AD-A189 142 PROPOSAL FOR SUPPORT OF MIAMI INNER CITY MARINE SUMMER INTERN PROGRAM DADE COUNTY(U) MIAMI UNIV FLA INST OF MARINE AND ATMOSPHERIC SCIENCES 21 DEC 87 1/1

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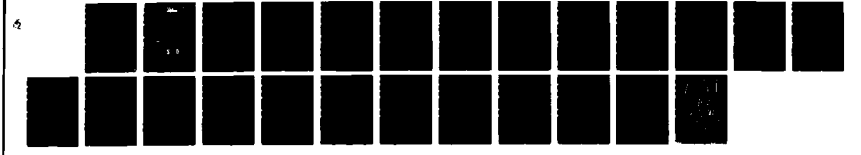

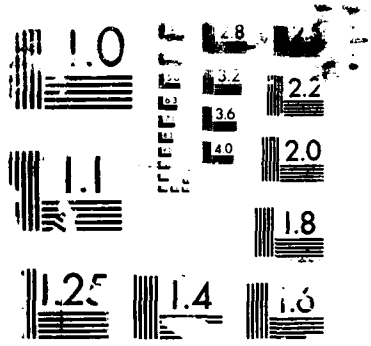
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December 21, 1987

UNIVERSITY OF Miami

Scientific Officer
Department of the Navy
Office of Naval Research
800 N. Quincy Street
Arlington, Virginia 22217-5000

Attention: Code 1125

Dear Sirs:

We are enclosing one copy of the final report of work performed under Agreement No. N00014-87-G-0116 reference "Proposal for Partial Support of Miami Inner City Marine Project Summer Intern Program", forwarding 2 copies to DTIC, and one copy to the Director of NRL.

Sincerely,

Chris Harrison

Christopher G. A. Harrison
Interim Dean

Enclosures





Rosenstiel School of Marine and Atmospheric Science
Office of the Dean
4600 Rickenbacker Causeway
Miami, Florida 33149-1098
(305) 361-4001

Easylink Mailbox No. 62845425

Telex No. 317454

**ABSTRACT**

This document constitutes the final report of efforts taken under grant number N00014-87-G-0116, Modification No. P00003. Under this program during the summer of 1987 socially and economically disadvantaged students from the inner city high schools of Miami, Florida were placed in laboratory positions at three oceanographic institutions on Virginia Key, Miami, Florida. Students received direct supervision from faculty members at the Rosenstiel School of Marine and Atmospheric Science (RSMAS) and from staff scientists at the Atlantic Oceanographic Marine Laboratory (AOML) and at the Southeast Fisheries Center (SEFC). This program provided these students an opportunity to work in a scientific environment and to appraise career opportunities in oceanographic science.

This document constitutes the Final Report of efforts undertaken under:

Grant No. N00014-87-G-0116
Modification No. P00003
ONR Code N00014
ACO Code N66020
Dated 30 June 1987

Amount $13,835.00

**GRANT PURPOSE**

The purpose of this grant was to provide funding to conduct a high-school intern program jointly with the Dade County Public Schools. This program was supported by both the National Oceanic and Atmospheric Administration and the Navy. The conduct of the workshop, the personnel and effort, and the use of funds for direct and indirect expenses was generally as set forth in the Grantee's proposal entitled "Proposal For Partial Support of Miami Inner City Marine Project Summer Intern Program" dated 30 January 1987. Eligibility for this program was limited to socially and economically disadvantaged students in inner city Dade County high schools who:

- o were entering grades 10, 11 or 12.
- o minimum grade point overall average of 2.5 was acceptable, but 3.0 was minimum requirement for scientific and laboratory research jobs.
- o good attendance record.
- o successfully completed or will be enrolled in one or more of these courses: Biology, Marine Biology, Ecology, Chemistry, Physics, and Computer Applications.
- o considered to be a high achiever, hard worker, and possess a positive attitude. Be self-directed and able to work independently if necessary. Able to work well with others; punctual, and dependable.
- o must be able to provide or arrange for daily transportation.
- o complete application and interview process.

**EXECUTION OF THE PROGRAM**

Faculty at RSMAS were asked to fill out job description forms. These are attached as Appendix A. These forms were then examined by DCPS staff to match up the job requirements with the interests and skills of the prospective student interns. The final list of students and supervising faculty is given in Appendix B. The program ran from June 23 to August 21, 1987.

Paid summer internship positions were available with three federally supported oceanographic centers. They are:

- o University of Miami, Rosenstiel School of Marine and Atmospheric Science.
- o NOAA, Atlantic Oceanographic and Meteorological Laboratory.
- o National Marine Fisheries Service, Southeast Fisheries Center.

The terms of employment and opportunities in this program were:

- o a maximum of eighteen internships were available through an application and interview process.
- o employment period was from June 23 to August 21, 1987.
- o one annual elective credit was earned.
- o each student earned $3.50 per hour for working four days per week for 30 hours each week.
- o Monday through Thursday students reported on-the-job. On Friday, students reported to DCPS for an instructional program that include guidance counseling, field trips, instructiona activities, guest speakers and student presentations.

The 1987 timetable for this program was:

| | |
|---|---|
| April 2 - 24 | Student Recruitment |
| May 8 | Internship applications due to ICMP Office |
| May 11 - 15 | Applications checked for completeness by ICMP Office |
| May 16 | Applicant employability skills training sponsored by The Achievers of Greater Miami. Time: 8:30 a.m. to Noon |
| May 18-June 5 | Interviews at job sites (Students must arrange their own transportation) |
| May 29 | Swim Test given to interns whose jobs require swimming. Jose Marti Pool at 3 p.m. |
| June 8 - 12 | Interns notified of job placement at school through the Science Department Chairperson or Assistant Principal for Curriculum |
| June 23 | Employment began. |

Evaluation will be done in two parts. Firstly, DCPS has received the answers to questionnaires that all students were required to fill out at the end of their summer research experience. The questionnaire is shown in Appendix C. The results from these questionnaires are not yet available. In addition, DCPS has also agreed to monitor these students to find out what happens to them when they leave school. We are interested in finding out how many of them continue their education at universities or colleges, and in particular what subjects they plan on majoring in. The second part of the evaluation is done by RSMAS faculty, who are currently replying to a request for an evaluation which is included as Appendix D. Again, final results from this evaluation are not yet complete.

APPENDIX A

JOB DESCRIPTION FORMS

FOR

DADE COUNTY INNER CITY MARINE SCIENCE PROJECT

SUMMER INTERNSHIP

JUNE 23, 1987 to AUGUST 21, 1987

| | |
|---|---|
| AGENCY | UM - Rosenstiel School<br>Biology/Algal Culture Assistant |
| JOB SITE | 4600 Rickenbacker Causeway |
| HOURS | Discuss with employer |
| NUMBER OF POSITIONS | ONE |
| SPECIAL REQUIREMENTS | • Chemistry<br>• Mathematics<br>• Laboratory experience |
| DRESS REQUIREMENTS | Discuss with employer |

JOB DESCRIPTION

- Work in algal culture laboratory in phytoplankton and zooplankton culture project.

  Formulate nutrient solutions
  Population density monitoring
  Lab sterilization techniques
  Daily maintenance of cultures

| | |
|---|---|
| AGENCY | UM - Rosenstiel School<br>Biology/Fish Culture Assistant |
| JOB SITE | 4600 Rickenbacker Causeway |
| HOURS | Discuss with employer |
| NUMBER OF POSITIONS | ONE |
| MINIMUM AGE | 16 |
| SPECIAL REQUIREMENTS | • Like working outside<br>• Prepared to go on field trips |
| DRESS REQUIREMENTS | Discuss with employer |

JOB DESCRIPTION

- Maintain and care for adult and juvenile fish.

  Food preparation and feeding
  Daily care and maintenance of fish cultures
  Experimental data collection

| | |
|---|---|
| AGENCY | UM - Rosenstiel School<br>Biology/Shark Research: Dr. Gruber |
| JOB SITE | 4600 Rickenbacker Causeway |
| HOURS | Discuss with employer |
| NUMBER OF POSITIONS | TWO |
| MINIMUN AGE | 16 |
| SPECIAL REQUIREMENTS | • Strong Biology background and interest<br>• Boating experience preferred or possess self-confidence to be able to conduct research while on a boat (ICMP WILL SWIM TEST)<br>• Computer operation experience |
| DRESS REQUIREMENTS | Discuss with employer |

JOB DESCRIPTION

- Shark research including calorimetry, respirometry, feeding studies, fishing for sharks and lab maintenance.

| | |
|---|---|
| AGENCY | UM - Rosenstiel School<br>Chemistry/Rain: Dr. Prospero |
| JOB SITE | 4600 Rickenbacker Causeway |
| HOURS | Discuss with employer |
| NUMBER OF POSITIONS | ONE |
| MINIMUM AGE | 16 |
| SPECIAL REQUIREMENTS | • Chemistry<br>• Science research interest |
| DRESS REQUIREMENTS | Discuss with employer |

JOB DESCRIPTION

- Study of the chemistry of precipitation
- Rainwater samples will be routinely collected, PH measured, composition analyzed in an effort to understand the causes of acid rain in the South Florida area

| | |
|---|---|
| AGENCY | UM - Rosenstiel School<br>Ocean Chemistry Research |
| JOB SITE | 4600 Rickenbacker Causeway |
| HOURS | Discuss with employer |
| NUMBER OF POSITIONS | ONE |
| MINIMUM AGE | 16 |
| SPECIAL REQUIREMENTS | • STRONG Chemistry<br>• STRONG lab experience<br>• Minimum Grade Point Average 3.0 |
| DRESS REQUIREMENTS | Discuss with employer |

JOB DESCRIPTION

- Analysis of various samples collected on oceanographic research cruises
- Computer work
- Possible Oceanographic Cruise (ICMP WILL SWIM TEST)

| | |
|---|---|
| AGENCY | UM - Rosenstiel School<br>Ocean Engineering |
| JOB SITE | 4600 Rickenbacker Causeway |
| HOURS | Discuss with employer |
| NUMBER OF POSITIONS | TWO |
| MINIMUM AGE | 16 |
| SPECIAL REQUIREMENTS | • Must like to work with electronics and mechanical tools |
| DRESS REQUIREMENTS | Discuss with employer |

JOB DESCRIPTION

- Assist in Geo-Acoustic Engineering laboratory using electronic equipment and machines
- Use and learn more about computers and word processors

| | |
|---|---|
| **AGENCY** | UM - Rosenstiel School<br>Marine Geology & Geophysics |
| **JOB SITE** | 4600 Rickenbacker Causeway |
| **HOURS** | 8:30 to 5 p.m. |
| **NUMBER OF POSITIONS** | ONE |
| **MINIMUN AGE** | 16 |
| **SPECIAL REQUIREMENTS** | Swimming |
| **DRESS REQUIREMENTS** | Work clothes - Will get dirty some days. |

**JOB DESCRIPTION**

Processing sediment and rock sample
separating molluscs for identificat
sampling burrows in field for form.

| | |
|---|---|
| AGENCY | AOML/Ocean Chemistry Division |
| JOB SITE | 4301 Rickenbacker Causeway |
| HOURS | Discuss with employer |
| NUMBER OF POSITIONS | TWO |
| MINIMUM AGE | 16 |
| SPECIAL REQUIREMENTS | • Chemistry<br>• Laboratory experience helpful<br>• Minimum Grade Point Average 3.0 |
| DRESS REQUIREMENTS | Discuss with employer |

JOB DESCRIPTION

- Performs tasks which relate to the analysis of various types of samples collected on oceanographic research cruises.
- Performs data reduction of oceanographic samples obtained on research cruises.

| | |
|---|---|
| AGENCY | AOML/Physical Oceanography Division |
| JOB SITE | 4301 Rickenbacker Causeway |
| HOURS | Discuss with employer |
| NUMBER OF POSITIONS | TWO |
| MINIMUM AGE | 16 |
| SPECIAL REQUIREMENTS | • Physical Science<br>• Mathematics<br>• Minimum Grade Point Average 3.0 |
| DRESS REQUIREMENTS | Discuss with employer |

JOB DESCRIPTION

- Performs analysis of data which involves chart scaling and preparation of graphs and tables of data.
- Performs routine calculations of mathematical formulae using worksheets, procedures, and standardized guidelines prescribed by the supervisory scientist.
- Searches through reports, scientific journals and publications for desired information and data. Assembles and prepares such data in format(s) convenient for subsequent use.

| | |
|---|---|
| AGENCY | AOML/Library |
| JOB SITE | 4301 Rickenbacker Causeway |
| HOURS | Discuss with employer |
| NUMBER OF POSITIONS | ONE |
| MINIMUM AGE | 16 |
| SPECIAL REQUIREMENTS | • General Science<br>• Basic knowledge of library procedures, an interest in library science is helpful<br>• Minimum Grade Point Average 3.0 |
| DRESS REQUIREMENTS | Discuss with employer |

JOB DESCRIPTION

- Catalogs and files new sets of charts used in oceanographic research.
- Supports scientific research efforts by locating journal articles, research papers and reports and reference material for AOML scientists.
- Assists AOML's librarian (or library technician) in a number of tasks, such as: locating reference books, microfiche, microfilm, charts used in oceanographic and hurricane research, and other library material; responding requests (inter-library loan) for scientific information; and preparing journals for binding.

| | |
|---|---|
| AGENCY | AOML/OCEAN Acoustics Division |
| JOB SITE | 4301 Rickenbacker Causeway |
| HOURS | Discuss with employer |
| NUMBER OF POSITIONS | ONE |
| MINIMUM AGE | 16 |
| SPECIAL REQUIREMENTS | • Mathematics<br>• Graphing<br>• Minimum Grade Point Average 3.0 |
| DRESS REQUIREMENTS | Discuss with employer |

JOB DESCRIPTION

- Performs analysis of data which involves chart scaling and preparation of graphics and tables of data.
- Performs routine calculations of mathematical formulae using worksheets, procedures and standardized guidelines prescribed by the supervisory scientist.
- Searches through reports, scientific journals and publications for desired information and data. Assembles and prepares such data in format(s) convenient for subsequent use.

| | |
|---|---|
| AGENCY | Miami Seaquarium<br>Marine Mammal Curator Assistant |
| JOB SITE | Rickenbacker Causeway |
| HOURS | Discuss with employer |
| NUMBER OF POSITIONS | ONE |
| MINIMUM AGE | 16 |
| SPECIAL REQUIREMENTS | • Like working outdoors<br>• Marine biology interest<br>• Public speaking skills<br>• Swimming (ICMP WILL TEST) |
| DRESS REQUIREMENTS | Discuss with employer |

JOB DESCRIPTION

- Participate in the daily duties of the animal training staff:

  get fish for show areas
  clean fish buckets
  patrol animal show areas

- Observe marine mammal training sessions and assist as needed

- Assist in the development of a "Behind the Scenes" tour for visitors.

- Assist in other projects that may develop as they pertain to the show department and educational programs.

| | |
|---|---|
| AGENCY | Miami Seaquarium |
| JOB SITE | 4400 Rickenbacker Causeway |
| HOURS | 7:00 A.M. to 2:00 P.M. |
| NUMBER OF POSITIONS | ONE |
| MINIMUM AGE | 16 |
| SPECIAL REQUIREMENTS | • Interest in marine animals and common sense |
| DRESS REQUIREMENTS | Sneakers, shorts or long pants that you don't mind ruining. T-shirts will be provided. |

JOB DESCRIPTION

- Routine aquarium maintenance including scrubbing algae, siphoning bottoms, etc. Feeding specimens (fish, turtles, manatees, birds.)

- Miscellaneous other related duties

- On-the-job training provided

- Hydroponic machine operation

| | |
|---|---|
| AGENCY | Southeast Fisheries Center |
| JOB SITE | 75 Virginia Beach Drive on Virginia Key Rickenbacker Causeway |
| HOURS | 8:00 A.M. to 4:30 PM |
| NUMBER OF POSITIONS | THREE |
| MINIMUM AGE | 16 |
| SPECIAL REQUIREMENTS | • Strong biology background |
| DRESS REQUIREMENTS | Discuss with employer |

- Students will participate in a variety of job assignments on a rotation basis. Assignments include:

  Data Requests, Species Identification and Data Edit/Quality Control
  Commercial Fishery Statistics Data Collection
  Customs and Market News
  Florida Landing Tacking System on an IBM PC
  Computer Operations
  Data Base Management
  Data Entry
  Status of Funds Report
  Computer Plotter Output for Marine Mammals Program
  Word Processing on the CPT
  Icthyoplankton Sorting

- The interns will work in close cooperation with the professional, technical and clerical staff of SEFC and the Miami Laboratory.
- The intern will gain familiarity with different potential career opportunities in the field of marine science as applied to management of fisheries from a scientific point of view in the Southeast Region of the United States.
- The intern will be given specific work instructions and their work will be closely followed during the program. The last rotational assignments will be to learn to use a word processor which will allow each internal to draft a one page report on their learning experience at SEFC. The interns will not only learn new skills but also be a team player with scientific team.
- Interns who have a preference may elect one specific job for the summer in lieu of the rotation plan. Speak with the interviewer about this if interested.

APPENDIX B

LIST OF STUDENT INTERNS AND MENTORS

FOR

DADE COUNTY INNER CITY MARINE SCIENCE PROJECT

SUMMER INTERNSHIP

JUNE 23, 1987 to AUGUST 21, 1987

INNER CITY MARINE PROJECT
SUMMER INTERNS
1987

| | |
|---|---|
| Thomas Ash | SEFC - Ausbon Brown<br>361-4214 |
| Sandra Cherfrere | AOML - Dr. Hansen - Physcial Oceanography<br>361-4340 |
| Carol Ann Clenton | Biochemistry - Dr. Barrie Taylor<br>4728 |
| John Flanagan | AMP - Dr. T. Yamamoto/Mohsen Badiey<br>4637 & 4647 |
| Emane Fleureme | AMP - Dr. T. Yamamoto/Mohsen Badiey<br>4637 & 4647 |
| George Johnson | MAC - Dr. Frank Millero<br>4707/4155 |
| Miguel Martinez | BLR - Sharks - Jeff Tatelman/Dr. Gruber<br>4146 |
| Zannetha V. Moss | MAC - Dr. Kenneth Mopper<br>4721 |
| Mary L. Norris | Seaquarium/E. Einstadt/Dennis Elster<br>or Susan - Marine mammals<br>361-5705 |
| Kathleen Paterno | EFH - Joan Sheldon<br>361-0554 & 1236 |
| Carol M. Randle | MAC - Dr. Joseph Prospero<br>4724 |

| | |
|---|---|
| Fernando Rojas | AOML - Dr. Donald Hansen<br>361-4340 |
| Jeffrey A. Trapanese | SEFC - Ausbon Brown<br>361-4214 |
| Frank Valle | EFH - Joan Sheldon<br>361-1236 |
| Melinda Vavrek | BLR - Sharks - Jeff Tatelman<br>4146 |
| Colette Walker | AOML - Library - Rose Scott<br>361-4428 |
| Lavernus E. White | MGG - Dr. Harold Wanless<br>4658 |
| Taphine Wilcox | SEFC - Ausbon Brown<br>361-4214 |

APPENDIX C

EVALUATION FORM BY STUDENTS OF PROGRAM

June 23, 1987 to August 21, 1987

INNER CITY MARINE PROJECT

INTERNSHIP PROGRAM

STUDENT EVALUATION

DIRECTIONS: Rate each question on a scale of 1-5, with one being lowest, or worst score possible; five the highest, or best.

| | Question | 1 | 2 | 3 | 4 | 5 | N/A |
|---|---|---|---|---|---|---|---|
| 1. | How well did the initial information packet describe the program and your duties as an intern? | | | | | | |
| 2. | How well was the recruiting process handled by your school? | | | | | | |
| 3. | After your application was submitted, how well was the process of your interview and job assignment handled by the Inner City Marine Project? | | | | | | |
| 4. | How positive was your mentor relationship? | | | | | | |
| 5. | How helpful was your mentor? | | | | | | |
| 6. | How meaningful were your contacts with persons other than your mentor at the job? | | | | | | |
| 7. | How well did your organization provide additional learning activities beyond those required for teaching you the job? | | | | | | |

8. Please rate the value of Internship activities (1- lowest value, 5- highest value) in relation to your <u>personal growth</u> and <u>career awareness growth</u>. Write a score in <u>BOTH</u> columns.

| | Personal Growth | Career Awareness Growth |
|---|---|---|
| A. Job performance evaluations | | |
| B. Notebook | | |
| C. Career research forms | | |
| D. Verbal presentation | | |

# APPENDIX D

## MENTOR PROGRAM EVALUATION FORM

June 23, 1987 to August 21, 1987

INNER CITY MARINE PROJECT

MENTOR PROGRAM EVALUATION

DIRECTIONS: Rate each question by placing a check mark in the appropriate column. Please add improvement suggestions.

| | Question | EXCELLENT | GOOD | FAIR | POOR | NOT APPLICABLE |
|---|---|---|---|---|---|---|
| 1. | How well did the initial communication from the Inner City Marine Project office: | | | | | |
| | a) describe the program | | | | | |
| | b) explain your responsibilities as a mentor | | | | | |
| | IMPROVEMENT SUGGESTIONS | | | | | |
| 2. | How well were the interns prepared for: | | | | | |
| | a) their interview | | | | | |
| | b) their job responsibilities | | | | | |
| | IMPROVEMENT SUGGESTIONS | | | | | |
| 3. | To what extent did the student: | | | | | |
| | a) develop interpersonal relationship skills | | | | | |
| | b) develop self-confidence | | | | | |
| | c) establish a positive student-mentor relationship | | | | | |
| | IMPROVEMENT SUGGESTIONS | | | | | |

| Question | EXCELLENT | GOOD | FAIR | POOR | NOT APPLICABLE |
|---|---|---|---|---|---|
| 4. To what extent was the supervising teacher: | | | | | |
| a) advised of mentor concerns | | | | | |
| b) available to the mentor | | | | | |
| c) of assistance in promoting a successful intern/mentor relationship | | | | | |

IMPROVEMENT SUGGESTIONS _____

| | | | | | |
|---|---|---|---|---|---|
| 5. To what extent did the supervising teacher: | | | | | |
| a) address and deal with mentor concerns | | | | | |
| b) maintain mentor contact | | | | | |
| c) provide mentor guidance | | | | | |
| 6. To what degree were you prepared to: | | | | | |
| a) assign a variety of meaningful job assignments and duties | | | | | |
| b) provide the student opportunity to learn more about your organization | | | | | |
| c) encourage the student to enter your career field | | | | | |
| d) give the student job performance guidance | | | | | |
| e) supervise job assignments | | | | | |
| f) teach the student new skills | | | | | |
| g) advise the student of desirable employability habits and attitudes | | | | | |
| h) provide opportunity for interaction with professionals at your organization | | | | | |

IMPROVEMENT SUGGESTIONS _____

| Question | EXCELLENT | GOOD | FAIR | POOR | NOT APPLICABLE |
|---|---|---|---|---|---|
| 7. To what degree did you find the internship/mentor job rewarding? | | | | | |

STRENGTHS (Please list) _____

_____

IMPROVEMENT SUGGESTIONS (any additional not already listed) _____

_____

_____

8. Do you think the SCIENCE RESEARCH project assignment was a positive addition to the project? ( ) Yes ( ) No N/A 1987

If yes, list benefits to the:
Mentor _____

_____

Student _____

_____

If no, why _____

_____

_____

9. Did you attend the mentor preparation program ? N/A 1987
Was it of value ? ( ) Yes ( ) No
If not, why _____

_____

10. Would you participate in a specially designed mentor preparation program for the next year's Summer Internship Program? ( ) Yes ( ) No

If no, why _____

11. What topics or type of preparation do you feel would be most helpful to you in a mentor preparation program? _____

_____

_____

PLEASE MAIL DIRECTLY TO:

Linda J. Eads
Inner City Marine Project
Room 907
1450 N.E. 2 Avenue
Miami, FL 33132

/jo

END

DATE

FILMED

3-88

DTIC