UNIT REPORTS

School of Physical and Mathematical Sciences

through

Special Units

AFFIRMATIVE ACTION PLAN

FOR THE

SCHOOL OF PHYSICAL AND MATHEMATICAL SCIENCES

June 15, 1973

REVISED JANUARY, 1974

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 Opportunity (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.

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

Source: Availability Statistics, Women Holders of the Ph.D., 1967 - 1969 (Top Degree Granting Schools) Complied by the Office of the Chancellor, University of Wisconsin. (April 1972)

Table 2

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

Field of Doctorate	Year PhD Awarded													58-70 Total	% of Total Black PhD's*
	58	59	60	61	62	63	64	65	66	67	68	69	70		
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: Black American Doctorates and Negroes in Science: Natural Science Doctorates, 1876-1969.

**Notices of the American Mathematical Society, 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.

AFFIRMATIVE ACTION PLAN

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)

FULL-TIME	White M	White F	Black M	Black F	Other M	Other F	Total M	Total F
Department Head	6	0	0	0	0	0	6	0
Professor	56	0	0	0	2	0	58	0
Associate Professor	37	0	0	0	1	0	38	0
Assistant Professor	50	3	0	0	3	0	53	3
Instructor	11	6	1	0	0	0	12	6
Lecturer	0	0	0	0	0	0	0	0
SUB-TOTAL	160	9	1	0	6	0	167	9
*PERMANENT PART-TIME								
Professor	2	0	0	0	0	0	2	0
Associate Professor	0	0	0	0	0	0	0	0
Assistant Professor	0	0	0	0	0	0	0	0
Instructor	1	0	0	0	0	0	1	0
Lecturer	0	0	0	0	0	0	0	0
Visiting	0	0	0	0	0	0	0	0
SUB-TOTAL	3	0	0	0	0	0	3	0
TOTAL	163	9	1	0	6	0	169	9

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
Department Head	6	0	0	0	0	0	6	0
Professor	66	1	0	0	2	0	68	1
Associate Professor	44	1	0	0	5	0	49	1
Assistant Professor	37	7	1	0	0	0	38	7
Instructor	8	4	1	0	0	0	9	4
Lecturer	0	0	0	0	0	0	0	0
SUB-TOTAL	161	13	2	0	7	0	170	13
*PERMANENT PART-TIME								
Professor	1	0	0	0	0	0	1	0
Associate Professor	0	0	0	0	0	0	0	0
Assistant Professor	0	0	0	0	0	0	0	0
Instructor	1	0	0	0	0	0	1	0
Lecturer	0	0	0	0	0	0	0	0
Visiting	0	0	0	0	0	0	0	0
SUB-TOTAL	2	0	0	0	0	0	2	0
TOTAL	163	13	2	0	7	0	172	13

*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 part 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 PAMS DATE January 11, 1974

COMPLETED BY J. D. Memory

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

Availability Percentages(a)	Full Time No.	Full Time %(b)	Part Time No.	Part Time %(c)	Total No.	Total %(d)	See Note(e)
White Male	160	91	3	100	163	91	
White Female	9	5	0	0	9	5	
Black Male	1	1	0	0	1	1	
Black Female	0	0	0	0	0	0	
Other Male	6	3	0	0	6	3	
Other Female	0	0	0	0	0	0	
TOTAL	176	100%	3	100%	179	100%	

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

	Full Time No.	Full Time %	Part Time No.	Part Time %	Total No.	Total %
White Male	161	88	2	100	163	88
White Female	13	8	0	0	13	8
Black Male	2	1	0	0	2	1
Black Female	0	0	0	0	0	0
Other Male	7	3	0	0	7	3
Other Female	0	0	0	0	0	0
TOTAL	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.
(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
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 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
Professionals	9	0	0	0	0	0	9	0
Technicians	0	2	0	0	0	0	0	2
SUB-TOTAL	9	2	0	0	0	0	9	2
PERMANENT PART-TIME								
Officials & Managers	0	0	0	0	0	0	0	0
Professionals	3	0	0	0	0	0	3	0
Technicians	0	0	0	0	0	0	0	0
SUB-TOTAL	0	0	0	0	0	0	0	0
TOTAL	12	2	0	0	0	0	12	2

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	0	0	0	0	0	0	0	0
Professionals	10	0	0	0	0	0	10	0
Technicians	0	2	0	0	0	0	0	2
SUB-TOTAL	10	2	0	0	0	0	10	2
Officials & Managers	0	0	0	0	0	0	0	0
Professionals	1	0	0	0	0	0	1	0
Technicians	0	0	0	0	0	0	0	0
SUB-TOTAL	1	0	0	0	0	0	1	0
TOTAL	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

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

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

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

TABLE II

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

WHITE M	WHITE F	BLACK M	BLACK F	OTHER M	OTHER F	TOTAL M	TOTAL F
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
10	8	1	0	1	0	12	8
0	0	0	0	0	0	0	0
3	45	0	3	0	0	3	48
3	0	0	0	0	0	3	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
16	53	1	3	1	0	18	56
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	1	0	0	0	0	0	1
0	0	0	0	0	0	0	0
0	2	0	0	0	0	0	2
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	3	0	0	0	0	0	3
16	56	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

N. C. STATE UNIVERSITY
AFFIRMATIVE ACTION PLAN
SPA PERSONNEL

TABLE I

PRESENT SPA COMPLEMENT

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

TABLE II

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

WHITE M	WHITE F	BLACK M	BLACK F	OTHER M	OTHER F	TOTAL M	TOTAL F
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
10	8	1	0	1	0	12	8
0	0	0	0	0	0	0	0
3	44	0	4	0	0	3	48
3	0	0	0	0	0	3	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
16	52	1	4	1	0	18	56
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	1	0	0	0	0	0	1
0	0	0	0	0	0	0	0
0	2	0	0	0	0	0	2
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	3	0	0	0	0	0	3
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 J. D. Memory
DATE January 9, 1974

N. C. STATE UNIVERSITY
AFFIRMATIVE ACTION PLAN
SPA PERSONNEL

TABLE I

PRESENT SPA COMPLEMENT

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

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

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

AFFIRMATIVE ACTION PLAN
SPA PERSONNEL

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 - 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
C = D

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

AFFIRMATIVE ACTION PLAN
SPA PERSONNEL

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		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	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 - 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
C = D

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

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. 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."

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. Analyze: "Transfer and promotion practices."

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. Analyze: "Facilities, company sponsored recreation and social events, special problems such as educational assistance."

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

2. De facto 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.

DATE: January 10, 1974

AVAILABILITY STUDY REPORTING FORMS — Form No. 1, page one

School/Department: Department of Chemistry

Individual Completing Form: R. H. Loeppert

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. Candidates for faculty positions must normally have a Ph.D. in Chemistry, experience at least as a teaching assistant, and aptitude for teaching 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%

School/Department: Chemistry

Individual Completing Form: R. H. Loeppert

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, Spanich 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 (29,985).

c. Evaluate the accuracy and/or completeness of the data you 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 somewhat 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

AFFIRMATIVE ACTION PLAN
EPA FACULTY

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)

	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	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~~ January 1973 Tabulation)
See Table I

	Availability Percentages	Full Time No.	Full Time %(b)	Part Time No.	Part Time %(c)	Total No.	Total %(d)	See Note(e)
White Male	92.55	34	94.4			34	94.4	+
White Female	4.65	2				2	5.6	+
Black Male	0.86	0				0	-	-
Black Female	0.04	0				0	-	-
Other Male	1.81	0				0	-	-
Other Female	0.09	0				0	-	-
TOTAL	100	36	100%		100%	36	100%	

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

	Full Time No.	Full Time %	Part Time No.	Part Time %	Total No.	Total %
White Male	34	91.9			34	91.9
White Female	3	8.1			3	8.1
Black Male	0	-			0	-
Black Female	0	-			0	-
Other Male	0	-			0	-
Other Female	0	-			0	-
TOTAL	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

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

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
		2						2
		2						2
		0						
		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

Availability Percentages	Full Time		Part Time		Total			Full Time		Part Time		Total	
	No.	%	No.	%	No.	%		No.	%	No.	%	No.	%
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%

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

DATE: January 10, 1974

AVAILABILITY STUDY REPORTING FORMS

Form No. 1, page one

School/Department: Computer Science

Person Completing Form: N. F. Williamson

PART I AVAILABLE POOL OF PROSPECTIVE FACULTY MEMBERS

[illegible] below the requirements as to education, experience, and achievement [illegible] members of your faculty at each academic rank.

See attached sheet

[illegible] people in the United States meet the requirements in #17 [illegible] for each type of appointment described above.

	Master's		Ph.D.	
	Number	Percent	Number	Percent
White Male	10840	88	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%

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.

Department: Computer Science

Individual Completing Form: N. F. Williamson

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. List any particular problems encountered in trying to ascertain and report the 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.

AFFIRMATIVE ACTION PLAN
EPA FACU[illegible]

SCHOOL/DEPARTMENT Computer Science
COMPLETED BY N. F. Williamson

DATE January 10, 1974

TABLE I

PRESENT FACULTY COMPLEMENT
(According to ~~October~~ June 15 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. E. Williamson

TABLE III
TOTAL FACULTY COMPLEMENT
(According to ~~October~~ June 30 1973 Tabulation)
See Table I

	Availability Percentages	Full Time No.	Full Time %(b)	Part Time No.	Part Time %(c)	Total No.	Total %(d)	See Note(e)
White Male	92	18	100	1	100	19	100	+
White Female	4							
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%	

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

	Full Time No.	Full Time %	Part Time No.	Part Time %	Total No.	Total %
White Male	20	99.5	1	100	21	99.5
White Female	1	0.5			1	0.5
Black Male						
Black Female						
Other Male						
Other Female						
TOTAL	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 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

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
	0	0	0	0	0	0	0	0

AFFIRMATIVE ACTION PLAN
EPA NON-FACULTY

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

Availability Percentages	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%

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

	Full Time No.	Full Time %	Part Time No.	Part Time %	Total No.	Total %
	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)

NORTH CAROLINA STATE UNIVERSITY | AT RALEIGH

SCHOOL OF PHYSICAL AND MATHEMATICAL SCIENCES

DEPARTMENT OF GEOSCIENCES
BOX 5966 ZIP 27607

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.

School/Department: Geosciences

Individual Completing Form: C. J. Leith

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.

(continued on attached sheet)

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

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%

School/Department: Geosciences

Individual Completing Form: C. J. Leith

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: Geosciences

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%

School/Department: Geosciences

Individual Completing Form: C. J. Leith

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

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

School/Department: Geosciences

Individual Completing Form: C. J. Leith

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

AFFIRMATIVE ACTION PLAN
EPA FACULTY

DATE January 10, 1974

TABLE I

PRESENT FACULTY COMPLEMENT
(According to ~~October~~ June 15 1973 Tabulation)

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

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
Department Head	1						1	0
Professor	2						2	0
Associate Professor	6				1*		7	0
Assistant Professor	3						3	1
Instructor	0						0	0
Lecturer	0						0	0
SUB-TOTAL	12				1		13	1
							0	0
TOTAL							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

	Availability Percentages	Full Time No.	Full Time %(b)	Part Time No.	Part Time %(c)	Total No.	Total %(d)	See Note(e)
White Male	95.4	12	100	0		12	100	
White Female	4.3	0		0		0		
Black Male	.1	0		0		0		
Black Female	0	0		0		0		
Other Male	.2	0		0		0		
Other Female	0	0		0		0		
TOTAL	100.0	12	100%	0	100%	12	100%	

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

	Full Time No.	Full Time %	Part Time No.	Part Time %	Total No.	Total %
White Male	12	86	0		12	86
White Female	1	7	0		1	7
Black Male	0	0	0		0	0
Black Female	0	0	0		0	0
Other Male	1	7	0		1	7
Other Female	0	0	0		0	0
TOTAL	14	100%	0	0.00%	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.

SCHOOL/DEPARTMENT PAMS-Geosciences
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

AFFIRMATIVE ACTION PLAN
EPA NON-FACULTY

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

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

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

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

DATE: January 8, 1974

AVAILABILITY STUDY REPORTING FORMS

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.

Department: Mathematics

Individual Completing Form: N. J. Rose and W. J. Harrington Form No. 1, page two

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
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. 885. [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.

Department: Mathematics

Individual Completing Form: N. J. Rose and W. J. Harrington Form No. 1, page ~~three~~ two A

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.

School/Department: Mathematics Department

Individual Completing Form: N. J. Rose & W. J. Harrington 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 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%

School/Department:_____

Individual Completing Form:_____

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: Mathematics Department

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:

School/Department: _____

Individual Completing Form: _____ 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:

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:

AFFIRMATIVE ACTION PLAN
EPA FACUL

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~~ 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	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~~ June 1973 Tabulation)
See Table I

	Availability Percentages	Full Time No.	Full Time %(b)	Part Time No.	Part Time %(c)	Total No.	Total %(d)	See Note(e)
White Male	90.8	49	84.5			49	84.5	-
White Female	6.7	5	8.6			5	8.6	+
Black Male	0.56	1	1.7			1	1.7	+
Black Female	0.04	0	0			0	0	-
Other Male	1.90	3	5.2			3	5.2	+
Other Female	0.03	0	0			0	0	-
TOTAL		58	100%		100%		100%	

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

	Full Time No.	Full Time %	Part Time No.	Part Time %	Total No.	Total %
White Male	48	81.3			48	81.3
White Female	6	10.2			6	10.2
Black Male	2	3.4			2	3.4
Black Female	0	0			0	0
Other Male	3	5.1			3	5.1
Other Female	0	0			0	0
TOTAL	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.

SCHOOL/DEPARTMENT PAMS-Mathematics

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 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

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
	0	0	0	0	0	0	0	0

AFFIRMATIVE ACTION PLAN
EPA NON-FACULTY

SCHOOL/DEPARTMENT PAMS-Mathematics

DATE January 11, 1974

COMPLETED BY J. D. Memory

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

Availability Percentages	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%

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

	Full Time No.	Full Time %	Part Time No.	Part Time %	Total No.	Total %
	0	100%	0	100%	0	100%

DATE: January 9, 1974 Appendix E

AVAILABILITY STUDY REPORTING FORMS

Form No. 1, page one

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.

School/Department: PAMS/Statistics

Individual Completing Form: David D. Mason

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

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.

School/Department: _____

Individual Completing Form: _____

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%

School/Department:_____

Individual Completing Form:_____

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 0

	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 0

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

School/Department: PAMS/Statistics

Individual Completing Form: David D. Mason

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. 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 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. Evaluate 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

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.

School/Department: _____

Individual Completing Form: _____ 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:

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

AFFIRMATIVE ACTION PLAN
EPA FACULTY
Appendix I

SCHOOL/DEPARTMENT PAMS/Statistics
COMPLETED BY David D. Mason
DATE January 9, 1974

TABLE I

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

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

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
Department Head	1							
Professor	16							
Associate Professor	6							
Assistant Professor	3	1						
Instructor		1						
Lecturer								
SUB-TOTAL	26	2						
*PERMANENT PART-TIME								
Professor								
Associate Professor								
Assistant Professor								
Instructor								
Lecturer								
Visiting								
SUB-TOTAL								
TOTAL	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: _____

Individual Completing Form: _____

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
COMPLETED BY David D. Mason

EPA FACULTY

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

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

	Availability Percentages	Full Time No.	Full Time %(b)	Part Time No.	Part Time %(c)	Total No.	Total %(d)	See Note(c)
White Male	87.3	26	92.9					
White Female	10.0	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%	

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

	Full Time No.	Full Time %	Part Time No.	Part Time %	Total No.	Total %
White Male	26	92.9				
White Female	2	7.1				
Black Male						
Black Female						
Other Male						
Other Female						
TOTAL	28	100%		100%		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/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)

	White		Black		Other		Total	
FULL-TIME	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
	0							
	9							
	0							
	9							
	0							
	1							
	0							
	1							
	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

Availability Percentages	Full Time No.	%	Part Time No.	%	Total No.	%
White Male	81.0	8	100	3	100	11	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
TOTAL	100.0	8	100%	3	100%	11	100%

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

	Full Time No.	%	Part Time No.	%	Total No.	%
White Male	9*	100	1*	100		
White Female						
Black Male						
Black Female						
Other Male						
Other Female						
TOTAL	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

Form No. 1, page one

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.

School/Department: PAMS - Physics

Individual Completing Form: L. W. Seagondollar

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.

School/Department: PAMS - Physics

Individual Completing Form: L. W. Seagondollar

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

School/Department: PAMS - Physics

Individual Completing Form: L. W. Seagondollar

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 and 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%

School/Department: PAMS - Physics

Individual Completing Form: L. W. Seagondollar

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:

School/Department: PAMS - Physics

Individual Completing Form: L. W. Seagondollar

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

School/Department: PAMS - Physics

Individual Completing Form: L. W. Seagondollar

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:

AFFIRMATIVE ACTION PLAN
EPA FACUL

SCHOOL/DEPARTMENT PAMS - Physics
COMPLETED BY L. W. Seagondollar, A. W. Jenkins and K. T. Chung

DATE January 5, 1974

TABLE I

PRESENT FACULTY COMPLEMENT
(According to ~~October~~ June 15 1973 Tabulation)

TABLE II
PROJECTED 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
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

AFFIRMATIVE ACTION PLAN
EPA FACULTY

SCHOOL/DEPARTMENT PAMS - Physics DATE January 5, 1974

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

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

	Availability Percentages(a)	Full Time No.	Full Time %(b)	Part Time No.	Part Time %(c)	Total No.	Total %(d)	See Note(e)
White Male *	89.5	22	88	1	100	23	88	-
White Female**	2.7	0	0	0	0	0	0	+
Black Male ***	0.5	0	0	0	0	0	0	-
Black Female	---	0	0	0	0	0	0	
Other Male ***	7.3	3	12	0	0	3	12	+
Other Female	---	0	0	0	0	0	0	
TOTAL	100	25	100%	1	100%	26	100%	

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

	Full Time No.	Full Time %	Part Time No.	Part Time %	Total No.	Total %
White Male *	21	84	1	100	22	84
White Female**	1	4	0	0	1	4
Black Male ***	0	0	0	0	0	0
Black Female	0	0	0	0	0	0
Other Male ***	3	12	0	0	3	12
Other Female	0	0	0	0	0	0
TOTAL	25	100%	1	100%	26	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.

* 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)

SCHOOL/DEPARTMENT PAMS-Physics
COMPLETED BY J. D. Memory

AFFIRMATIVE ACTION PLAN
EPA NON-FACULTY

DATE Jsnuary 11, 1974

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
	1						1	
	1						1	
	1						1	

AFFIRMATIVE ACTION PLAN
EPA NON-FACULTY

SCHOOL/DEPARTMENT PAMS-Physics DATE January 11, 1974

COMPLETED BY J. D. Memory

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

Availability Percentages	Full Time		Part Time		Total	
	No.	%	No.	%	No.	%
White Male	1	100			1	100
White Female						
Black Male						
Black Female						
Other Male						
Other Female						
TOTAL	1	100%		100%	1	100%

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

	Full Time		Part Time		Total	
	No.	%	No.	%	No.	%
White Male	1	100			1	100
White Female						
Black Male						
Black Female						
Other Male						
Other Female						
TOTAL	1	100%		100%	1	100%

AFFIRMATIVE ACTION PLAN

FOR THE

SCHOOL OF TEXTILES

June 15, 1973

REVISED JANUARY, 1974

TABLE OF CONTENTS

Affirmative Action Plan – School of Textiles, NCSU

January 1974

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 available 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 environmental concerns of the textile industry	May already have moral commitment 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 applications 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 disciplines 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. Furthermore, 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 at present 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.