMENT
(According to October 1973 Tabulation)

TABLE II

PROJECTED FACULTY COMPLEMENT
FOR ACADEMIC YEAR 1975-76
(Reflecting Anticipated Promotions
and your Projected Hiring Goals)

FULL-TIME	White M	White F	Black M	Black F	Other M	Other F	Total M	Total F	///	White M	White F	Black M	Black F	Other M	Other F	Total M	Total F
Department Head	1						1		///	1						1	
Professor	3						3		///	5						5	
Associate Professor	2						2		///	6						6	
Assistant Professor	10						10		///	6	1					6	1
Instructor	2						2		///	2						2	
Lecturer									///								
SUB-TOTAL									///								
*PERMANENT PART-TIME									///								
Professor									///								
Associate Professor									///								
Assistant Professor									///								
Instructor	1						1		///	1						1	
Lecturer									///								
Visiting									///								
SUB-TOTAL									///								
TOTAL	19						19		///	21	1					21	1

*PERMANENT PART-TIME - Individuals working less than full-time and being paid accordingly but hired for a term of 12 months or more or for a stated term of one academic year or more. This does not include joint appointments which should be reported as full-time by their major departments. The numbers which need to be filled in here are not supplied in the October tabulation and will need to come from your own

AFFIRMATIVE ACTION PLAN
EPA FACULTY

SCHOOL/DEPARTMENT Computer Science   DATE   January 10, 1974

COMPLETED BY   N. F. Williamson

		TABLE III TOTAL FACULTY COMPLEMENT (According to October 1973 Tabulation) See Table I								TABLE IV PROJECTED FACULTY COMPLEMENT (For Academic Year 1975-76) See Table III					
	Availability	Full Time		Part Time		Total		See		Full Time		Part Time		Total	
	Percentages	No.	%(b)	No.	%(c)	No.	%(d)	Note(e)		No.	%	No.	%	No.	%
White Male	92	18	100	1	100	19	100	+		20	99.5	1	100	21	99.5
White Female	4									1	0.5			1	0.5
Black Male	0.4														
Black Female	0.1														
Other Male	3.0														
Other Female	0.5														
TOTAL	100.0	18	100%	1	100%	19	100%			21	100%	1	100%	22	100%

(a) These percentages should be taken directly from the charts you completed in questions #2 or #4 of Form I.
(b) These percentages should be computed on the basis of total number of full-time.
(c) These percentages should be computed on the basis of total number of part-time.
(d) These percentages should be computed on the basis of total number of full-time plus part-time.
(e) In this column: place a + (plus) if the percentage in the column marked Total in Table III is higher
     than the percentage in the corresponding column marked Availability or place a - (minus) if the percentage
     in the column marked Total is lower than the percentage in the corresponding column marked Availability.

SCHOOL/DEPARTMENT PAMS-Computer Science

COMPLETED BY J. D. Memory

AFFIRMATIVE ACTION PLAN
EPA NON-FACULTY

DATE __ January 11, 1974 __

| TABLE V |
| PRESENT NON-FACULTY COMPLEMENT |
| (According to June 15, 1973 Tabulation) |

FULL-TIME	White		Black		Other		Total	
	M	F	M	F	M	F	M	F
Officials & Managers								
Professionals								
Technicians								
SUB-TOTAL								
PERMANENT PART-TIME								
Officials & Managers								
Professionals								
Technicians								
SUB-TOTAL								
TOTAL	0	0	0	0	0	0	0	0

| TABLE VI |
| PROJECTED NON-FACULTY COMPLEMENT |
| FOR ACADEMIC YEAR 1975-76 |
| (Reflecting Anticipated Promotions and your Projected Hiring Goals) |

	White		Black		Other		Total	
	M	F	M	F	M	F	M	F
	0	0	0	0	0	0	0	0

SCHOOL/DEPARTMENT PAMS-Computer Science   DATE January 11, 1974

COMPLETED BY J. D. Memory

TABLE VII
TOTAL NON-FACULTY COMPLEMENT
(According to June 15, 1973 Tabulation)
See Table I

TABLE VIII
PROJECTED NON-FACULTY COMPLEMENT
(For Academic Year 1975-76)
See Table III

	Availability Percentages	Full Time		Part Time		Total			Full Time		Part Time		Total	
		No.	%	No.	%	No.	%		No.	%	No.	%	No.	%
White Male														
White Female														
Black Male														
Black Female														
Other Male														
Other Female														
TOTAL		0	100%	0	100%	0	100%		0	100%	0	100%	0	100%

DATE: January 10, 1974

AVAILABILITY STUDY REPORTING FORMS   Form No. 1, page one

School/Department: Geosciences

Individual Completing Form: C. J. Leith

PART I - AVAILABLE POOL OF PROSPECTIVE FACULTY MEMBERS

1. State below the requirements as to education, experience, and achievement
for members of your faculty at each academic rank.

See attached sheet.

2. How many people in the United States meet the requirements in #1?
(Complete the chart below for each type of appointment described above.

ASSISTANT PROFESSOR	Total Geoscience		Geology		Meteorol.		Oceanog.	
	Number	Percent	No.	%	No.	%	No.	%
White Male	830	95.4	531	94.8	253	97.3	46	92
White Female	37	4.3	28	5.0	5	1.9	4	8
Black Male	1	.1	0	0	1	0.4	0	0
Black Female	0	0	0	0	0	0	0	0
Other Male	2	.2	1	0.2	1	0.4	0	0
Other Female	0	0	0	0	0	0	0	0
TOTAL	870	100%	560	100	260	100	50	100

ASSOCIATE PROFESSOR

There is no possible way to estimate the number of qualified persons at the Associate
Professor level. The American Geological Institute estimates that the total number
of Ph.D.'s in geology is approximately 8500. No figures are available to indicate
the experience level distribution within this total. The AGI further estimates
that this total includes approximately 190 white females, 4 black males, 0 black
females, 19 other males, and 1 other female. The minority representation is so
minuscule as to be statistically insignificant. These data are included in a
(continued on attached sheet)

QUALIFICATIONS FOR FACULTY RANKS

Instructor

Ability or potential in teaching, research, extension, or another scholarly or germane creative activity.

A master's degree, an equivalent degree, or equivalent professional experience.

Assistant Professor

Ability or definite promise in teaching, research, extension, or another scholarly or germane creative activity.

Potential for directing teaching, research, graduate study, or extension activities.

A doctor's degree, an equivalent degree, or equivalent professional experience.

Associate Professor

Recognized ability and potential for distinction in teaching, independent research, extension, or another scholarly or germane creative activity.

Ability to direct teaching, research, graduate study, or extension activities.

A doctor's degree, an equivalent degree, or equivalent professional experience.

Professor

Distinguished achievement in teaching, indendent research, extension, or another scholarly or germane creative activity.

Ability to direct teaching, research, graduate study, or extension acitivites.

Established reputation in the individual's profession or field of scholarly or germane creative activity.

Ability and willingness to participate in university affairs.

A doctor's degree, an equivalent degree, or equivalent professional experience.

memorandum dated March 19, 1973, from the American Geological Institute to affirmative action officers of all concerned universities and colleges. No data of this type are available for meteorologists and oceanographers.

PROFESSOR

The number of minority persons qualified at the rank of Full Professor presumably is even less than that at the rank of Associate Professor. The best available information indicates only 4 black Ph.D.'s in geology, 3 in meteorology, and 3 in oceanography.

3. Explain how you arrived at the figures in the chart on page one.

    a. List sources of data:

        See attached sheet

    b. Describe the method(s) used for arriving at the figures
    recorded in the chart on page one. If you based your figures
    on a representative sample, please explain below:

    c. Evaluate the accuracy and/or completeness of the data you
    have used:

    d. Indicate particular problems encountered in trying to ascertain
    availability information:

    The problems are obvious from the preceding discussions.

Question 3a.

Geology

Each year the American Geological Institute conducts a survey of students enrolled in degree granting geoscience departments and also the number of degrees granted. In recent years a tabulation of female and other minority groups represented in these numbers has been made. A summary statement was provided to all college and university affirmative committees by the AGI by memo dated March, 1973. Some of the preceding data were derived from this memo. In addition, I called Bonnie Henderson, the person who is responsible for collecting these data for the AGI, on December 18th, 1973. She told me that the AGI knows of only 4 or 5 Negro Ph.D.'s, all male. Official figures on minority representation are not available from any source, but she went on to say that the percent or number of females and minority persons in the profession is so small that it would be completely impossible and unrealistic for any university to try to have these groups represented in anything approaching the percent in the total population. She was astounded that HEW would ask for such information and commented that of all people, HEW should know that these figures are not available.

Meteorology

In order to obtain any possible data regarding meteorologists, Dr. Saucier, of our faculty called Dr. Spengler, the Executive Director of the American Meteorological Society, on January 4, 1974. Dr. Spengler's reaction was that by law the AMS cannot keep records on race, creed, or color. He did say that a survey was made recently on anticipated Ph.D.'s to be granted from January, 1973, to January, 1975, in the atmospheric sciences for U.S. citizens only. It is anticipated that during this biennium, Ph.D.'s will be granted to 11 white females, 1 black female, 1 black male, 1 Spanish-American female, and 3 Spanish-American males. During a comparable biennium from 1969 to 1971, a total of approximately 260 Ph.D.'s were granted in the atmospheric sciences. All of these figures include many such as atmospheric physicists, high altitude specialists, etc., who would not be classified as meteorologists and could not teach meteorology on a faculty such as ours. Meteorologists probably would constitute 50% or less of the total of the degrees granted.

Oceanography

Dr. C. E. Knowles, of our faculty, called the American Geophysical Union to see if they had data available relating to oceanography. The reaction he received from the AGU was similar to that I received from the AGI and that Dr. Saucier received from the AMS. In short, such data simply are not available. Dr. Knowles was referred to the National Academy of Sciences. He then called that agency and received a similar reaction. Richard Vetter, National Academy of Sciences, told Dr. Knowles that he knew of no such information (as requested by Dr. Knowles). He further said that no university should be expected to gather or compile such information, but that it should be done by a national organization such as the Academy or HEW.

Question 3b.

The figures recorded in the chart on page 1 were derived as follows:

Geology
The most recent survey of student enrollment in geosciences as made by
Bonnie Henderson, of the AGI, was published in the journal Geotimes for
October of 1973. According to this article, 560 Ph.D.'s were granted in
geosciences in 1972. Of this number, 28 or 5% were women, including
minorities (the minority portion was not split out), and 532 were men
(including minority representatives). Of the total of 560 degrees awarded,
none were awarded to blacks, 1 was awarded to a Spanish speaking American
minority representative, and none were awarded to American Indians. These
data are the basis for the figures appearing for geology candidates in the
table on page 1.

Meteorology
The meteorology data in the table on page 1 were obtained from the AMS survey
of Ph.D.'s anticipated during the two year period 1973-74. This survey
identifies among U.S. citizens those who are white, those who are black,
those of Spanish-American ancestry, and male and female. The percentage
figures for meteorology are based on the total number of Ph.D. degrees
granted during the two year period 1969 to 1971.

Oceanography
According to Bonnie Henderson's article in the October, 1973, Geotimes,
52.8 percent of geosciences doctoral students reported in their final year
actually receive their degrees that year. Her enrollment tabulation shows
78 students in their final Ph.D. year in oceanography in 1973 and 94 in 1972.
Thus 41 should have received their degrees in 1972 and 50 in 1973. The
latter number is used in Table I as the total qualified in oceanography
at the Assistant Professor level. According to Bonnie Henderson's survey,
7.9 percent of all geoscience Ph.D. candidates are women, which would suggest
that 4 of the 50 1972 degrees went to females. Minorities, including
blacks, Spanish surnamed, and American Indians, accounted for a total of
0.7% of all geoscience Ph.D. candidates; applying this percentage to the 50
degrees granted in 1972, 1/3 of one minority person received the degree.

Question 3c.

All of the data presented are estimates and, in my opinion, are not reliable
enough to be used as the basis for drawing any conclusions or making any
recommendations. They are strictly ball park figures and should be
regarded as having no real basis in fact. For example, the surveys from
which some of the data were obtained may or may not represent a reliable
sample of the various professions, and certainly the way I have had to
manipulate the results of these surveys in order to come up with the
numbers that are requested reduces their reliability almost to the vanishing
point.

A tabulation in EOS, vol. 55, no. 1 (January, 1974), p. 21, shows 580
Earth Science Doctorates granted in 1972, of which 3.6% were women. I
cannot reconcile these figures with the data I have compiled from other
sources cited above. To me this is an indication of the lack of
reliability in any of these data.

School/Department: ___Geosciences_____

Individual Completing Form: ___C. J. Leith_____   Form No. 1, page three

4. If you ordinarily draw your faculty members from a smaller pool of candidates than the whole United States population in the profession,

      a. Define that pool for each level and type of appointment you customarily make:

      Our faculty members are drawn from the whole United States population in the profession who meet the qualifications as specified in question 1. Therefore, questions 4b and 5 are not applicable.

      b. Complete the following chart for each of the pools defined above:

      Not applicable.

	Number	Percent
White Male		
White Female		
Black Male		
Black Female		
Other Male		
Other Female		
TOTAL		100%

5. Explain how you arrived at the figures in the chart on page three.

    a. List sources of data:

Not applicable

    b. Describe the method(s) used for arriving at the figures recorded in the chart on page three. If you based your figures on a representative sample, indicate how you justify this:

Not applicable.

    c. Evaluate the accuracy and/or completeness of the data you have used:

Not applicable.

    d. Indicate particular problems encountered in trying to ascertain availability information:

Not applicable.

Individual Completing Form: __C. J. Leith__

PART II – AVAILABLE POOL OF PROSPECTIVE EPA NON-FACULTY PERSONNEL

1. Outline below the basic educational and experiential requirements for appointment to your EPA non-faculty positions by functional category.

There are no such positions in the Department of Geosciences.

2. How many people in the United States meet the basic educational and experiential requirements outlined in #1 above by functional category? (Complete charts below)

                                    Not applicable.

OFFICIALS AND MANAGERS

	Number	Percent
White Male		
White Female		
Black Male		
Black Female		
Other Male		
Other Female		
TOTAL		100%

PROFESSIONALS

	Number	Percent
White Male		
White Female		
Black Male		
Black Female		
Other Male		
Other Female		
TOTAL		100%

TECHNICIANS

	Number	Percent
White Male		
White Female		
Black Male		
Black Female		
Other Male		
Other Female		
TOTAL		100%

3. Explain how you arrived at the figures in the charts on page one.

   a. List sources of data:
   Not applicable.

   b. Describe the method(s) used for arriving at the figures recorded in the charts on page one. If you based your figures on a representative sample, please explain below:

   Not applicable.

   c. Evaluate the accuracy and/or completeness of the data you have used:

   Not applicable.

   d. Indicate particular problems encountered in trying to ascertain availability information:

   Not applicable.

School/Department: ___Geosciences___

Individual Completing Form: ___C. J. Leith___   Form No. 2, page three

4. If you ordinarily draw your EPA non-faculty personnel from a smaller pool of candidates than the whole United States population noted under #2,

    a. Describe the pool by functional category:

       Not applicable.

    b. How many people constitute that special pool by category?

      Not applicable.

OFFICIALS AND MANAGERS

	Number	Percent
White Male		
White Female		
Black Male		
Black Female		
Other Male		
Other Female		
TOTAL		100%

PROFESSIONAL

	Number	Percent
White Male		
White Female		
Black Male		
Black Female		
Other Male		
Other Female		
TOTAL		100%

TECHNICIANS

	Number	Percent
White Male		
White Female		
Black Male		
Black Female		
Other Male		
Other Female		
TOTAL		100%

5. Explain how you arrived at the figures in the charts on page three.

    a. List sources of data:

        Not applicable.

    b. Describe the method(s) used for arriving at the figures
    recorded in the charts on page three. If you based your figures
    on a representative sample, indicate how you justify this:

        Not applicable.

    c. Evaluate the accuracy and/or completeness of the data you
    have used:

        Not applicable.

    d. Indicate particular problems encountered in trying to ascertain
    availability information:

        Not applicable.

SCHOOL/DEPARTMENT Geosciences

COMPLETED BY   C. J. Leith

DATE January 10, 1974

TABLE I

PRESENT FACULTY COMPLEMENT

(According to October 1973 Tabulation)

TABLE II

PROJECTED FACULTY COMPLEMENT

FOR ACADEMIC YEAR 1975-76

(Reflecting Anticipated Promotions
and your Projected Hiring Goals)

FULL-TIME	White M	White F	Black M	Black F	Other M	Other F	Total M	Total F	/////	White M	White F	Black M	Black F	Other M	Other F	Total M	Total F
Department Head	1						1			1						1	0
Professor	2						2			2						2	0
Associate Professor	4						4			6				1*		7	0
Assistant Professor	5						5			3						3	1
Instructor	0						0			0						0	0
Lecturer	0						0			0						0	0
SUB-TOTAL	12						12	0		12				1		13	1
*PERMANENT PART-TIME																	
Professor																	
Associate Professor																	
Assistant Professor																	
Instructor																	
Lecturer																	
Visiting																	
SUB-TOTAL							0	0								0	0
TOTAL							12	0								13	1

*Foreign born (oriental) who will become a citizen. Counted as white male in Table I.

*PERMANENT PART-TIME - Individuals working less than full-time and being paid accordingly but hired for a term of 12 months or more or for a stated term of one academic year or more. This does not include joint appointments which should be reported as full-time by their major departments. The numbers which need to be filled in here are not supplied in the October tabulation and will need to come from your own

AFFIRMATIVE ACTION PLAN
EPA FACULTY

SCHOOL/DEPARTMENT Geosciences

DATE January 10, 1974

COMPLETED BY C. J. Leith

	TABLE III TOTAL FACULTY COMPLEMENT (According to October 1973 Tabulation) See Table I								TABLE IV PROJECTED FACULTY COMPLEMENT (For Academic Year 1975-76) See Table III					
	Availability Percentages (a)	Full Time		Part Time		Total		See Note(e)	Full Time		Part Time		Total	
		No.	%(b)	No.	%(c)	No.	%(d)		No.	%	No.	%	No.	%
White Male	95.4	12	100	0		12	100		12	86	0		12	86
White Female	4.3	0		0		0			1	7	0		1	7
Black Male	.1	0		0		0			0	0	0		0	0
Black Female	0	0		0		0			0	0	0		0	0
Other Male	.2	0		0		0			1	7	0		1	7
Other Female	0	0		0		0.			0	0	0		0	0
TOTAL	100.0	12	100%	0	100%	12	100%		14	100%	0	100%	14	100%

(a) These percentages should be taken directly from the charts you completed in questions #2 or #4 of Form I.
(b) These percentages should be computed on the basis of total number of full-time.
(c) These percentages should be computed on the basis of total number of part-time.
(d) These percentages should be computed on the basis of total number of full-time plus part-time.
(e) In this column: place a + (plus) if the percentage in the column marked Total in Table III is higher than the percentage in the corresponding column marked Availability or place a - (minus) if the percentage in the column marked Total is lower than the percentage in the corresponding column marked Availability.

(f) Combined data for Geology, Meteorology, and Oceanography.

TABLE V
PRESENT NON-FACULTY COMPLEMENT
(According to June 15, 1973 Tabulation)

TABLE VI
PROJECTED NON-FACULTY COMPLEMENT
FOR ACADEMIC YEAR 1975-76
(Reflecting Anticipated Promotions and your Projected Hiring Goals)

FULL-TIME	White M	F	Black M	F	Other M	F	Total M	F		White M	F	Black M	F	Other M	F	Total M	F
Officials & Managers																		
Professionals																		
Technicians																		
SUB-TOTAL																		
PERMANENT PART-TIME																		
Officials & Managers																		
Professionals																		
Technicians																		
SUB-TOTAL																		
TOTAL	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0

SCHOOL/DEPARTMENT PAMS-Geosciences

DATE January 11, 1974

COMPLETED BY J. D. Memory

TABLE VII
TOTAL NON-FACULTY COMPLEMENT
(According to June 15, 1973 Tabulation)
See Table I

TABLE VIII
PROJECTED NON-FACULTY COMPLEMENT
(For Academic Year 1975-76)
See Table III

	Availability Percentages	Full Time No.	%	Part Time No.	%	Total No.	%		Full Time No.	%	Part Time No.	%	Total No.	%
White Male														
White Female														
Black Male														
Black Female														
Other Male														
Other Female														
TOTAL		0	100%	0	100%	0	100%		0	100%	0	100%	0	100%

DATE:_____January 8, 1974_____

Department:____Mathematics____

Individual Completing Form:____N. J. Rose and W. J. Harrington____

PART I - AVAILABLE POOL OF PROSPECTIVE FACULTY MEMBERS

1. State below the requirements as to education, experience, and achievement
   for members of your faculty at each academic rank.

   Professor: Doctor's degree; distinguished achievement in teaching and
               independent research; ability to direct research and graduate
               study; established reputation in field of research.

   Associate Professor: Doctor's degree; recognized ability and potential for
               distinction in teaching and research; ability to direct research
               and graduate study.

   Assistant Professor: Doctor's degree; ability or promise in teaching and
               research.

   Instructor: Recent recipient of doctoral degree or a doctoral candidate with
               ability or potential in teaching and research.

2. How many people in the United States meet the requirements in #1?
   (Complete the chart below for each type of appointment described above.

                        See page one A

Professors

	Number	Percent
White Male	2724	90.8
White Female	201	6.7
Black Male	17	0.56
Black Female	1	0.04
Other Male	57	1.90
Other Female	1	0.03
TOTAL	3000	

Associate Professors

	Number	Percent
WM	3632	90.8
WF	268	6.7
BM	22	0.56
BF	2	0.04
OM	76	1.90
OF	1	0.03
TOTAL	4000	

Assistant Professors

	Number	Percent
WM	5902	90.8
WF	435	6.7
BM	36	0.56
BF	3	0.04
OM	123	1.90
OF	2	0.03
TOTAL	6500	

Instructors

	Number	Percent**
WM	1335	89%
WF	109	7.2
BM	15	1.0
BF	3	0.2
OM	37	2.5
OF	2	0.1
TOTAL	1500	

*For simplicity a rounded total pool of 15000 was used for these charts.

**The percentages used here are estimates based on 1972-73 trends.

3. Explain how you arrived at the figures in the chart on page one.

   a. List sources of data:

Doctorates in Mathematics Earned at U. S. Universities

	1930-70	1970-71	1971-72	1972-73	Totals	% of total pool (15,306)
U. S. Males (Black)	72[1]	2[6]	2[4]	10[5]	86	0.56%
U. S. Females (Black)	NA	1[6]	2[4]	3[5]	6	0.04%
U. S. Males (Spanish surname or Oriental)	NA	10[6]	6[4]	14[5]	30	0.20%
U. S. Females (")	NA	0[6]	0[4]	2[5]	2	0.03%
U. S. Males (None of the above)	8170[6]	960[6]	638[4]	651[5]	10,419	68.2
U. S. Females (")	816[2]	69[6]	67[4]	72[5]	1024	6.7
Non-U. S. Citizens	2500[6]	320[6]	133[4]	210[5]	3163	20.6
Unknown (Incomplete data)			433[4]	143[5]	576	3.7*
TOTALS	11,558[2]	1362[3]	1281[4]	1105	15,306	

(1) Estimate based on Ford Foundation Survey: Black American Doctorates.

(2) Larney, Violet H., "Female Mathematicians, Where Are You?," American Mathematical Monthly 18(1973), pp. 310-313.

(3) "Doctorates Awarded, 1970-71," Notices of the American Mathematical Society 18(1971), p. 835. [Total was not broken down by categories.]

(4) "Sex, Race, and Citizenship of New Doctorates, 1971-72," Notices of the American Mathematical Society 19(1972), p. 308.

(5) "Sex, Race, and Citizenship of New Doctorates, 1972-73," Notices of the American Mathematical Society 20(1973), p. 301.

(6) Estimated.

   NA - Not Available.

*For the preparation of the charts in Form No. 1, pages one and one A, this 3.7% was arbitrarily allocated as follows: 2% to White Male and 1.7% to Other Male.

3.   b. Describe the method(s) used for arriving at the figures recorded in
the chart on page one. If you based your figures on a representative sample,
please explain below:

A total pool of 15,000, based on the data shown on page two A, was used.
Percentages for the various categories were obtained from the same data. The
total pool was subdivided for each professional rank according to the amount
of experience required for that rank.

c. Evaluate the accuracy and/or completeness of the data you have used:

The recent data, 1971-73, is considered quite accurate. The earlier
data, 1930-70, distinguishes only between male and female with no ethnic
or racial categorization.

d. Indicate particular problems encountered in trying to ascertain
availability information:

1. Data pertaining to degrees in mathematics usually does not distinguish
between Ph.D.'s in mathematics and doctoral degrees in related mathematical
sciences such as Statistics and Computer Science.

2. Information concerning Ph.D.'s based on their ethnic or racial backgrounds
have been essentially non-existent until the American Mathematical Society
began to seek such data in 1971-72.

4. If you ordinarily draw your faculty members from a smaller pool of candidates than the whole United States population in the profession,

    a. Define that pool for each level and type of appointment you customarily make:

        Our pool is the total U.S. population in the profession.

    b. Complete the following chart for each of the pools defined above:

	Number	Percent
White Male		
White Female		
Black Male		
Black Female		
Other Male		
Other Female		
TOTAL		100%

5. Explain how you arrived at the figures in the chart on page three.

    a. List sources of data:

    b. Describe the method(s) used for arriving at the figures recorded in the chart on page three. If you based your figures on a representative sample, indicate how you justify this:

    c. Evaluate the accuracy and/or completeness of the data you have used:

    d. Indicate particular problems encountered in trying to ascertain availability information:

Individual Completing Form: _N. J. Rose & W. J. Harrington_

PART II - AVAILABLE POOL OF PROSPECTIVE EPA NON-FACULTY PERSONNEL

1. Outline below the basic educational and experiential requirements for appointment to your EPA non-faculty positions by functional category.

The Mathematics Department has no non-faculty EPA positions.

2. How many people in the United States meet the basic educational and experiential requirements outlined in #1 above by functional category? (Complete charts below)

OFFICIALS AND MANAGERS

	Number	Percent
White Male		
White Female		
Black Male		
Black Female		
Other Male		
Other Female		
TOTAL		100%

PROFESSIONALS

	Number	Percent
White Male		
White Female		
Black Male		
Black Female		
Other Male		
Other Female		
TOTAL		100%

TECHNICIANS

	Number	Percent
White Male		
White Female		
Black Male		
Black Female		
Other Male		
Other Female		
TOTAL		100%

School/Department:_____

Individual Completing Form:_____   Form No. 2, page two

3. Explain how you arrived at the figures in the charts on page one.

    a. List sources of data:

    b. Describe the method(s) used for arriving at the figures recorded
    in the charts on page one. If you based your figures on a
    representative sample, please explain below:

    c. Evaluate the accuracy and/or completeness of the data you
    have used:

    d. Indicate particular problems encountered in trying to ascertain
    availability information:

4. If you ordinarily draw your EPA non-faculty personnel from a smaller
pool of candidates than the whole United States population noted under #2,

    a. Describe the pool by functional category:

    b. How many people constitute that special pool by category?

OFFICIALS AND MANAGERS

	Number	Percent
White Male		
White Female		
Black Male		
Black Female		
Other Male		
Other Female		
TOTAL		100%

PROFESSIONAL

	Number	Percent
White Male		
White Female		
Black Male		
Black Female		
Other Male		
Other Female		
TOTAL		100%

TECHNICIANS

	Number	Percent
White Male		
White Female		
Black Male		
Black Female		
Other Male		
Other Female		
TOTAL		100%

School/Department:_____

Individual Completing Form:_____   Form No. 2, page four

5. Explain how you arrived at the figures in the charts on page three.

        a. List sources of data:

        b. Describe the method(s) used for arriving at the figures
        recorded in the charts on page three. If you based your figures
        on a representative sample, indicate how you justify this:

        c. Evaluate the accuracy and/or completeness of the data you
        have used:

        d. Indicate particular problems encountered in trying to ascertain
        availability information:

SCHOOL/DEPARTMENT Mathematics Department

COMPLETED BY N. J. Rose and W. J. Harrington

DATE January 8, 1974

TABLE I

PRESENT FACULTY COMPLEMENT
(According to October 1973 Tabulation)

TABLE II

PROJECTED FACULTY COMPLEMENT
FOR ACADEMIC YEAR 1975-76
(Reflecting Anticipated Promotions and your Projected Hiring Goals)

FULL-TIME	White M	White F	Black M	Black F	Other M	Other F	Total M	Total F	/////	White M	White F	Black M	Black F	Other M	Other F	Total M	Total F
Department Head	1						1		/////	1						1	
Professor	12				2		14		/////	13				2		15	
Associate Professor	11						11		/////	14	1			1		15	1
Assistant Professor	20	2			1		21	2	/////	16	4	1				17	4
Instructor	5	3(1)	(1)				6	3	/////	4	1	1				5	1
Lecturer	0	0	0						/////	0	0						
SUB-TOTAL	49	5	1		3		53	5	/////	48	6	2		3		53	6
*PERMANENT PART-TIME									/////								
Professor									/////								
Associate Professor									/////								
Assistant Professor									/////								
Instructor									/////								
Lecturer									/////								
Visiting									/////								
SUB-TOTAL									/////								
TOTAL									/////								

*PERMANENT PART-TIME - Individuals working less than full-time and being paid accordingly but hired for a term of 12 months or more or for a stated term of one academic year or more. This does not include joint appointments which should be reported as full-time by their major departments. The numbers which need to be filled in here are not supplied in the October tabulation and will need to come from your own ___

Addendum to Table I

(1) The black male instructor listed in Table I was a Ph.D. candidate and completed his doctoral degree at North Carolina State University in July, 1973. One of the females listed in Table I was also our own Ph.D. We customarily keep a recent Ph.D. as an instructor for a year while they are looking for a position. She left at the end of the year. Customarily we do not hire our own graduates. An exception was made in the case of the black instructor who was offered and accepted a position as assistant professor. However, for family reasons he resigned in the summer of 1973.

AFFIRMATIVE ACTION PLAN
EPA FACULTY

SCHOOL/DEPARTMENT __Mathematics Department__   DATE __January 8, 1974__

COMPLETED BY __N. J. Rose and W. J. Harrington__

		TABLE III TOTAL FACULTY COMPLEMENT (According to October 1973 Tabulation) See Table I							TABLE IV PROJECTED FACULTY COMPLEMENT (For Academic Year 1975-76) See Table III					
	Availability Percentages	Full Time No.	%(b)	Part Time No.	%(c)	Total No.	%(d)	See Note(e)		Full Time No.	%	Part Time No.	%	Total No.	%
White Male	90.8	49	84.5			49	84.5	−		48	81.3			48	81.3
White Female	6.7	5	8.6			5	8.6	+		6	10.2			6	10.2
Black Male	0.56	1	1.7			1	1.7	+		2	3.4			2	3.4
Black Female	0.04	0	0			0	0	−		0	0			0	0
Other Male	1.90	3	5.2			3	5.2	+		3	5.1			3	5.1
Other Female	0.03	0	0			0	0	−		0	0			0	0
TOTAL		58	100%		100%		100%			59	100%		100%	59	100%

(a) These percentages should be taken directly from the charts you completed in questions #2 or #4 of Form I.
(b) These percentages should be computed on the basis of total number of full-time.
(c) These percentages should be computed on the basis of total number of part-time.
(d) These percentages should be computed on the basis of total number of full-time plus part-time.
(e) In this column: place a + (plus) if the percentage in the column marked Total in Table III is higher than the percentage in the corresponding column marked Availability or place a − (minus) if the percentage in the column marked Total is lower than the percentage in the corresponding column marked Availability.

TABLE V
PRESENT NON-FACULTY COMPLEMENT
(According to June 15, 1973 Tabulation)

TABLE VI
PROJECTED NON-FACULTY COMPLEMENT
FOR ACADEMIC YEAR 1975-76
(Reflecting Anticipated Promotions and your Projected Hiring Goals)

FULL-TIME	White M	White F	Black M	Black F	Other M	Other F	Total M	Total F		White M	White F	Black M	Black F	Other M	Other F	Total M	Total F
Officials & Managers																	
Professionals																	
Technicians																	
SUB-TOTAL																	
PERMANENT PART-TIME																	
Officials & Managers																	
Professionals																	
Technicians																	
SUB-TOTAL																	
TOTAL	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0

SCHOOL/DEPARTMENT __PAMS-Mathematics__   DATE __January 11, 1974__

COMPLETED BY ___J. D. Memory___

	TABLE VII		TABLE VIII
	TOTAL NON-FACULTY COMPLEMENT		PROJECTED NON-FACULTY COMPLEMENT
	(According to June 15, 1973 Tabulation)		(For Academic Year 1975-76)
	See Table I		See Table III

	Availability Percentages	Full Time No.	Full Time %	Part Time No.	Part Time %	Total No.	Total %		Full Time No.	Full Time %	Part Time No.	Part Time %	Total No.	Total %
White Male														
White Female														
Black Male														
Black Female														
Other Male														
Other Female														
TOTAL		0	100%	0	100%	0	100%		0	100%	0	100%	0	100%

DATE: January 9, 1974   *Appendix E*

AVAILABILITY STUDY REPORTING FORMS

School/Department: PAMS/Statistics

Individual Completing Form: David D. Mason

PART I - AVAILABLE POOL OF PROSPECTIVE FACULTY MEMBERS

*1. State below the requirements as to education, experience, and achievement for members of your faculty at each academic rank.

Education: For Assistant Professor and higher levels: earned doctorate in statistics, or in another field with a strong statistics minor and strong interest and some experience in statistics. For Instructor and Lecturer, a minimum of an earned Master's degree in Statistics.

Experience: Instructor and Lecturer: 0-2 years; Assistant Professor: 0-4 years; Associate Professor: 6-8 years; Professor: 11-15 years.

Achievement: Competence in teaching, research and/or consultation as attested by peer and supervisory judgment, at a beginning level of recognition for Instructor and Assistant Professor, at an established level of recognition for Associate Professor, and at the level of having arrived as authority in his field for Professor.

2. How many people in the United States meet the requirements in #1? (Complete the chart below for each type of appointment described above.

	Assistant Professor and higher		Instructor and Lecturer	
	Number	Percent	Number	Percent
White Male	1961	92.6	1440	81.0
White Female	115	5.5	276	15.5
Black Male	18	.9	20	1.1
Black Female	3	.1	8	.5
Other Male	17	.8	26	1.5
Other Female	4	.1	7	.4
TOTAL	2118	100%	1777	100.0%

*See N. C. State University Faculty Handbook, 1-73, pages V-1 - V-2, for detailed criteria for each academic rank.

3. Explain how you arrived at the figures in the chart on page one.

　　　　　a. List sources of data:
(1) Directory of Statisticians and Others in Allied Professions, 1970. American
     Stat. Assn., Washington, D. C.
(2) NSF. American Science Manpower, 1968, 1970.
(3) Mail Survey to Establish Directory of Black Statisticians. Dr. David G. Kleinbaum,
     Department of Biostatistics, UNC-CH. July, 1973.
(4) HEW. Availability Data: Minorities and Women. G.P.O., 1973.
(5) University of Wisconsin. Availability Statistics, Women Holders of the Ph.D.:
     1967-69. April, 1972.
(6) University of Minnesota Council for Women's Progress. Doctorates Awarded to
     Women, 1960-1969. June, 1971.   (Continued on attached sheet)
　　　　　b. Describe the method(s) used for arriving at the figures
     recorded in the chart on page one. If you based your figures
     on a representative sample, please explain below:
     A random sample of 25 pages of the Directory (1) was tallied by five members
of the departmental faculty for statisticians available for the various faculty and
non-faculty classifications, and as to male/female and Spanish Surname classifications.
These estimates were checked for consistency with the other references. Reference (3)
was used as a primary source document for data on Blacks. Data for "Others" was based
partly from Spanish surname estimates from (1) and partly on percentages in (10).

　　　　　c. Evaluate the accuracy and/or completeness of the data you
　　　　　　　　have used:
     Female percentages are probably most reliable of estimates. Other than the
Kleinbaum survey (3), there is no comprehensive source of data. This survey (3)
addressed inquiries to 100 known Black Ph.D. mathematicians in the nation and to
190 university departments having significant advanced training roles in statistics,
and the resulting list is likely the most nearly definitive catalog in the country
at this date. The information on "Other" minorities is based on only fragmentary
data so that this group is estimated with the least reliability.

　　　　　d. Indicate particular problems encountered in trying to ascertain
　　　　　　　　availability information:
     The greatest difficulty encountered was in evaluating the "Blacks" and "Other"
groups since national manpower figures often fail to identify either their ethnic
character or their specific areas of interest. We were fortunate to have available
the survey on Black statisticians done by the Biostatistics Department, UNC-CH.
One of the difficulties that they reported in their survey was relatively frequent
rebuffs by respondents offended by racial emphasis.

School/Department: __PAMS/Statistics__

Individual Completing Form:__David D. Mason____   Form No. 1, page two
                                                    (continued)

3. Explain how you arrived at the figures in the chart on page one.

        a. List sources of data:

(7) Ford Foundation Survey: Black American Doctorates, 1968.
(8) Notices of the American Mathematical Monthly, October, 1972.
(9) James M. Jay. Negroes in Science: Natural Science Doctorates, 1876-1969.
(10) HEW. Racial and Ethnic Enrollment Data from Institutions of Higher Education,
     Fall, 1970.

4. If you ordinarily draw your faculty members from a smaller pool of candidates than the whole United States population in the profession,

   a. Define that pool for each level and type of appointment you customarily make:

   b. Complete the following chart for each of the pools defined above:

	Number	Percent
White Male		
White Female		
Black Male		
Black Female		
Other Male		
Other Female		
TOTAL		100%

5. Explain how you arrived at the figures in the chart on page three.

a. List sources of data:

b. Describe the method(s) used for arriving at the figures recorded
in the chart on page three. If you based your figures on a
representative sample, indicate how you justify this:

c. Evaluate the accuracy and/or completeness of the data you have
used:

d. Indicate particular problems encountered in trying to ascertain
availability information:

School/Department: __PAMS/Statistics__

Individual Completing Form: __David D. Mason__

PART II - AVAILABLE POOL OF PROSPECTIVE EPA NON-FACULTY PERSONNEL

1. Outline below the basic educational and experiential requirements for appointment to your EPA non-faculty positions by functional category.

Research Associate (FCC Code 2): Earned doctorate in Statistics, or in related field with a minor or equivalent experience in Statistics, or a Master's degree in Statistics, Computer Science or related field, and 3-5 years experience in their specialty field of statistics, statistical computing.

Research Assistant (FCC Code 2): Master's degree in Statistics, Computer Science or related field with equivalent experience in statistics, statistical computing and/or consulting in these areas. Appointment with Bachelor's degree made only in exceptional cases where individual has unusual talents demonstrated in graduate study and/or experience.

2. How many people in the United States meet the basic educational and experiential requirements outlined in #1 above by functional category? (Complete charts below)

OFFICIALS AND MANAGERS   O

	Number	Percent
White Male		
White Female		
Black Male		
Black Female		
Other Male		
Other Female		
TOTAL		100%

PROFESSIONALS
Research Assistants and Research Associates

	Number	Percent
White Male	1440	81.0
White Female	276	15.5
Black Male	20	1.1
Black Female	8	.5
Other Male	26	1.5
Other Female	7	.4
TOTAL	1777	100%

TECHNICIANS   O

	Number	Percent
White Male		
White Female		
Black Male		
Black Female		
Other Male		
Other Female		
TOTAL		100%

3. Explain how you arrived at the figures in the charts on page one.

     a. List sources of data:

(1) Directory of Statisticians and Others in Allied Professions, 1970. American Stat. Assn., Washington, D. C.

(2) NSF. American Science Manpower, 1968, 1970.

(3) Mail Survey to Establish Directory of Black Statisticians. Dr. David G. Kleinbaum, Department of Biostatistics, UNC-CH. July.

(4) HEW. Availability Data: Minorities and Women. G.P.O., 1973.

(5) University of Wisconsin. Availability Statistics, Women Holders of the Ph.D.: 1967-69. April, 1972.

(6) University of Minnesota Council for Women's Progress. Doctorates Awarded to Women, 1960-1969. June, 1971.   (Continued on attached sheet)

    ~~b. Indicate the methods~~ used for arriving at ~~the figures recorded~~ in the charts on page one. If you based your figures on a representative sample, please explain below:

A random sample of 25 pages of the Directory (1) was tallied by five members of the departmental faculty for statisticians available for the various faculty and non-faculty classifications, and as to male/female and Spanish Surname classifications. These estimates were checked for consistency with the other references. Reference (3) was used as a primary source document for data on Blacks. Data for "Others" was based partly from Spanish surname estimates from (1) and partly on percentages in (10).

    In studying the identifying characteristics of the available pool for Instructors and Lecturers, and Professionals (Research Associates and Research Assistants), the Faculty Committee found the two groups indistinguishable. Hence the same pool is ~~c. Indicate the accuracy and/or completeness of the data you~~ have used: (Continued)

    Female percentages are probably most reliable of estimates. Other than the Kleinbaum survey (3), there is no comprehensive source of data. This survey (3) addressed inquiries to 100 known Black Ph.D. mathematicians in the nation and to 190 university departments having significant advanced training roles in statistics, and the resulting list is likely the most nearly definitive catalog in the country at this date. The information on "Other" minorities is based on only fragmentary data so that this group is estimated with the least reliability.

    d. Indicate particular problems encountered in trying to ascertain availability information:

    The greatest difficulty encountered was in evaluating the "Blacks" and "Other" groups since national manpower figures often fail to identify either their ethnic origin or their specific areas of interest. We were fortunate to have available the survey on Black statisticians done by the Biostatistics Department, UNC-CH. One of the difficulties that they reported in their survey was relatively frequent rebuffs by respondents offended by racial emphasis.

School/Department: PAMS/Statistics

Individual Completing Form: David D. Mason   Form No. 2, page two
                                                  (continued)

3. Explain how you arrived at the figures in the charts on page one.

    a. List sources of data:

(7) Ford Foundation Survey: Black American Doctorates, 1968.
(8) Notices of the American Mathematical Monthly, October, 1972.
(9) James M. Jay. Negroes in Science: Natural Science Doctorates, 1876-1969.
(10) HEW. Racial and Ethnic Enrollment Data from Institutions of Higher Education,
     Fall, 1970.

    b. Describe the method(s) used for arriving at the figures recorded in
    the chart on page one. If you based your figures on a representative
    sample, please explain below:

identified for these two groups. We do not presently have anyone in the classification
of Technician.

4. If you ordinarily draw your EPA non-faculty personnel from a smaller pool of candidates than the whole United States population noted under #2,

    a. Describe the pool by functional category:

    b. How many people constitute that special pool by category?

OFFICIALS AND MANAGERS

	Number	Percent
White Male		
White Female		
Black Male		
Black Female		
Other Male		
Other Female		
TOTAL		100%

PROFESSIONAL

	Number	Percent
White Male		
White Female		
Black Male		
Black Female		
Other Male		
Other Female		
TOTAL		100%

TECHNICIANS

	Number	Percent
White Male		
White Female		
Black Male		
Black Female		
Other Male		
Other Female		
TOTAL		100%

5. Explain how you arrived at the figures in the charts on page three.

    a. List sources of data:

    b. Describe the method(s) used for arriving at the figures
recorded in the charts on page three. If you based your figures
on a representative sample, indicate how you justify this:

    c. Evaluate the accuracy and/or completeness of the data you
have used:

    d. Indicate particular problems encountered in trying to ascertain
availability information:

AFFIRMATIVE ACTION PLAN

SCHOOL/DEPARTMENT __PAMS/Statistics__   EPA FACULTY   DATE __January 9, 1974__
COMPLETED BY ___David D. Mason___

Appendix I

TABLE I

PRESENT FACULTY COMPLEMENT
(According to ~~########~~ 1973 Tabulation)
June

TABLE II

PROJECTED FACULTY COMPLEMENT
FOR ACADEMIC YEAR 1975-76
(Reflecting Anticipated Promotions and your Projected Hiring Goals)

FULL-TIME	White M	White F	Black M	Black F	Other M	Other F	Total M	Total F		White M	White F	Black M	Black F	Other M	Other F	Total M	Total F
Department Head	1									1							
Professor	16									16							
Associate Professor	5									6							
Assistant Professor	4**	1								3	1						
Instructor		1									1						
Lecturer																	
SUB-TOTAL	26	2								26	2						
*PERMANENT PART-TIME																	
Professor																	
Associate Professor																	
Assistant Professor																	
Instructor																	
Lecturer																	
Visiting																	
SUB-TOTAL																	
TOTAL	26	2								26	2						

**One Visiting Assistant Professor

*PERMANENT PART-TIME - Individuals working less than full-time and being paid accordingly but hired for a term of 12 months or more or for a stated term of one academic year or more. This does not include joint appointments which should be reported as full-time by their major departments. The numbers which need to be filled in here are not supplied in the October tabulation and will need to come from your own

SCHOOL/DEPARTMENT __PAMS/Statistics_____
COMPLETED BY __David D. Mason_____

DATE __January 9, 1974_____

WORK SHEET FOR TABLE II

FULL TIME	Estimated Number of Positions Expected to Become Vacant (1973-1976)	Estimated Number of Newly Created Positions (1973-1976)	Total Positions to be filled (1973-76)	Projected Hiring Goals (based on the total positions to be filled) (1973-1976)							
				WHITE		BLACK		OTHER		TOTAL	
				M	F	M	F	M	F	M	F
Department Head	0	0	0	1							
Professor	0	0	0	16							
Associate Professor	0	0	0	6							
Assistant Professor	0	0	0	3	1						
Instructor	0	0	0		1						
Lecturer	0	0	0								
SUB-TOTAL	0	0	0	26	2						
TOTAL	0 A	0 B	0 C	28							
PERMANENT PART TIME*											
Professor											
Associate Professor											
Assistant Professor											
Instructor											
Lecturer											
Visiting											
SUB-TOTAL											
TOTAL	0 A	0 B	0 C	0	0	0	0	0	0	0	0

Note: A + B = C
C = D

*Individuals working less than full time and being paid accordingly but hired for a term of 12 months or more or for a stated term of one aca-

AFFIRMATIVE ACTION PLAN
EPA FACULTY

SCHOOL/DEPARTMENT PAMS/Statistics   DATE January 9, 1974

COMPLETED BY   David D. Mason

	Availability Percentages	Full Time		Part Time		Total		See Note(e)		Full Time		Part Time		Total	
		No.	%(b)	No.	%(c)	No.	%(d)			No.	%	No.	%	No.	%
White Male	87.3	26	92.9							26	92.9				
White Female	10.0	2	7.1							2	7.1				
Black Male	1.0	0													
Black Female	.3	0													
Other Male	1.1	0													
Other Female	.3	0													
TOTAL	100.0	28	100%		100%		100%			28	100%		100%		100%

TABLE III
TOTAL FACULTY COMPLEMENT
(According to October 1973 Tabulation)
See Table I

TABLE IV
PROJECTED FACULTY COMPLEMENT
(For Academic Year 1975-76)
See Table II#

(a) These percentages should be taken directly from the charts you completed in questions #2 or #4 of Form I.
(b) These percentages should be computed on the basis of total number of full-time.
(c) These percentages should be computed on the basis of total number of part-time.
(d) These percentages should be computed on the basis of total number of full-time plus part-time.
(e) In this column: place a + (plus) if the percentage in the column marked Total in Table III is higher than the percentage in the corresponding column marked Availability or place a - (minus) if the percentage in the column marked Total is lower than the percentage in the corresponding column marked Availability.

SCHOOL/DEPARTMENT PAMS/Statistics
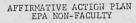COMPLETED BY David D. Mason

AFFIRMATIVE ACTION PLAN
EPA NON-FACULTY

DATE January 9, 1974

TABLE V
PRESENT NON-FACULTY COMPLEMENT
(According to June 15, 1973 Tabulation)

FULL-TIME	White		Black		Other		Total	
	M	F	M	F	M	F	M	F
Officials & Managers	0							
Professionals	8							
Technicians	0							
SUB-TOTAL	8							
PERMANENT PART-TIME								
Officials & Managers	0							
Professionals	3							
Technicians	0							
SUB-TOTAL	3							
TOTAL	11							

TABLE VI
PROJECTED NON-FACULTY COMPLEMENT
FOR ACADEMIC YEAR 1975-76
(Reflecting Anticipated Promotions and your Projected Hiring Goals)

	White		Black		Other		Total	
	M	F	M	F	M	F	M	F
Officials & Managers	0							
Professionals	9							
Technicians	0							
SUB-TOTAL	9							
Officials & Managers	0							
Professionals	1							
Technicians	0							
SUB-TOTAL	1							
TOTAL	10							

AFFIRMATIVE ACTION PLAN
EPA NON-FACULTY

SCHOOL/DEPARTMENT __PAMS/Statistics__   DATE __January 9, 1974__

COMPLETED BY __David D. Mason__

TABLE VII
TOTAL NON-FACULTY COMPLEMENT
(According to June 15, 1973 Tabulation)
See Table I

TABLE VIII
PROJECTED NON-FACULTY COMPLEMENT
(For Academic Year 1975-76)
See Table III

	Availability Percentages	Full Time No.	%	Part Time No.	%	Total No.	%		Full Time No.	%	Part Time No.	%	Total No.	%
White Male	81.0	8	100	3	100	11	100		9*	100	1*	100		
White Female	15.5	0	0	0	0	0	0							
Black Male	1.1	0	0	0	0	0	0							
Black Female	.5	0	0	0	0	0	0							
Other Male	1.5	0	0	0	0	0	0							
Other Female	.4	0	0	0	0	0	0							100%
TOTAL	100.0	8	100%	3	100%	11	100%		9	100%	1	100%		100%

*Under prior commitment, one present part-time permanent employee will be moved to full-time, and one part-time permanent employee dropped.

DATE: January 5, 1974

AVAILABILITY STUDY REPORTING FORMS

School/Department:_____PAMS – Physics_____

Individual Completing Form:_L. W. Seagondollar_____

PART I - AVAILABLE POOL OF PROSPECTIVE FACULTY MEMBERS

1. State below the requirements as to education, experience, and achievement for members of your faculty at each academic rank.
a. Full Professor ------ Ph.D.-- at least five years experience
                         Superlative achievement.
b. Associate Professor- Ph.D.-- at least five years experience.
                        Outstanding achievement.
c. Assistant Professor- Ph.D.--two years Post Doctoral experience desirable.
                        Outstanding performance in graduate study.
d. Instructor --------- It is not planned to hire new instructors in this
                        department in the foreseeable future.

2. How many people in the United States meet the requirements in #1?
(Complete the chart below for each type of appointment described above.

The best information we have in the holders of the Doctorals degree in Physics is as follows:

	Number	Percent
White Male *	18,818	89.5%
White Female**	562	2.7%
Black Male ***	100	0.5%
Black Female	–	–
Other Male***	1,529	7.3%
Other Female	–	–
TOTAL	21,000	100%

* Includes "other male."
** Includes "other female" and "black female."
*** A generous upper limit according to Susanne D. Ellis, Supervisor, Manpower
    Statistics, American Institute of Physics (11/13/73).

    As a pure estimate on my part 20% of these persons would meet our requirements
for the position of Assistant Professor, 10% for the position of Associate Professor,
and 5 % for the position of Professor.

3. Explain how you arrived at the figures in the chart on page one.

    a. List sources of data:
        (1) "Women in Physics," American Physical Society (American Institute of Physics, September, 1972).
        (2) "Women in Physics--Supplement," American Physical Society (American Institute of Physics, April, 1973).
        (3) "Physics and Manpower Enrollments and Degrees in U. S.," American Institute of Physics, Pub. No. R-151.10, March, 1973.
        (4) "Physics Manpower, 1973" (American Institute of Physics, August, 1973).
        (5) Direct call to Susanne D. Ellis, Supervisor, Manpower Statistics, American Institute of Physics.

    b. Describe the method(s) used for arriving at the figures recorded in the chart on page one. If you based your figures on a representative sample, please explain below:

Total number--used Scientific Manpower Roster 1970 data (17,000 Ph.D.) and added 4,000 for annual production of 1,500 less 500 for loss by retirement or death.
    Number of women Ph.D.'s given items (2) and (3) above.
    Number of black Ph.D.'s obtained from American Institute of Physics, Item (5).

    c. Evaluate the accuracy and/or completeness of the data you have used:

Better than 10% on each count.
American Insitute of Physics Manpower Statistics has done an excellent job in accumulating reliable data.

    d. Indicate particular problems encountered in trying to ascertain availability information:
    The "other" category is not well documented. All we can do is to recognize that the American Indian and Chicano groups are substantially less numerous than the black group. The figure used was arrived by consulation with Susanne D. Ellis, Supervisor, Manpower Statistics, American Institute of Physics. The number is probably an over estimate.

4. If you ordinarily draw your faculty members from a smaller pool of candidates than the whole United States population in the profession,

a. Define that pool for each level and type of appointment you customarily make:

We draw from whole U. S. population.

b. Complete the following chart for each of the pools defined above:

. NA

	Number	Percent
White Male		
White Female		
Black Male		
Black Female		
Other Male		
Other Female		
TOTAL		100%

5. Explain how you arrived at the figures in the chart on page three.

    a. List sources of data:

       NA

    b. Describe the method(s) used for arriving at the figures recorded in the chart on page three. If you based your figures on a representative sample, indicate how you justify this:

       NA

    c. Evaluate the accuracy and/or completeness of the data you have used:

       NA

    d. Indicate particular problems encountered in trying to ascertain availability information:

       NA ·

Individual Completing Form: <u>L. W. Seagondollar</u>

PART II - AVAILABLE POOL OF PROSPECTIVE EPA NON-FACULTY PERSONNEL

1. Outline below the basic educational and experiential requirements for appointment to your EPA non-faculty positions by functional category.

  The only non-faculty EPA position in this department is that of a Post-Doctoral in Nuclear Structure Physics. This person must have a Ph.D. in Experimental Nuclear Structure Physics from an institution that has given the person experience in this area <u>and</u> given him experience with either a Van de Graff generator as a Cyclotron (preferably both); with modern nuclear radiation detection techniques; and with modern computer usage in data storage and analysis.

2. How many people in the United States meet the basic educational and experiential requirements outlined in #1 above by functional category? (Complete charts below)

OFFICIALS AND MANAGERS

	Number	Percent
White Male		
White Female		
Black Male		
Black Female		
Other Male		
Other Female		
TOTAL		100%

PROFESSIONALS

	Number	Percent
White Male	63.6	88.3
White Female	1.9	2.6
Black Male	0.7	1.0
Black Female	-	-
Other Male	5.8	8.1
Other Female	-	-
TOTAL	72	100%

TECHNICIANS

	Number	Percent
White Male		
White Female		
Black Male		
Black Female		
Other Male		
Other Female		
TOTAL		100%

3. Explain how you arrived at the figures in the charts on page one.

    a. List sources of data:

        Since the market pool is composed of only recent Ph.D.'s (current
year), the most recent year (1971-1972) Ph.D. production rate was used as
the data base. See Physics Manpower 1973 (American Institute of Physics,
August, 1973).

    b. Describe the method(s) used for arriving at the figures recorded
in the charts on page one. If you based your figures on a
representative sample, please explain below:

        A very liberal guess is the 5% of all new Ph.D.'s in Physics would
meet our requirements. Thus direct figures of data listed in 3a were divided
by 20. A small decline in the total number may have occurred in the
interval to 1972-1973 but the percentages should stay about the same.

    c. Evaluate the accuracy and/or completeness of the data you
have used:

        To better than 10% on each point.

    d. Indicate particular problems encountered in trying to ascertain
availability information:

4. If you ordinarily draw your EPA non-faculty personnel from a smaller pool of candidates than the whole United States population noted under #2,

   a. Describe the pool by functional category:

      We draw from the whole United States population.

   b. How many people constitute that special pool by category?   NA

OFFICIALS AND MANAGERS

	Number	Percent
White Male		
White Female		
Black Male		
Black Female		
Other Male		
Other Female		
TOTAL		100%

PROFESSIONAL

	Number	Percent
White Male		
White Female		
Black Male		
Black Female		
Other Male		
Other Female		
TOTAL		100%

TECHNICIANS

	Number	Percent
White Male		
White Female		
Black Male		
Black Female		
Other Male		
Other Female		
TOTAL		100%

5. Explain how you arrived at the figures in the charts on page three.

    a. List sources of data: NA

    b. Describe the method(s) used for arriving at the figures recorded in the charts on page three. If you based your figures on a representative sample, indicate how you justify this:

                             NA

    c. Evaluate the accuracy and/or completeness of the data you have used:

                             NA

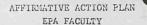   d. Indicate particular problems encountered in trying to ascertain availability information:

SCHOOL/DEPARTMENT   PAMS - Physics
EPA FACULTY
DATE January 5, 1974

COMPLETED BY L. W. Seagondollar, A. W. Jenkins and K. T. Chung

TABLE I

PRESENT FACULTY COMPLEMENT
(According to October 1973 Tabulation)

TABLE II

PROJECTED FACULTY COMPLEMENT
FOR ACADEMIC YEAR 1975-76
(Reflecting Anticipated Promotions and your Projected Hiring Goals)

	White M	White F	Black M	Black F	Other M	Other F	Total M	Total F		White M	White F	Black M	Black F	Other M	Other F	Total M	Total F
FULL-TIME																	
Department Head	1	0	0	0	0	0	1	0		1	0	0	0	0	0	1	0
Professor	8	0	0	0	0	0	8	0		11	1	0	0	0	0	12	1
Associate Professor	6	0	0	0	1	0	7	0		5	0	0	0	3	0	8	0
Assistant Professor	4	0	0	0	2	0	6	0		3	0	0	0	0	0	3	0
Instructor	1	0	0	0	0	0	1	0		1	0	0	0	0	0	1	0
Lecturer	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0
SUB-TOTAL	20	0	0	0	3	0	23	0		21	1	0	0	3	0	25	0
*PERMANENT PART-TIME																	
Professor	2	0	0	0	0	0	2	0		1	0	0	0	0	0	1	0
Associate Professor	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0
Assistant Professor	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0
Instructor	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0
Lecturer	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0
Visiting	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0
SUB-TOTAL	2	0	0	0	0	0	2	0		1	0	0	0	0	0	1	0
TOTAL	22	0	0	0	3	0	25	0		22	1	0	0	3	0	26	1

*PERMANENT PART-TIME - Individuals working less than full-time and being paid accordingly but hired for a term of 12 months or more or for a stated term of one academic year or more. This does not include joint appointments which should be reported as full-time by their major departments. The numbers which need to be filled in here are not supplied in the October tabulation and will need to come from your own

SCHOOL/DEPARTMENT PAMS - Physics   DATE January 5, 1974

COMPLETED BY L. W. Seagondollar, A. W. Jenkins,
                 and K. T. Chung

<table>
<tr><td></td><td colspan="10">TABLE III
TOTAL FACULTY COMPLEMENT
(According to October 1973 Tabulation)
See Table I</td><td colspan="6">TABLE IV
PROJECTED FACULTY COMPLEMENT
(For Academic Year 1975-76)
See Table III</td></tr>
<tr><td></td><td rowspan="2">Availability Percentages(a)</td><td colspan="2">Full Time</td><td colspan="2">Part Time</td><td colspan="2">Total</td><td rowspan="2">See Note(e)</td><td colspan="2">Full Time</td><td colspan="2">Part Time</td><td colspan="2">Total</td></tr>
<tr><td>No.</td><td>%(b)</td><td>No.</td><td>%(c)</td><td>No.</td><td>%(d)</td><td>No.</td><td>%</td><td>No.</td><td>%</td><td>No.</td><td>%</td></tr>
<tr><td>White Male *</td><td>89.5</td><td>22</td><td>88</td><td>1</td><td>100</td><td>23</td><td>88</td><td>-</td><td>21</td><td>84</td><td>1</td><td>100</td><td>22</td><td>84</td></tr>
<tr><td>White Female **</td><td>2.7</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>+</td><td>1</td><td>4</td><td>0</td><td>0</td><td>1</td><td>4</td></tr>
<tr><td>Black Male ***</td><td>0.5</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>-</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></tr>
<tr><td>Black Female</td><td>---</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td></td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></tr>
<tr><td>Other Male ***</td><td>7.3</td><td>3</td><td>12</td><td>0</td><td>0</td><td>3</td><td>12</td><td>+</td><td>3</td><td>12</td><td>0</td><td>0</td><td>3</td><td>12</td></tr>
<tr><td>Other Female</td><td>---</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td></td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></tr>
<tr><td>TOTAL</td><td>100</td><td>25</td><td>100%</td><td>1</td><td>100%</td><td>26</td><td>100%</td><td></td><td>25</td><td>100%</td><td>1</td><td>100%</td><td>26</td><td>100%</td></tr>
</table>

(a) These percentages should be taken directly from the charts you completed in questions #2 or #4 of Form I.
(b) These percentages should be computed on the basis of total number of full-time.
(c) These percentages should be computed on the basis of total number of part-time.
(d) These percentages should be computed on the basis of total number of full-time plus part-time.
(e) In this column: place a + (plus) if the percentage in the column marked Total in Table III is higher
     than the percentage in the corresponding column marked Availability or place a - (minus) if the percentage
     in the column marked Total is lower than the percentage in the corresponding column marked Availability.

 * Includes "Other Male"
 ** Includes "Other Female" and "Black Female"
 *** A generous upper limit according to Susanne D. Ellis, Supervisor, Manpower Statistics, American Institute of Physics
                                                                                        (11/13/73)

TABLE V
PRESENT NON-FACULTY COMPLEMENT
(According to June 15, 1973 Tabulation)

FULL-TIME	White M	White F	Black M	Black F	Other M	Other F	Total M	Total F
Officials & Managers								
Professionals	1						1	
Technicians								
SUB-TOTAL	1						1	
PERMANENT PART-TIME								
Officials & Managers								
Professionals								
Technicians								
SUB-TOTAL								
TOTAL	1						1	

TABLE VI
PROJECTED NON-FACULTY COMPLEMENT
FOR ACADEMIC YEAR 1975-76
(Reflecting Anticipated Promotions and your Projected Hiring Goals)

	White M	White F	Black M	Black F	Other M	Other F	Total M	Total F
Officials & Managers								
Professionals	1						1	
Technicians								
SUB-TOTAL	1						1	
TOTAL	1						1	

AFFIRMATIVE ACTION PLAN
EPA NON-FACULTY

SCHOOL/DEPARTMENT PAMS-Physics   DATE January 11, 1974

COMPLETED BY   J. D. Memory

<table>
<tr><th colspan="8">TABLE VII
TOTAL NON-FACULTY COMPLEMENT
(According to June 15, 1973 Tabulation)
See Table I</th><th colspan="6">TABLE VIII
PROJECTED NON-FACULTY COMPLEMENT
(For Academic Year 1975-76)
See Table III</th></tr>
<tr><th rowspan="2">Availability
Percentages</th><th colspan="2">Full Time</th><th colspan="2">Part Time</th><th colspan="2">Total</th><th></th><th colspan="2">Full Time</th><th colspan="2">Part Time</th><th colspan="2">Total</th></tr>
<tr><th>No.</th><th>%</th><th>No.</th><th>%</th><th>No.</th><th>%</th><th>No.</th><th>%</th><th>No.</th><th>%</th><th>No.</th><th>%</th></tr>
<tr><td>White Male</td><td>1</td><td>100</td><td></td><td></td><td>1</td><td>100</td><td></td><td>1</td><td>100</td><td></td><td></td><td>1</td><td>100</td></tr>
<tr><td>White Female</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Black Male</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Black Female</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Other Male</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Other Female</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>TOTAL</td><td>1</td><td>100%</td><td></td><td>100%</td><td>1</td><td>100%</td><td></td><td>1</td><td>100%</td><td></td><td>100%</td><td>1</td><td>100%</td></tr>
</table>

Checklist on "Required Components of Affirmative Action Plans: Order Number 4" for The School of Physical and Mathematical Sciences, NCSU

A. Analyze: "Composition of the workforce by minority group status and sex."

As is documented in the data tables provided in the text of the School of Physical and Applied Mathematics section, there are fewer women and minorities in the Physical and Mathematical Sciences than in the other broad areas of university disciplines. Of the departments in the School, Mathematics has a relatively higher proportion of these than the other departments. The school is conscious of the fact that it has a responsibility to train a larger number of women and members of minority groups for careers in the Physical and Mathematical Sciences, and this point is addressed in the text of our section.

In the immediate future, however, it will be unrealistic to set as a goal as high a percentage of minority group members and women for departments other than Mathematics in our School as for some other areas of the University.

B. Analyze: "Composition of applicant flow by minority group status and sex."

For the departments in the School of Physical and Mathematical Sciences, the composition of applicant flow by minority group status and sex follows, as well as we can tell, the composition of the available work force in these areas. In other words, we feel that we are getting a share of applications from women and those with minority group status women proportional to the relative percentage of the work force.

C. <u>Analyze: The total selection process including position descriptions,
position titles, worker specifications, application forms, interview
procedures, test administration, test validity, referral procedures,
final selection process, and similar factors.</u>"

    1. Our selection process does not eliminate a significantly higher
percentage of minorities or women than non-minorities or men.

    2. We do not have applications or related pre-employment forms
which are not in compliance with federal legistlation.

    3. Our position descriptions are not inaccurate in relation to
actual functions and duties.

    4. Selection procedures are such that no techniques of measurement
are used which could be adapted to serving a conscious discriminatory
purpose and none have built-in factors which have the affect of disadvantaging
females or minority group members.

    5. Not applicalbe.

D. <u>Analyze: "Transfer and promotion practices.</u>"

    Lateral and/or vertical movement of minority or female employees
does not occur at a lesser rate. (compared to work force mix) than that
of non-minority or male employees.

E. <u>Analyze: "Facilities, company sponsored recreation and social events,
special problems such as educational assistance.</u>"

    1. Minorities or women are not excluded from and do participate
in sponsored activities or programs.

    2. <u>De facto</u> segregation does not exist in any of the school
facilities.

F. Analyze: "Seniority practices and seniority provisions of union contracts.

    Not applicable.

G. Analyze: "Apprenticeship programs."

    Not applicable.

H. Analyze: "All company training programs, formal and informal."

    Not applicable.

I. Analyze: "Workforce attitude."

    Personnel involved in the recruiting, screening, selection, promotion, disciplinary, and related processes have been carefully selected and trained to insure elimination of bias in all personnel actions.

J. Analyze: "Technical phases of Compliance such as poster and notification to labor unions, retention of applications, notifications to subcontractors, etc."

    1. Posters affirming that NCSU is an Equal Employment Opportunity Employer are on display in the School of Physical and Mathematical Sciences.

    2. Not applicable.

    3. Not applicable.

K. In addition to the foregoing specific points which are treated correlatively in both section (a) and (b) of 60-2.23, the following miscellaneous "problems" noted in 60-2.23 (b) which, exist, should received corrective attention:

    Not applicable.

L. Various sections of the Revised Order No. 4, other than 60-2.23, and of the HEW Higher Education Guidelines "problems areas" which must be analyzed and which may require remedial action; they are treated here for purposes of comprehensive consideration of the total "Self-analysis" exercise in which the institution must engage.

1. Not applicable.

2. Not applicable.

3. Not applicable.

4. In the School of Physical and Mathematical Sciences there is no violation of the "equal pay for equal work" concept.

AFFIRMATIVE ACTION PLAN

School of Textiles

North Carolina State University

January 1974

David W. Chaney, Dean
John F. Bogdan, Head, Textile Technology
Henry A. Rutherford, Head, Textile Chemistry

TABLE OF CONTENTS

I. Background Information

A. Characterization of School of Textiles and Textile Education
    in General

The School of Textiles is a career-oriented segment of North Carolina
State University. Majors in this School receive about one-third of their
course work in their major field of study and the remainder from the
humanities, social sciences, mathematics and sciences provided by the
University. Subjects offered by the School are interdisciplinary and
applications-oriented. There are several concentrations of study avail-
able based on application.

Because of the breadth of subject matter covered, no two of the 39
faculty are alike. Many have industrial experience with total experience
from research and study adding up to some in depth aspect of textiles,
fibers and/or polymers.

Emphasis is on the theoretical principles underlying the practical
processes and products which constitute this vast field of commercial
and human endeavor. Physical sciences, mathematics and engineering
subjects are crucial to the educational approach taken by the School.
Over 77% of present faculty have attained the doctorate or equivalent in
some discipline and combined this with years of applications study and
experience.

The School is one of only seven in the country with undergraduate
programs, one of six with masters level programs, and one of five
with a Ph.D. program. It is by far the largest school with approximately
1/3 of the national enrollment at each of the above academic levels. The
national output of graduates is roughly 450 per year at the undergraduate
level, 70 per year at the masters, and 6 at the doctoral.

B. Textile Students

In the Spring 1973 semester there were 638 students enrolled in the
School of Textiles: 577 undergraduate, 40 masters, 18 Ph.D., and 3
special. At the undergraduate level there were 40 female (7%) and 15
black (2.6%).

At the graduate level there were 6 female (12.5%) and 1 black (2%).

During the period from fall 1969 to spring 1973 the number of black students enrolled increased from 6 to 16, a change from 0.8% to 2.5% of our student body.

The number of female students increased from 27 to 46, a change from 3.8% to 7.2% of our student body.

The number of black undergraduate students who were awarded scholarships increased from 16.7% to 37.5% during this same period. A larger proportion of blacks were supported by scholarships during each of the semesters since 1969 than were females or white males.

The percent of female undergraduate students receiving scholarships increased from 11.1% to 30.5% from fall 1969 to spring 1973.

All black and female graduate students currently enrolled receive financial support through assistantships. Only 82% of the white male graduate students have been awarded assistantships.

For more detailed comparative data on enrollment and financial support awarded to students from 1969 to the present see the charts on pages 13 and 14 of the appendix.

In the seven colleges and universities that have undergraduate B.S. programs in textiles, only 30 other blacks are currently enrolled. There are 215 female enrolled in addition to those at NCSU.

Other than those enrolled in the School of Textiles at NCSU, there are 5 black students enrolled in the six colleges and universities offering graduate programs in textiles in the U.S. Of these 5, one is female. In addition there are 3 other female students enrolled in these same colleges and universities.

C. Steps Taken to Increase Enrollment of Minority Students in Order to Increase the Potential Supply of Minority Faculty

It is evident that the supply of blacks and females who are fully qualified (Ph.D. or equivalent) for teaching at NCSU School of Textiles is extremely limited. There are only one or two who have achieved the doctorate in the past five years and these have gone to industry at salaries beyond the range available to the university. In addition, the known Ph.D.s were not optimally prepared in that the course of study that they followed was in a non-textile discipline. The only connection with textiles was in the thesis problem.

In general the females with Ph.D.s in textiles come from home economics programs. We have one such person on our faculty, plus

one more temporarily. In consideration of the range of subject matter taught by the School of Textiles there is only room for one or possibly two faculty with backgrounds of this type.

Recently, in 1972, the first female graduated from UNC-G with a Ph.D. in home economics whose thesis work was done at NCSU on a textile subject. It is expected that this avenue, and females and blacks in our own textile program, will generate the potential for them to qualify for faculty positions. Results of efforts to increase black and female enrollment are given in the appendix, pages 15 and 16. Graduates resulting are also listed.

Encouragement for minority students is indicated by the fact that all seven of the graduate students from that group are currently receiving assistantships as opposed to 82% for other students. Blacks and females are also experiencing a higher proportion of undergraduate scholarships than other students (appendix, page 13).

The School has intensified recruiting of minority students each year over the previous year. For the past two years a black recruiter has been used. Seventy-five percent of his recruiting efforts have been directed to the minority group in the coastal and southeastern part of the state. The first year he visited 9 schools and talked with approximately 250 students, 7 of whom were accepted here. This year he has recruited in the seven or eight predominately black high schools in the state and with the other recruiters has visited about 20 other high schools. We estimate that our recruiters have talked with approximately 400-500 black students so far this year.

At our last four open houses for high school students we have had special programs for blacks with black industrial representatives participating in them.

This past year a special brochure for black students was produced. A copy is appended to this report.

The problem of encouraging high school and B.S. graduates to enter the School of Textiles is not an easy one, as testified to by the drop of the national enrollment of textile students by 25% in the past five years. It is doubly difficult to attract minority students. That the School has succeeded with minority students over this same period is testimony to the very strong effort that has been made.

D. Faculty of the School

A list of current faculty is provided in the appendix, pages 17 and 18, with brief information about their background and areas of expertise and interest.

Distribution of faculty by rank is:

Professors	8
Associate Professors	16
Assistant Professors	12
Instructors	3
Total	39

There are two females and no blacks among the faculty. Both females have the rank of assistant professor, one with tenure and the other with visiting status for one semester. The tenured female has a current salary of $11,500 on a 9-month basis. She is the newest in the rank of assistant professor and is one of three who do not have Ph. D. degrees. Six others do.

E. Openings in Faculty Positions Expected, 1973-1977

Faculty positions estimated to be available in the next five years are as follows.

Table I.

Year, Fall	Regular Faculty		Adjunct		Post Doc. or Other		Sub. Total	Visiting[3]	Total
	New	Replace.	New	Replace.	New	Replace.			
1973	2[1]				1		3	1[2]	4
1974		2	1			1	4	1	5
1975				1	1	1	3	1	4
1976		2	1	1		1	5	1	6
1977		3		1	1	1	6	1	7
	2	7	2	3	3	4	21	1	22

Seven new positions, fourteen replacements, and four non-cumulative replacements (visiting professors)

[1] Will materialize only if budget request approved by legislature now in session and by Board of Governors

[2] Already committed

[3] Non-cumulative; only one at a time

F. Fields of Specialization to be Sought for Positions Open, 1973-1977

Restricting attention to the 7 to 9 regular faculty positions that will be filled in the next five years, School administrators have chosen the following fields of specialization to fill these positions. The listing is in order of current priority. The chances of being able to find a minority person with the particular characteristics described are also estimated.

Field of Specialization	Chances for Minority Person	
	Black	Female
1. Textile scientist or engineer specializing in physical and chemical testing, quality control, and statistical analysis of textile materials	Fair	Good
2. Materials scientist and/or engineer skilled in theory and practice of the formation of non-conventional fabric structures	Very slight	Very slight
3. Chemist specializing in environ-mental concerns of the textile industry	May already have moral com-mitment to white male	
4. Industrial engineer or economist specializing in textile management, operations research, technical and economic forecasting, etc.	Very slight	Fair
5. Knitting specialist — research and machine oriented	Very slight	Nil
6. Textile chemist specializing in the theory and practice of the finishing of textiles	Very slight	Very slight
7. Textile engineer or materials scientist thoroughly knowledgeable in theory and practice of weaving and related fabric systems	Very slight	Very slight
8. Physicist or equivalent specializing in science of color and its appli-cations in textiles	Fair	Good
9. Textile engineer specializing in theory and practice of yarn manufacture	Very slight	Very slight

G. Supply of Blacks and Females for Open Positions

Another possible source of university faculty is from related disci-
plines coupled with special training and development. There are occasions
when we do this deliberately in order to build an on-campus bridge to the
department of that discipline. It is not a common thing, having been done
only once in the past ten years. In other related instances the individuals
in question also had fairly extensive experience or training in textiles,
fibers, and/or polymers.

It would appear that the number of such individuals in the minority
group is quite limited as judged from the records. The records quoted
are the Ford Foundation Survey Black American Doctorates and another
source, Negroes in Science: Natural Science Doctorates, 1876-1969.
Between 1960-69 only 70 blacks obtained Ph. D. s in chemistry and 32 in
engineering and other physical sciences. On top of this there are only
20 institutions in the country that offer Ph. D. degrees relating to the
chemistry or physics of polymers, fibers and/or textiles. Four of these
have initiated such programs in only the past five years. It is estimated
for example that of 10, 000 Ph. D. chemists graduating annually less than
1% (100) have been given training in polymers, fibers or textiles. Further-
more, less than 1% of these are blacks; therefore, one or two per year
might be expected to have an appropriate orientation, but there is a good
probability than in any given year there would be no blacks obtaining a
doctorate in chemistry with a polymer-fiber-textile orientation.

The number of women available with such doctorates is estimated to
be small but at least existent. In the period 1960-69, 52 women obtained
Ph. D. s in home economics, clothing and textiles (limited usefulness to
the School of Textiles). There were 881 Ph. D. s in chemistry in the same
period. Eight or nine of these may have had an orientation in polymers,
fibers or textiles. Only 168 obtained doctorates in physics.

H. Promotions and Tenure, Minority Faculty

The one permanently employed female faculty member was recently
promoted to the rank of assistant professor and given tenure.

I. SPA Employees

At the present time there are 29 full-time and 3 part-time SPA
employees in the School of Textiles. A complete list is given in the
appendix, page 19. Sixty-four percent are female and 6% black. One
of the two black employees is female.

Out of 32 positions, turnover in the past five years was 45 with
highest turnover rate in the lowest level positions (appendix, pages 19
and 20).

Looking at individual positions, only 15 of the 32 positions actually experienced one or more turnovers; the rest had none. It would be reasonable to expect that in the next five years approximately 1/2 of the present work force will be replaced. This averages out to about three new persons per year, but nine will be hired in order to gain the three. Through June 1977 only three SPA personnel will retire, two of them textile laboratory mechanics and one a secretary III.

In the past five years it was necessary to invite 8 blacks in for interviews in order to hire two. This is slightly more than our average for whites, male or female.

II.   Affirmative Action Plan by the School of Textiles

A.   General

The record of the recent past described in the introduction above shows that the School of Textiles has taken many positive steps designed to increase representation of minorities in all areas of its operations: students, faculty and non-academic employees. The results have been promising but not outstanding. The supply of interested, qualified individuals is a severe problem at the faculty level; lesser problems exist in the other categories. Honest attempts are being made in all areas to search out qualified minority applicants.

The affirmative action plan set forth below will include every known device for improving chances of bringing the minority situation in each of the three categories mentioned above more nearly in line with the theoretical supply. The word theoretical is deliberately chosen because it is our experience that what appears to be the supply may be overestimated in view of the fact that the rate of rejection by the minority group is higher than for the majority. Nevertheless, as the plan indicates, the School will do its part.

The plan is for targeted numbers of minority personnel within a particular span of time. It is necessary to make assumptions with respect to (1) the availability of qualified people and (2) their willingness to accept an academic appointment within the pay scale available to the School. If these conditions are not met with a frequency equivalent to our assumptions, the targets will not be achieved.

B.   Plan for Faculty and Other EPA Personnel

A complete picture of the proposed affirmative action plan for all EPA employees and related associates is given in tables appended to the end of this report.

The following points are apparent in this plan:

1. No provision is made for minority representation among administrative personnel. Since there is <u>at present</u> no potentially eligible minority person in the United States for either of the key positions that will be open in the next five years, and the

positions require approximately 10-20 years of prior experience to qualify, it is not reasonable to expect that a minority person can qualify in the time span considered.

2. Four out of nine regular faculty positions open in the next five years will be filled with either black or female if available. At least two of the nine positions are not certain to be approved. The increase in the five-year period will be from 3% to 10% of total regular faculty.

3. Adjunct faculty who are minority persons will increase from zero to 40% in five years. To accomplish this, four out of the next five appointments will have to be black or female. This can probably be accomplished because there is no salary involved but merely an agreement to share interests and to work together.

4. Visiting faculty will probably not exceed one person at any one time and will rotate each year. The rotation will be equally balanced between white male, black and female.

5. Other EPA personnel include research associates, recruiters, instructional technologist, and extension specialist. At present 29% of this group are black or female. In five years it is anticipated that the minority will become 50%. Five out of seven of those persons added will have to be minority.

6. Minority EPA persons five years from now is targeted for 20% of total EPA.

In order to achieve even this relatively modest figure it is going to require a very great effort. The steps we plan to take are as follows:

1. Establish direct communications with all departments in institutions of higher education which graduate black students and females trained in fields which might qualify them for an open position. At the faculty level this will be practically impossible in the next year or so according to our survey of the supply situation. In other EPA positions it should at least be possible.

2. Develop an increasing supply of minority students coming through our own programs who would qualify to become faculty or fill other EPA positions. This effort is already underway as indicated in the section on background. Applies at both undergraduate and graduate level.

3. Extend invitations to qualified minority faculty of other institutions to enter into some sort of relationship in the hopes that something more permanent might develop. These relationships would include visiting professor or adjunct faculty status.

4. Increase invitations for minority persons to lecture here for purposes of becoming better acquainted.

5. Work with industry for leave arrangements with minority persons employed there. Traditionally many of our faculty have come from industry. Until recently this would not have been possible. Now industry is beginning to employ more minority persons and this approach will soon become at least possible.

C. Plan for SPA Personnel

The plan shown in the table at the end of this report is proposed for SPA employees in the School of Textiles.

This affirmative action plan is based on the availability of qualified women and blacks to fill the positions anticipated to be open. If an adequate supply is not available, or if qualified individuals decline our offers, or our minority employees are lured away by higher salaries than are available to us, these targets will not be met.

Minority employees will be given opportunity to train and to qualify for higher paying positions in the same manner as non-minority employees. As a result, we would expect that upward movement will be available to them on the basis of merit.

As already pointed out, higher level jobs will open with much lower frequency and, while intensive searches will be made to uncover qualified minority personnel, the chances of filling these positions from the outside will be very much less.

APPENDIX

Student Enrollment in School of Textiles

	1969	1970	1971	1972	1973(S)
Number					
Black	6	6	12	15	16
Female	27	29	35	39	46
White Male	671	716	662	602	576
Percent					
Black	0.8	0.8	1.7	2.3	2.5
Female	3.8	3.9	4.9	5.9	7.2
White Male	95.4	95.3	93.4	91.8	90.3

Undergraduate Scholarships Awarded

	1969	1970	1971	1972	1973(S)
Number					
Black	1	2	3	3	6
Female	3	6	7	6	14
White Male	88	94	87	90	101
Percent					
Black	16.7	33.3	25.0	20.0	37.5
Female	11.1	20.6	20.0	15.4	30.5
White Male	13.1	13.1	13.1	14.9	17.5

Graduate Student Enrollment in School of Textiles

	1969	1970	1971	1972	1973(S)
Number					
Black	0	1	1	1	1
Female	5	5	7	6	6
White Male	54	78	68	56	51
	59	84	76	63	58
Percent					
Black	0	1.2	1.3	1.6	1.7
Female	8.5	6.0	9.2	9.5	10.3
White Male	91.5	92.8	89.5	88.9	88.0

Graduate Assistantships Awarded 1972

	Number		Percent with
	Grad. Students	Assistant- ships	Assistant- ships
Black	1	1	100
Female	6	6	100
White Male	50	41	82

Recruiter(s)	Institution	Contact(s)	Students Interviewed			Action: Offers made including financial support — Record of Acceptances
			B	F	M	
Chaney, Rutherford	A&T State Univ.	W.I. Morris W. Sullivan	6			3 students, Miss Kelly, Miss Parker & Mr. Boone, visited here 2/14/72 at Burlington Ind.'s expense. No applications received afterwards.
Goldfinger	A&T State	Gilcrist & Hanghan	5 (2 of which were female)			One black enrolled and graduated from M.S. program
Chaney, Rutherford	UNC-G	Schaeffer				Visited Director of Placement who planned to inform students of School of Textiles programs
Cuculo, Rutherford	UNC-G	Puterbaugh				Follow-up on 2 potential students revealed that one went to Wis. and other to Duke with assistantship
Hamby, Rutherford	UNC-C	English	1		1	Graduate assistantship offered and accepted by J.J. Hendley (black) — NCTF $300 month. Other student dropped out after 1 semester.
Hamby	Fayette-ville State	Knuckles, Fields		2		Presentation made to students in Science Dept. Application forms mailed to Miss Morant and Miss Mack who showed interest. Miss Morant admitted later on provisional basis — then dropped out. Miss Mack did not apply.
Hamby	Gaston C.	Dean Cline	2		1	Sent application forms to blacks although records seemed weak. Later sent letters to students on Dean's List. No results.
Hamby	UNC-Ch	.			1	*Talked to 2 classes. One boy given an Enka assistantship. He withdrew after 2 weeks.

*One or 2 students presently in 4-1 program may have enrolled here as a result of this visit.

15

Recruiter(s)	Institution	Contact(s)	Students Interviewed			Action: Offers made including financial support — Record of Acceptances
			B	F	M	
Rutherford, Cuculo	Duke	Quin and P. Smith				Set up to give a seminar to the 100+ students (including some black) in the Chemistry Dept. No one showed up.
Gates	Wake F.	J. Reed			2	Discussed graduate programs with 2 students (one oriental). Neither applied.
Goldfinger	Appalacian	Gram, Randall				Talked with Placement Director and Chairman of Math Dept. who will inform students of programs
Hamby, Rutherford	UNC-Wilm.	Crews				Talked with group. Two male students applied and are enrolled in School now. Mr. Crews could recommend no one when contacted this year.
Hamby	PCTS	Partridge		3 (1 black)	6	Interviewed each separately. Files contain summary of comments. Black female encouraged to discuss further the possibility of entering School's MTT program; female Vietnamese has already submitted an application; suggested to third female that she discuss MTT program with Dr. Cooper here during holidays; assistantship offered to male with "A" average; will forward application form to another male with high average; no encouragement given to two foreign nor 1 American whose grades were low.

Fields of Training of Textile Technology Faculty

Graduates of textile colleges or programs:

Field	Faculty
Textile Engineering	Bogdan
	Bradford
Textile Technology	Hutchison
	Klibbe
	Middleton
	Mohamed
	Moser
	Pardue
	Porter
	Smith
	Stuckey
	Lynch
Textile, Fiber & Polymer Science	Brown
	Grady
	Tucker
Textile Physics	Gupta
Physical Chemistry	Hersh
Law	Powell
Education	Robinson
Home Ec., Tex. & Clothing	Massey
Mechanical Engineering	El-Shiekh

Faculty with textile experience at time of recruitment:

Field	Faculty
Mechanical Engineering	Lord
Physics	George
Economics & Industrial Engineering	Cooper
Microscopy	Rochow

Fields of Training of Textile Technology Faculty (Cont.)

Field	Faculty

Faculty with no textile experience at time of recruitment:

Physics	Fornes

Fields of Training of Textile Chemistry Faculty

Faculty with practical textile experience at time of recruiting:

Organic Chemistry	H. A. Rutherford
	J. A. Cuculo
Textile Chemistry	K. S. Campbell
	R. McGregor
Textile Chemistry & Education	C. D. Livengood
Physical Organic Chemistry	T. H. Guion
Physical Chemistry	D. M. Cates
Chemistry	R. W. Work

Faculty with applicable polymer experience:

Polymer Chemistry	R. D. Gilbert
	M. H. Theil
Organic Chemistry	C. E. Bryan
Physical Chemistry	G. Goldfinger
Chemical Engineering	W. K. Walsh

SPA POSITIONS IN SCHOOL OF TEXTILES

Position No.	Classification	No. Turnovers 7/1/67 to 12/31/72	Turnover Total
44499	Steno III	3	
44500	Secretary IV	0	
44506	Secretary III	0	
44518	Steno III	0	
44528	Steno III	3	
44504	Steno III	0	6
44520	Steno II	3	
44534	Steno II	7	
44536	Steno II (Established 12/1/70)	2	
45530	Steno II	4 (1 retired)	
44530	Steno II	5	21
44550	Typist III	3	3
44560	Typist I (Established 2/1/70)	5	5
44800	Tex. Lab. Mech.	0	
44804	Tex. Lab. Mech.	0	
44807	Tex. Lab. Mech.	0	
44802	Tex. Lab. Mech.	1 (Retired)	1
44870	Tex. Res. Tech. (Est. 8/28/70)	0	0
45453	Res. Tech.	0	0
44776	Instr. Maker II	1	1
44784	Instr. Maker I	0	0
44620	Stock Clerk	0	0
44792	Maintenance Mech.	1	1
44790	Res. Mech. II (Est. 8/2/71)	0	0
44450	Accounting Clerk III	0	0
44464	Accounting Clerk II	1 (Death)	1

Position No.	Classification	No. Turnovers 7/1/67 to 12/31/72	Turnover Total
44480	Library Assistant	3	3
45770	Public Infor. Specialist	3	3
45750	Graphic Arts Specialist (Est. 2/1/72)	0	0
45230	Tex. Dyer & Finisher	0	0
45230	Tex. Lab. Tech. III	0	0
44936	Tex. Lab. Tech. III	0	0
Total No. Positions — 32 (2 blacks, 30 whites)		45	45

Addendum to Affirmative Action Plan

School of Textiles

April 1973

Implementation

The School of Textiles recognizes that the establishment of goals alone will not bring about the solution to problems of imbalance of employment among white males, females and blacks. Responsibilities for continuing action must be assigned to individuals who will plan specific actions and see that they are followed through.

Accordingly the School has established an Affirmative Action Committee. The initial composition of the committee is as follows:

> J. F. Bogdan, Chairman
> H. A. Rutherford
> W. E. Smith

This committee will have ad hoc advisers who will be chosen according to the needs of the committee. Various minority groups will be represented by an adviser to be elected by each group. All permanent committee members, selected temporary committee members and some ad hoc advisers will each be assigned some aspect of the overall plan of implementation as their individual responsibility for action or coordination as required.

The permanent committee as presently constituted will:

(1) Identify and classify the component parts of the affirmative action plan.

(2) Develop a plan of implementation.

(3) Determine the composition of the permanent committee and, together with advisers, the assignments of the component parts of the plan to individuals.

(4) Establish methods of recordkeeping and a repository for records.

(5) Receive grievances and recommend to the appropriate administrators what kind of consideration should be given to them.

SCHOOL/DEPARTMENT _SCHOOL OF TEXTILES_   EPA FACILITY   DATE _JAN 4, 1974_

COMPLETED BY _J.F. BOGDAN_

TABLE I

PRESENT FACULTY COMPLEMENT
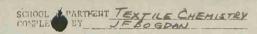(According to October 1973 Tabulation)

TABLE II

PROJECTED FACULTY COMPLEMENT
FOR ACADEMIC YEAR 1973-75
(Reflecting Anticipated Promotions and your Projected Hiring Goals)

	White		Black		Other		Total			White		Black		Other		Total	
FULL-TIME	M	F	M	F	M	F	M	F		M	F	M	F	M	F	M	F
Department Head	2						2			2						2	
Professor	7						7			9						9	
Associate Professor	17						17			16	1					16	1
Assistant Professor	9	1					9	1		6	2					6	2
Instructor	1						1					1				1	
Lecturer	1						1			1						1	
RESEARCH ASSOCIATE	3	1					3	1		3						3	1
SUB-TOTAL	40	2					40	2		37	4	1				38	4
*PERMANENT PART-TIME																	
Professor																	
Associate Professor																	
Assistant Professor																	
Instructor																	
Lecturer																	
Visiting																	
RESEARCH ASSOCIATE		1						1			1						1
SUB-TOTAL		1						1			1						1
TOTAL	40	3					40	3		37	5	1				38	5

*PERMANENT PART-TIME - Individuals working less than full-time and being paid accordingly but here for a term of 12 months or more or for a stated term of one academic year or more. This does not include joint appointments which should be reported as full-time by their major departments. The numbers which need to be filled in here are not supplied in the October tabulation and will need to come from your own records.
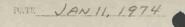
AFFIRMATIVE ACTION PLAN

SCHOOL & DEPARTMENT _TEXTILE CHEMISTRY_   EPA FA ...   DATE _JAN 11, 1974_
COMPLETED BY __J F BOGDAN__

	TABLE I
	PRESENT FACULTY COMPLEMENT (According to October 1973 Tabulation)

	TABLE II
	PROJECTED FACULTY COMPLEMENT FOR ACADEMIC YEAR 1973-75 (Reflecting Anticipated ... and your Projected Hiring Goals)

	White M	White F	Black M	Black F	Other M	Other F	Total M	Total F		White M	White F	Black M	Black F	Other M	Other F	Total M	Total F
FULL-TIME																	
Department Head	1						1			1						1	
Professor	4						4			4						4	
Associate Professor	5						5			5						5	
Assistant Professor	1						1				1						1
Instructor																	
Lecturer RESEARCH ASSOCIATE	1						1			1						1	
SUB-TOTAL	12						12			11	1					11	1
PERMANENT PART-TIME																	
Professor																	
Associate Professor																	
Assistant Professor																	
Instructor																	
Lecturer																	
Visiting RESEARCH ASSOCIATE		1						1			1						1
SUB-TOTAL		1						1			1						1
TOTAL	12	1					12	1		11	2					11	2

*PERMANENT PART-TIME - Individuals working less than full-time and being... academically but which are for a term of 12 months or more or for a stated term of one academic year or more. This does not include joint appointments which should be reported as full-time by their major departments. The numbers which need to be filled in here are not supplied in the October tabulation and will need to come from your own records.

SCHOOL . ARTMENT *TEXTILE TECHNOLOGY*
COMPLETED BY _____ *JF BOGDAN* _____

DATE ____ *JAN 11, 1974* ____

TABLE I

PRESENT FACULTY COMPLEMENT
(According to October 1973 Tabulation)

73/74

TABLE II

PROJECTED FACULTY COMPLEMENT
FOR ACADEMIC YEAR 1973-75
(Reflecting Anticipated Promotions
and your Projected Hiring ...)

	White M	White F	Black M	Black F	Other M	Other F	Total M	Total F		White M	White F	Black M	Black F	Other M	Other F	Total M	Total F
FULL-TIME																	
Department Head	1						1			1						1	
Professor	3						3			5						5	
Associate Professor	12						12			11			1			11	1
Assistant Professor	8	1					8	1		6	1					6	1
Instructor	1						1						1			1	
Lecturer	1						1			1						1	
RESEARCH ASSOCIATES	2	1					2	1		2	1					2	1
SUB-TOTAL	28	2					28	2		26	3	1				27	3
*PERMANENT PART-TIME																	
Professor																	
Associate Professor																	
Assistant Professor																	
Instructor																	
Lecturer																	
Visiting																	
SUB-TOTAL																	
TOTAL	28	2					28	2		26	3	1				27	3

*PERMANENT PART-TIME - Individuals working less than full-time and being paid accordingly but hired for a term of 12 months or more or for a stated term of one academic year or more. This does not include joint appointments which should be reported as full-time by their major departments. The numbers which need to be filled in here are not supplied in the October tabulation and will need to come from your own records.

TABLE V
PRESENT NON-FACULTY COMPLEMENT
(According to June 15, 1973 Tabulation)

FULL-TIME	White M	White F	Black M	Black F	Other M	Other F	Total M	Total F
Officials & Managers	4						4	
Professionals	2						2	
Technicians	1						1	
SUB-TOTAL	7						7	
PERMANENT PART-TIME								
Officials & Managers								
Professionals								
Technicians								
SUB-TOTAL								
TOTAL	7						7	

TABLE VI
PROJECTED NON-FACULTY COMPLEMENT
FOR ACADEMIC YEAR 1973-75
(Reflecting Anticipated Promotions and your Projected Hiring Goals)

FULL-TIME	White M	White F	Black M	Black F	Other M	Other F	Total M	Total F
Officials & Managers	4						4	
Professionals	2						2	
Technicians	1						1	
SUB-TOTAL	7						7	
PERMANENT PART-TIME								
Officials & Managers								
Professionals								
Technicians								
SUB-TOTAL								
TOTAL	7						7	

SCHOOL _TEXTILES_
COMPLETED BY _J. F. BOGDAN_
DATE _JAN 11, 1974_

N. C. STATE UNIVERSITY
AFFIRMATIVE ACTION PLAN
SPA PERSONNEL

TABLE I
PRESENT SPA COMPLEMENT

TABLE II
PROJECTED SPA COMPLEMENT FOR
ACADEMIC YEAR(S) _73/74_
(Reflecting Anticipated Promotions and your Projected Hiring Goals)

FULL-TIME	WHITE M	F	BLACK M	F	OTHER M	F	TOTAL M	F		WHITE M	F	BLACK M	F	OTHER M	F	TOTAL M	F
Officials & Managers																	
Professionals																	
Technicians	7	2					7	2		7	2						
Sales																	
Clerical		13	1	2			1	15			13	1	2			1	15
Craftsman	3						3			3						3	
Operations (semi-skilled)																	
Laborers																	
Service Workers																	
SUB-TOTAL	10	15	1	2			11	17		10	15	1	2			11	17
*PART-TIME																	
Officials & Managers																	
Professionals																	
Technicians																	
Sales																	
Clerical		2						2			2						2
Craftsman																	
Operations (semi-skilled)																	
Laborers																	
Service Workers																	
SUB-TOTAL		2						2			2						2
TOTAL	10	17	1	2			11	19		10	17	1	2			11	19

*SPA individuals working at least ½-time in a permanently established position.

SCHOOL _TEXTILES_
COMPLETED BY _J F BOGDAN_
DATE _Jan 11, 1974_

N. C. STATE UNIVERSITY
AFFIRMATIVE ACTION PLAN
SPA PERSONNEL

TABLE I
PRESENT SPA COMPLEMENT

TABLE II
PROJECTED SPA COMPLEMENT FOR
ACADEMIC YEAR(S) _74/75_
(Reflecting Anticipated Promotions
and your Projected Hiring Goals)

FULL-TIME	WHITE M	F	BLACK M	F	OTHER M	F	TOTAL M	F		WHITE M	F	BLACK M	F	OTHER M	F	TOTAL M	F
Officials & Managers																	
Professionals																	
Technicians	7	2					7	2		7	2					7	2
Sales																	
Clerical		13	1	2			1	15			12	1	3			1	15
Craftsman	3						3			3						3	
Operations (semi-skilled)																	
Laborers																	
Service Workers																	
SUB-TOTAL	10	15	1	2			11	17		10	14	1	3			11	17
*PART-TIME																	
Officials & Managers																	
Professionals																	
Technicians																	
Sales																	
Clerical		2						2			2						2
Craftsman																	
Operations (semi-skilled)																	
Laborers																	
Service Workers																	
SUB-TOTAL		2						2			2						2
TOTAL	10	17	1	2			11	19		10	16	1	3			11	19

*SPA individuals working at least ½-time in a permanently established position.

SCHOOL _TEXTILES_
COMPLETED BY _J F BOGDAN_
DATE _JAN 11, 1974_

N. C. STATE UNIVERSITY
AFFIRMATIVE ACTION PLAN
SPA PERSONNEL

TABLE I
PRESENT SPA COMPLEMENT

TABLE II
PROJECTED SPA COMPLEMENT FOR ACADEMIC YEAR(S) _75/76_
(Reflecting Anticipated Promotions and your Projected Hiring Goals)

FULL-TIME	WHITE M	WHITE F	BLACK M	BLACK F	OTHER M	OTHER F	TOTAL M	TOTAL F		WHITE M	WHITE F	BLACK M	BLACK F	OTHER M	OTHER F	TOTAL M	TOTAL F
Officials & Managers																	
Professionals																	
Technicians	7	2					7	2		7	2					7	2
Sales																	
Clerical		13	1	2			1	15			10	1	5			1	15
Craftsman	3						3			3						3	
Operations (semi-skilled)																	
Laborers																	
Service Workers																	
SUB-TOTAL	10	15	1	2			11	17		10	12	1	5			11	17
*PART-TIME																	
Officials & Managers																	
Professionals																	
Technicians																	
Sales																	
Clerical		2						2			2						2
Craftsman																	
Operations (semi-skilled)																	
Laborers																	
Service Workers																	
SUB-TOTAL		2						2			2						2
TOTAL	10	17	1	2			11	19		10	14	1	5			11	19

*SPA individuals working at least ½-time in a permanently established position.

JANUARY 17, 1974

AVAILABILITY STUDY REPORTING FORMS

School/Department: *TEXTILE TECHNOLOGY*

Individual Completing Form: *J E Bogard*

PART I - AVAILABLE POOL OF PROSPECTIVE FACULTY MEMBERS

1. State below the requirements as to education, experience, and achievement for members of your faculty at each academic rank.

PLEASE REFER TO FACULTY HANDBOOK

2. How many people in the United States meet the requirements in #1? (Complete the chart below for each type of appointment described above.

	Number	Percent
White Male	1004	96
White Female	6	0.5
Black Male	6	0.5
Black Female	0	0
Other Male	31	3
Other Female	0	0
TOTAL	1047	100%

School/Department: _TEXTILE TECHNOLOGY_

Individual Completing Form: _J F BOGDAN_   Form No. 1, page two

3. Explain how you arrived at the figures in the chart on page one.

    a. List sources of data:

STATISTICAL PACKAGE FOR THE SOCIAL SCIENCES,
(UNIVERSITY OF NORTH CAROLINA)

    b. Describe the method(s) used for arriving at the figures
    recorded in the chart on page one. If you based your figures
    on a representative sample, please explain below:

THERE ARE NO TEXTILE ENGINEERS OR TECHNOLOGISTS
LISTED IN ANY OF THESE REPORTS.
    10% OF THE MECHANICAL ENGINEERS WAS TAKEN
AS A POOL TO BE STUDIED FOR AVAILABILITY OF
PROFESSIONAL NEEDS OF THE DEPARTMENT

    c. Evaluate the accuracy and/or completeness of the data you
    have used:

THE DATA IS AN ESTIMATE BASED ON
AN ASSUMED FRACTION OF A POOL

    d. Indicate particular problems encountered in trying to ascertain
    availability information:

LISTINGS DO NOT SHOW TEXTILE
TECHNOLOGISTS.
    AVAILABILITY FOR EMPLOYMENT CANNOT BE
ASCERTAINED WITHOUT THOROUGH SEARCH WHEN
NEED ARISES.
    FACULTY MEMBERS IN SCHOOLS OF TEXTILES
DO NOT FREQUENTLY CHANGE EMPLOYERS.

School/Department: _TEXTILE TECHNOLOGY_

Individual Completing Form: _J F BOGDAN_   Form No. 1, page three

4. If you ordinarily draw your faculty members from a smaller pool of candidates than the whole United States population in the profession,

    a. Define that pool for each level and type of appointment you customarily make:

DEPARTMENT DRAWS FROM THE U S AND

FROM FOREIGN COUNTRIES FOR ITS FACULTY

    b. Complete the following chart for each of the pools defined above:

	Number	Percent
White Male		
White Female		
Black Male		
Black Female		
Other Male		
Other Female		
TOTAL		100%

NOT APPLICABLE

5. Explain how you arrived at the figures in the chart on page three.

    a. List sources of data:

        NOT APPLICABLE

    b. Describe the method(s) used for arriving at the figures recorded in the chart on page three. If you based your figures on a representative sample, indicate how you justify this:

        NOT APPLICABLE

    c. Evaluate the accuracy and/or completeness of the data you have used:

        NOT APPLICABLE

    d. Indicate particular problems encountered in trying to ascertain availability information:

        NOT APPLICABLE

School/Department: _TEXTILE TECHNOLOGY_   Form No. 2, page one

Individual Completing Form: ____J F BOGDAN____

PART II - AVAILABLE POOL OF PROSPECTIVE EPA NON-FACULTY PERSONNEL

1. Outline below the basic educational and experiential requirements for appointment to your EPA non-faculty positions by functional category.

NOT APPLICABLE.
    THERE ARE NO EPA NON-FACULTY POSITIONS
IN THE DEPT OF TEXTILE TECHNOLOGY

2. How many people in the United States meet the basic educational and experiential requirements outlined in #1 above by functional category? (Complete charts below)

OFFICIALS AND MANAGERS

	Number	Percent
White Male		
White Female		
Black Male		
Black Female		
Other Male		
Other Female		
TOTAL		100%

PROFESSIONALS

	Number	Percent
White Male		
White Female		
Black Male		
Black Female		
Other Male		
Other Female		
TOTAL		100%

TECHNICIANS

	Number	Percent
White Male		
White Female		
Black Male		
Black Female		
Other Male		
Other Female		
TOTAL		100%

NOT APPLICABLE

School/Department: _TEXTILE TECHNOLOGY_

Individual Completing Form: _√FBoGDAN_   Form No. 2, page two .

3. Explain how you arrived at the figures in the charts on page one.

    a. List sources of data:

         NOT APPLICABLE

    b. Describe the method(s) used for arriving at the figures recorded
    in the charts on page one. If you based your figures on a
    representative sample, please explain below:

         NOT APPLICABLE

    c. Evaluate the accuracy and/or completeness of the data you
    have used:

         NOT APPLICABLE

    d. Indicate particular problems encountered in trying to ascertain
    availability information:

         NOT APPLICABLE

School/Department: _____ *TEXTILE TECHNOLOGY*

Individual Completing Form: _____ *J F BOGDAN* _____ Form No. 2, page three

4. If you ordinarily draw your EPA non-faculty personnel from a smaller pool of candidates than the whole United States population noted under #2,

    a. Describe the pool by functional category:

        NOT APPLICABLE

    b. How many people constitute that special pool by category?

OFFICIALS AND MANAGERS

	Number	Percent
White Male		
White Female		
Black Male		
Black Female		
Other Male		
Other Female		
TOTAL		100%

PROFESSIONAL

	Number	Percent
White Male		
White Female		
Black Male		
Black Female		
Other Male		
Other Female		
TOTAL		100%

TECHNICIANS

	Number	Percent
White Male		
White Female		
Black Male		
Black Female		
Other Male		
Other Female		
TOTAL		100%

NOT APPLICABLE

Dept of Textile Chemistry
Prep by Henry A Rutherford, Head

PART I - Available Pool of Prospective Faculty Members

1. See Faculty Handbook

    Essential points: (a) instructor - minimum Master's degree

                      (b) all higher academic ranks - minimum
                                                      PhD degree

2. For Instructor -

TEXTILE CHEMISTS
WITH MS

	Number	Percent
White Male	446	78%
White Female	100	18%
Black Male	17	3%
Black Female	4	0.7%

    For all other academic ranks

TEXTILE CHEMISTS
WITH PhD's

	Number	Percent
White Male	417	88.6%
White Female	36	7.6%
Black Male	16	3.4%
Black Female	2	0.4%

3. (a) List sources of date:

         (1) 1973 Membership Directory - American Association
              of Textile Chemist and Colorists (approx 9700 members)
              Box 12215, Research Triangle Park, N.C. 27709
         (2) The University of North Carolina's - Statistical
              Package for the Social Sciences - National Recruiting
              Area: Managers, Professionals, Technicians, compiled
              by the University of North Carolina at Chapel Hill,
              Version 4.01, dated January 3, 1974.

    (b) The data in the charts on page 1 were arrived at by
         using the following assumptions:

         (1) Future employees (during the next 5 - 8 years)
              must have had either academic training or experience
              in the field of Textile Chemistry.

PART I, 3.

(b)

    (2) It was assumed that people with graduate degrees *also* and members of the AATCC would qualify ~~as~~

        (a) for instructors - MS degrees
        (b) for all other academic ranks - PhD degrees

    (3) No information was available from the AATCC membership list (i.e., textile chemists) to indicate race. It was assumed that the ratio of whites to blacks in the AATCC membership would be the same as the ratio of white to black chemists (both male and female) as that reported as professional chemists on page 19 of the University of North Carolina's report -- Statistical Package for the Social Sciences - National Recruiting Area, dated January 3, 1974. These ratios were as follows:

$$\frac{\text{Black Male Professional Chemist}}{\text{While Male Professional Chemist}} = \frac{2400}{64,700} = 0.037$$

$$\frac{\text{Black Female Professional Chemist}}{\text{White Female Professional Chemist}} = \frac{350}{8250} = 0.042$$

It is believed however that the number of blacks will be less than indicated by these ratios because of the past history of the employment of blacks in the textile industry.

    (4)   There is no possible way without a personal knowledge of the individuals involved at the PhD level to determine their qualifications for the academic ranks higher than instructor.

(c) Sources of data are believed to be as accurate and complete as any available. As a matter of fact, no source of data for Textile Chemists other than the one cited is known.

(d) Availability for employment can not be ascertained. Past experience would indicate that, of those employed in the professional ranks, no more than 10% would be available for employment in the Dept. of Textile Chemistry at NCSU. This is particularly true at the higher academic ranks where our salaries are considerably below those of industry.

PART I, 3   (CONTINUED)

(d)   It might be added that the interest level on the part
      of textile chemists for a change of employer is apparently
      at a very low level. Evidence for this is as follows:
      The School of Textiles placed an advertisement for a
      textile chemist at the professional level in the September,
      1973, issue of the Textile Chemist and Colorists, the
      journal published by the American Association of Textile
      Chemists and Colorists. The code number of the ad was
      # 389. This journal is circulated to the approximately
      9700 professional and non-professional chemists in the
      country. There were only 10 responses. Five of these
      were U.S. citizens (all white males), two were Egyptian
      and three were Indians (India). In view of this experience
      it appears that the only reliable way to ascertain
      availability of people for our positions (when they occur)
      is through personal contact.

                                           textile

PART I, 4

4. (a) Not applicable

   (b) Not applicable

5. (a) Not applicable

   (b) Not applicable

   (c) Not applicable

   (d) Not applicable

PART II.   (All parts of Part II - Not applicable)

   1. Not applicable.   There are no EPA non-faculty positions
       in the Dept. of Textile Chemistry.

AFFIRMATIVE ACTION PLAN

DIVISION OF STUDENT AFFAIRS
NORTH CAROLINA STATE UNIVERSITY

January, 1974

AFFIRMATIVE ACTION PLAN

DIVISION OF STUDENT AFFAIRS
NORTH CAROLINA STATE UNIVERSITY

I. Preamble. The Division of Student Affairs at North Carolina State University is committed to the concept of equal employment opportunity and affirmative action. The following plan has been designed to eliminate any existing discriminatory conditions, whether purposeful or inadvertent, and to require units within the Division to make additional efforts to recruit, employ, and promote qualified members of groups formerly excluded - even if that exclusion cannot be traced to particular discriminatory actions on the part of the Division.

II. Reaffirmation of Equal Employment Opportunity Principles. The Division committment to non-discriminatory policies and practices and to increasing employment opportunity is outlined in I above and in the introduction to the University plan.

III. Publicizing the Equal Employment Opportunity Policy. The Division Affirmative Action Plan and annual summaries of progress will be disseminated among employees of the Division.

IV. Responsibility for Implementation of the Plan. Overall responsibility for implementation of the Division Plan is assumed by the Dean of Student Affairs. Associate deans and department heads are responsible for implementation of the plan within their departments, and the Department of Student Affairs Research is responsible for monitering of progress and preparing annual summaries of progress.

V. Identification of Problems.

    A. Utilization and Availability Analysis and Goals and Time Tables

        1. Analysis of Workforce Profile by Race and Sex. The Division of Student Affairs is composed of employees in two categories, EPA Non-Faculty and SPA. The June, 1973 profile of EPA Non-Faculty and the October, 1973 profile of SPA employees is presented below.

            a. EPA Non-Faculty. Appendix A includes an analysis of EPA Non-Faculty by Department.

b. SPA. Appendix B includes an analysis of SPA employees by occupational category. This analysis indicates the following proportions of females and blacks within each occupational category.

	Females % of total	Blacks % of total
Officials and managers	0.0	0
Professional	100.0	10.0
Technician	66.7	0.0
Sales	33.3	33.3
Clerical	96.7	10.0
Craftsman	0.0	0.0
Operations	100.0	0.0
Service workers	60.8	39.1
TOTAL	76.0	29.2

2. Utilization and Availability Analysis.

    a. EPA Non-Faculty. Availability analysis for EPA Non-Faculty was conducted for each department within the Division of Student Affairs. Results of the analysis and a description of methods used are shown in Appendix C. The analysis indicated that females were being under-utilized in some areas and blacks in some areas. Goals to correct under-utilization are discussed in the following section.

    b. SPA. Availability analysis for SPA employees was conducted by compiling manpower data by occupational category for Wake County, North Carolina, the primary recruiting area for SPA employees. This analysis, shown in Appendix D, indicates that females and blacks are under-utilized in the officials and managers category; blacks in the technician category; and females, in the craftsman category.

3. Establishment of Goals and Timetables.

    a. EPA Non-Faculty. Analyses of availability and utilization and estimated turnover and new positions were used to establish goals (Analyses of estimated turnover and new positions are not included in this plan but are available in the Division Affirmative Action files). Projected goals for the 1975-76 academic year are shown in Appendix A and are summarized below.

Category	June, 1973	Projected '75-'76
Female	24.6 %	30.1 %
Black	7.0	10.6

b. SPA. Analyses of availability and utilization and estimated turn-
over of new positions were used to establish goals. (Analyses of
estimated turnover and new positions are not included in this plan
but are available in the Division Affirmative Action files). Pro-
jected goals for each academic year through 1975-76 are shown in
Appendix E and are summarized below:

Projected

Occupational Category	June '74 Female	June '74 Black	June '75 Female	June '75 Black	June '76 Female	June '76 Black
Officials & Managers	0 %	0 %	0 %	0 %	0 %	0 %
Professionals	100.0	10.0	100.0	20.0	100.0	30.0
Technicians	66.7	0	66.7	0	66.7	0
Sales	33.3	33.3	33.3	33.3	33.3	33.3
Clerical	96.7	11.7	96.7	13.3	96.7	15.0
Craftsman	0	33.3	0	33.3	0	33.3
Operations	100.0	0	100.0	0	100.0	0
Service Workers	60.8	65.2	60.8	65.2	60.8	65.2
TOTAL	76.6	29.9	76.6	31.4	76.6	32.8

B. Composition of Applicant flow by minority, group status and sex.

1. EPA Non-Faculty. Recruitment of applicants for vacant or newly created
   EPA Non-Faculty positions is the responsibility of department heads in
   which the vacancy occurs. An analysis of recruitment techniques in-
   dicates that, although procedures vary, department heads and associate
   deans generally seek qualified persons initially from within the
   Division. Positions are next advertised through professional publications
   and/or channels of communications. The analysis indicated that
   applications from qualified blacks generally under-represent their
   availability unless extra efforts are made to seek them out. In
   addition, detailed records of applicant flow by minority group and
   sex had not been maintained within every department.

2. SPA. As with EPA positions, department heads and associate deans are responsible for recruiting applicants for unfilled SPA positions. Applications for SPA positions throughout the university are co-ordinated by the University Division of Personnel Services. When a SPA position becomes vacant or is newly created, the department head normally reviews the qualifications of persons already employed within the Division, then reviews applications on file at Personnel Services and then if necessary recruits applicants through other channels. Analysis of applicant flow within this category indicates that minority groups applications approximate the number of minority persons within the primary recruiting area for the University.

C. Analysis of total selection process.

1. EPA. The selection process for EPA positions involves the following: The position is described and the title identified; requirements including degrees and experience are specified. The position is advertised in appropriate professional communications or at pro-fessional organizational meetings. Applications are reviewed and two or three persons are selected for interviews. After completion of interviews, the Department Head makes the final selection with approval by the Associate Dean and Dean of Student Affairs. This selection process does not eliminate a significantly higher percentage of minorities or women than non-minorities or men. In addition, position descriptions accurately describe functions and duties.

2. SPA. The selection process for SPA positions is similar to that for EPA positions except that all applications are coordinated by the Division of Personnel Services. All SPA positions are classified by the State Personnel Department, but position descriptions are written by the Department Head in which the position is located. Analysis of the selection process for SPA positions does not indicate elimination of a significantly higher percentage of minorities or women than non-minorities or men nor position descriptions which inaccurately describe functions and duties.

D. Analysis of Transfer and Promotion Practices.

   1. EPA - Promotion and transfer are based on evaluation of performance by department heads, associate deans and the Dean of Student Affairs. This analysis does not indicate the lateral and/or vertical movement of minority or female employees occurs at a lesser rate than that of non-minority or male employees.

   2. SPA. Analysis of promotion and transfer of SPA employees provided results similar to those for EPA employees.

E. Analysis of facilities, University sponsored recreational and social events, and special programs such as educational assistance. For both EPA and SPA employees, analysis in this area indicates that minorities and women are included and participate in university sponsored recreational and social events and in programs of educational assistance. In addition, de facto segregation does not exist at any facilities.

F. Workforce Attitude. All personnel involved in recruiting, screening, selection, promotion, disciplinary, and related processes have been notified about bias in personnel actions. Their personnel actions will be continuously reviewed to insure the absence of bias.

G. Analysis of technical phases of compliance. "Equal Opportunity Employeer" posters have been provided by the University and have been placed in conspicuous places throughout the Division.

H. Rights and Benefits - Salary. For both EPA and SPA positions, analysis of compensation patterns indicates that differentials between men and women doing the same work is the result of differentials in longetivity and/or judged performance between individuals and not discrimination on the basis of sex.

VI. Development and Execution of Corrective and Remedial Programs. In the preceeding section analyses of employment patterns, policies, and procedures have identified several problem areas in which corrective action is needed. Under-utilization of females and blacks in some areas has resulted in establishment of goals and time tables to correct these problems. Goals and timetables have been covered in Section V,3. Responsibility for implementation of these goals will be assumed by department heads, associate deans, and the Dean of Student Affairs. Goals will be accomplished by adding female and black members to the Division as existing positions become vacant through normal

turnover or as new positions are established. Recruitment efforts in areas of under-utilization will give special emphasis to attracting female and/or black applications. Final selection of personnel for positions will not be approved until satisfactory evidence is submitted to indicate that additional efforts have been made to recruit under-utilized groups. Finally, recruitment efforts will include channels of communication which will maximize the number of female and black candidates who might be attracted to the position.

VII. Internal Audit and Reporting Systems. The Department of Student Affairs Research will be responsible for data collection and analysis of affirmative action progress within the Division of Student Affairs. This office will conduct an annual summary of progress toward established goals.