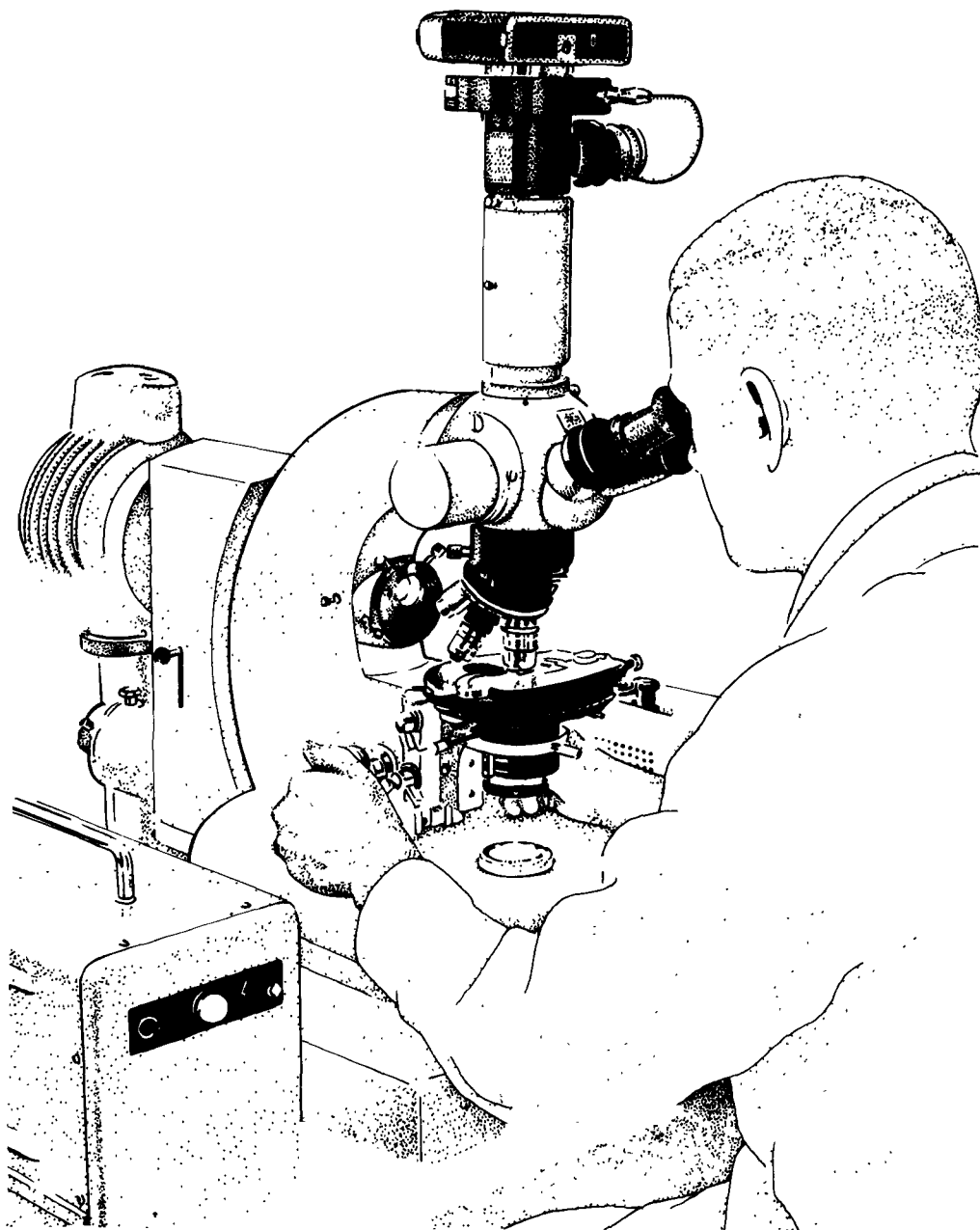




Solicitation for Research Grant Proposals—1989



Exploratory Research Grants

Introduction

The U.S. Environmental Protection Agency (EPA) is responsible for implementing laws designed to mitigate or prevent environmental pollution. Central to the execution of its responsibility is the need for reliable, high quality scientific and technical information. Recognizing that some of the information needed to address current or emerging problems is not available, the Agency has established a long term, exploratory research program.

As part of this long term research effort, EPA's Office of Research and Development (ORD) established the Research Grants Program within the Office of Exploratory Research (OER) in 1980. The objective of this program is to develop an effective means to stimulate extramural scientists to work on EPA's technical problems, to complement existing EPA programs and to provide a stronger creative base for mission-oriented research needed for the Agency's regulatory and enforcement purposes. To date, through its Research Grants Program OER has supported approximately 600 research projects in various priority areas as identified by the Agency's program planning mechanisms and ORD's Research Committees

Grants are an important means by which EPA underwrites research on environmental topics in the academic sector. Therefore, this document solicits investigator-initiated proposals to address ORD's priority research needs. This solicitation relates only to the research grants procedures as administered by ORD's Office of Exploratory Research and outlines the procedures for applying for grants assistance. Participation in the research grants assistance program does not preclude individuals or institutions from engaging in EPA-sponsored research supported through cooperative agreements or contracts with ORD laboratories. Those interested in these aspects of EPA's research and development programs are encouraged to consult directly with personnel at the EPA laboratories. A list of these laboratories appears in Appendix A. Through this solicitation, OER seeks proposals for research in the following general program areas:

- Environmental Biology
- Environmental Health

- Environmental Engineering
- Environmental Air/Water Chemistry and Physics

Specific research topic areas are presented under the descriptions of each of the above program areas. Although this document emphasizes certain needs in the aforementioned research areas, it is by no means all inclusive. Every scientifically meritorious proposal is accorded full and fair consideration. The legislative and administrative limitations of this program require, however, that applications must be relevant to EPA's mission.

Application Procedures

The Research Grants Program accepts applications that respond to its general annual solicitation. In addition, applications are sought through more narrowly defined proposal requests, the Request for Applications (RFA). Application procedures for both mechanisms are outlined below.

General Grants Program

Application forms, instructions, and other pertinent information including general regulations for assistance programs at EPA are available in the EPA Research Grants Application/Information Kit. Interested investigators should review the material in this kit before preparing an application for assistance. The kits are available from:

Grants Operations Branch
Grants Administration Division (PM-216F)
U.S. Environmental Protection Agency
Washington, DC 20460

or

Research Grants Staff
Office of Exploratory Research (RD-675)
Office of Research and Development
U.S. Environmental Protection Agency
401 M Street, SW
Washington, DC 20460

Proposed projects must be investigative research. Proposals will not be accepted that are state-of-the-art or market surveys, development of proven concepts, or the preparation of materials and documents, including process designs or instructive manuals.

Fully-developed research grant applications, prepared in accordance with instructions in the Application for Federal Assistance Form No. 5700-12, should be sent to:

Grants Operations Branch
Grants Administration Division (PM-216F)

U.S. Environmental Protection Agency
Washington, DC 20460

A pre-addressed mailing label is provided in the Application/Information Kit.

If this solicitation is the basis for submitting a proposal, that fact may be entered on line 3 of Form 5700-12.

One copy of the application with original signatures plus eight copies are required. Informal, incomplete, or unsigned proposals will not be considered.

While applications are accepted year round, proposals will be evaluated at regular intervals. Closing dates for receipt of applications and review schedules are listed separately in each program area description. Applicants should contact the appropriate Science Review Administrator, whose name appears at the end of each program area description, for further information on review schedules.

Special Targeted Grants Program

When the Agency wishes to expand an existing research area or explore a new one in which current Agency efforts are either minimal or non-existent, targeted grants are awarded on a specified research topic. The Office of Exploratory Research addresses this specific research need by issuing a special solicitation called a "Request for Applications"(RFA). The RFA is a mechanism by which a formal announcement is released describing a high priority initiative in a well defined scientific area.

Applicants are invited to submit research applications for a one-time competition using the standard application for Federal Assistance Form No. 5700-12. One copy of the application with original signatures plus eight copies should be mailed directly to:

Research Grants Staff
Office of Exploratory Research (RD-675)
Office of Research and Development
U.S. Environmental Protection Agency
401 M Street, SW
Washington, DC 20460

Funds for this special mechanism are generally set aside for a specified number of RFAs (where five to ten agreements are expected to be awarded per RFA). The deadlines for receipt of applications are identified in the RFA announcement. All responses received are reviewed for scientific merit by *ad hoc* extramural peer review panels.

As in the case of the general grants program, an application for a targeted grant is only considered when

| | |
|--------------------------|---|
| Eligibility | <p>a fully developed proposal is submitted on the required Application for Federal Assistance Form 5700-12.</p> |
| | <p>Nonprofit institutions and state or local governments are eligible under all existing authorizations. Profit-making firms are eligible only under certain laws, and then under restrictive conditions, including the absence of any profit from the project.</p> |
| | <p>Potential applicants who are uncertain of their eligibility should study the restrictive language of the law governing the area of research interest. This information is provided in the Research Grants Application/Information Kit.</p> |
| Funding Mechanism | <p>Federal agencies and federal employees are not eligible to participate in this program.</p> |
| | <p>Investigators at minority institutions or those who have not previously received support are encouraged to submit applications (See Minority Programs Section).</p> |
| | <p>For all regular and targeted grants, the funding mechanism will consist of a grant agreement between EPA and the recipient.</p> |
| Review Process | <p>Federal grant regulation 40 CFR 30.307 requires all recipients to provide a minimum of 5% of the total project cost, which may not be taken from federal sources. The Office of Exploratory Research will not support a request for a deviation from this requirement for any grant supported by its Research Grants Program.</p> |
| | <p>All applications are initially reviewed by the Agency to determine their legal and administrative acceptability.</p> |
| | <p>Acceptable applications are then reviewed by the appropriate peer review panel. This review is designed to evaluate and rank each proposal according to its scientific merit as a basis for recommending Agency approval or disapproval. Each peer review panel is composed primarily of non-EPA scientists and engineers who are experts in their respective disciplines.</p> |
| | <p>The panels use the following criteria in their review:</p> |
| | <ul style="list-style-type: none"> ● Quality of research plan (including theoretical and/or experimental design, originality, and creativity) ● Qualifications of principal investigator and staff including knowledge of subject area ● Potential contribution to scientific knowledge ● Availability and adequacy of facilities and equipment |

- Budgetary justification

Proposals which receive a panel's approval based upon scientific merit are further evaluated by EPA officials for relevance to the Agency's mission and budget appropriations. A summary of the scientific review and recommendation of the panel is provided to each applicant.

The review process described above is applicable to all applications received, whether in the general or targeted (RFA) procedure.

**Research Areas-
General Grants Program**

The four research areas under which the general grants program is conducted are described below. The description of each area includes a list of general research topic areas which are considered to be especially relevant to the Agency's mission. In addition, a schedule of significant dates for receipt and review of research proposals is included in each research area for the anticipated FY 1989 program.

Environmental Health

The major objective of the Environmental Health Research Program is to obtain and provide a scientific basis upon which the Agency can make regulatory decisions concerning human health risk assessment after exposure to environmental pollutants. The principle concern is to determine whether, and to what extent, exposure to various pollutants contribute to environmentally related health risks

Areas of interest include but are not limited to:

- Models and Methodologies for Human Risk Assessment
- Risk Assessment and Predictions
- Risk Assessment in Human Populations

The following schedule applies to the Environmental Health Grants Program.

| <i>Application Closing Date</i> | <i>Panel Review Meeting</i> | <i>Relevancy Review</i> | <i>Earliest Date for Notification of Award</i> |
|---------------------------------|-----------------------------|-------------------------|--|
| <i>September 15th</i> | <i>December</i> | <i>January</i> | <i>February</i> |
| <i>February 16th</i> | <i>May</i> | <i>June</i> | <i>July</i> |

For further information, please contact

George R. Simon
 Science Review Administrator (RD-675)
 U.S. Environmental Protection Agency
 401 M Street, SW
 Washington, DC 20460
 (202) 382-7445

**Environmental
Biology**

The Environmental Biology Research Program supports a broad range of research in the areas of risk assessment, ecosystem structure and function, toxicology, biotechnology and degradation processes. The program seeks information that, in combination with exposure data, allows the prediction of the environmental risk of pollutants on individual organisms, populations, communities and ecosystems.

Areas of interest include but are not limited to:

- Risk Assessment
- Ecosystem Structure and Function
- Toxicological Effects

The following schedule applies to the Environmental Biology Grants Program.

| <i>Application Closing Date</i> | <i>Panel Review Meeting</i> | <i>Relevancy Review</i> | <i>Earliest Date for Notification of Award</i> |
|-------------------------------------|---------------------------------|-----------------------------|--|
| <i>September 16th</i> | <i>November</i> | <i>December</i> | <i>February</i> |
| <i>March 17th</i> | <i>June</i> | <i>July</i> | <i>October</i> |

For further information, please contact:

Clyde C. Bishop, Jr.
Science Review Administrator (RD-675)
U.S. Environmental Protection Agency
401 M Street, SW
Washington, DC 20460
(202) 382-7445

**Environmental
Engineering**

The Environmental Engineering Research Program supports fundamental research needed to provide solutions to pollution control problems outside the scope of the Agency's response-directed research program. New, innovative toxic substances control and waste management techniques are sought to provide cost-effective advanced multi-media (solid, liquid, gaseous) pollution control technology.

Areas of interest include but are not limited to:

- Proof-of-concept research in high-risk, high-potential technical areas
- Pilot-scale evaluation and cost performance testing of innovative technologies
- Fundamental thermal destruction/combustion research leading to less pollutant production and to better incineration of hazardous waste

The following schedule applies to the Environmental Engineering Grants Program.

| <i>Application Closing Date</i> | <i>Panel Review Meeting</i> | <i>Relevancy Review</i> | <i>Earliest Date for Notification of Award</i> |
|---------------------------------|-----------------------------|-------------------------|--|
| <i>February 15th</i> | <i>June</i> | <i>July</i> | <i>August</i> |
| <i>August 15th</i> | <i>October</i> | <i>November</i> | <i>January</i> |

For further information, please contact:

Donald F. Carey
 Science Review Administrator (RD-675)
 U.S. Environmental Protection Agency
 401 M Street, SW
 Washington, DC 20460
 (202) 382-7445

**Environmental
 Air/Water
 Chemistry
 and Physics**

The Environmental Air/Water Chemistry and Physics Program supports research leading to the basic scientific tools for establishing the levels at which pollutants occur or might occur in the environment. The program includes projects in analytical chemistry, studies on chemical reactions and their rates and on the physics of the movement of pollutants in air, water, and soil. The resulting tools and information will allow the estimation of total exposures needed for risk assessments

This program is divided into:

- I. RESEARCH ON AIR POLLUTION
- II. RESEARCH ON POLLUTION OF FRESHWATER, MARINE/ESTUARINE WATERS, GROUNDWATERS, SOILS AND SEDIMENTS

Areas of interest include but are not limited to:

- I. AIR POLLUTION
 - Exposure Monitoring Systems and Advanced Analytical Methods
 - Transport and Fate Studies
 - Modeling Studies

The following schedule applies to the Environmental Air Chemistry and Physics Grants Program.

| <i>Application Closing Dates</i> | <i>Panel Review Meeting</i> | <i>Relevancy Review</i> | <i>Earliest Date for Notification of Award</i> |
|----------------------------------|-----------------------------|-------------------------|--|
| <i>March 15th</i> | <i>May</i> | <i>June</i> | <i>July</i> |
| <i>August 15th</i> | <i>October</i> | <i>November</i> | <i>December</i> |

For further information, please contact:

Louis G. Swaby
Science Review Administrator (RD-675)
U.S. Environmental Protection Agency
401 M Street, SW
Washington, DC 20460
(202) 382-7445

II. RESEARCH ON POLLUTION OF FRESHWATER, MARINE/ESTUARINE WATERS, SOILS, GROUND-WATERS, AND SEDIMENTS.

- Transport and Fate Studies
- Monitoring Systems and Analytical Methods

The following schedule applies to the Environmental Water Chemistry and Physics Grants Program.

| <i>Application Closing Dates</i> | <i>Panel Review Meeting</i> | <i>Relevancy Review</i> | <i>Earliest Date for Notification of Award</i> |
|----------------------------------|-----------------------------|-------------------------|--|
| <i>March 15th</i> | <i>May</i> | <i>June</i> | <i>July</i> |
| <i>August 15th</i> | <i>October</i> | <i>November</i> | <i>December</i> |

For further information, please contact:

Louis G. Swaby
Science Review Administrator (RD-675)
U.S. Environmental Protection Agency
401 M Street, SW
Washington, DC 20460
(202) 382-7445

Request for Applications

The number of RFAs that will be issued is subject to the availability of funds in OER's FY 1989 Research Grants Program. While a specific research topic has not yet been chosen, it is anticipated that one RFA will be issued during the month of March 1989. The Request for Applications will appear in the Federal Register, Commerce Business Daily, and various technical journals relative to the subject matter of the RFA.

Minority Research Grant and Student Fellowship Programs

Minority Institutions Assistance (MIA)

The U.S. Environmental Protection Agency has initiated a special assistance program entitled, *Minority Institutions Assistance (MIA) program*. The objective of the program is to award grant funds for the support of exploratory research by faculty and to support undergraduate and graduate fellowships for students enrolled at eligible institutions. The principal purpose of

this program is to provide Federal assistance to Historically Black Colleges and Universities (HBCUs) as directed by Executive Order 12320, issued on September 15, 1981.

Terms and Restrictions for Research Assistance

- Consideration will be given only to applications submitted by institutions subject to Executive Order No. 12320, and identified by the Secretary of the Department of Education as Historically Black Colleges and Universities.
- In contrast to the regular grants program, preapplication assistance is available upon request. A potential investigator may submit a preproposal for informal scientific review and determination of its relevance to Agency research goals.
- The Application Form (5700-12), instructions and procedures are the same as those used for EPA's regular research grants, except that "MIA" should be typed in item (3) on the face page to identify the program to which the application is directed.
- All of the topic areas described previously for the regular research grants program are applicable to the MIA program.

Terms and Restrictions for Student Fellowship Assistance

- Consideration will be given only to applicants who are enrolled full-time and in good standing with an eligible institution (HBCU).
- The applicant must be a senior or graduate student with a cumulative Grade Point Average (GPA) of 3.0 or higher on a scale of 4.0.
- All applications will be reviewed and evaluated for the following: (1) individual's orientation towards and commitment to a career in the Physical Sciences (Chemistry, Physics, Math, Engineering), Biological Sciences, Environmental Sciences, Computer Sciences, (2) Grade Point Average (GPA) verified by college transcript, (3) applicant's statement of objectives and personal goals, (4) recommendations by the sponsor and faculty, and (5) employment experience related to the field of study
- These Student Fellowship applications must be properly executed on EPA Forms. Failure to complete all forms with appropriate signatures will delay processing or disqualify the application. Each application must enter "MIA" in the upper left hand corner of the face page, EPA Form 5770-4.

- Applicants must be citizens of the United States or its possessions, the U.S. Virgin Islands or Puerto Rico.
- The Environmental Protection Agency reserves the right to limit the number of awards to a particular college or university.

For further information, please contact:

Walter H Preston
Ombudsman, MIA
U.S. Environmental Protection Agency (RD-675)
401 M Street, SW
Washington, DC 20460
(202) 382-7445

or

Clyde C. Bishop, Jr
Science Review Administrator

Appendix A: Laboratories of The Office of Research and Development, USEPA

Health Effects Research Laboratory
Research Triangle Park, NC 27711
(919) 541-2281

Environmental Monitoring Systems Laboratory
P.O. Box 15027
Las Vegas, NV 89193-3478
(702) 798-2100

Water Engineering Research Laboratory
Cincinnati, OH 45268
(513) 569-7951

Environmental Research Laboratory
South Ferry Road
Narragansett, RI 02882
(401) 789-1071

Environmental Monitoring Systems Laboratory
Research Triangle Park, NC 27711
(919) 541-2106

Environmental Research Laboratory
Sabine Island
Gulf Breeze, FL 32561
(904) 932-5311

Hazardous Waste Engineering Research Laboratory
Cincinnati, OH 45268
(513) 569-7418

Environmental Monitoring and Support Laboratory
Cincinnati, OH 45268
(513) 569-7301

Environmental Research Laboratory
200 SW 35th Street
Corvallis, OR 97333
(503) 757-4601

Environmental Research Laboratory
College Station Road
Athens, GA 30613
(404) 546-3154

Environmental Research Laboratory
6201 Congdon Boulevard
Duluth, MN 55804
(218) 727-6692

Atmospheric Sciences Research Laboratory
Research Triangle Park, NC 27711
(919) 541-2191

Air and Energy Engineering Research Laboratory
Research Triangle Park, NC 27711
(919) 541-2821

Robert S. Kerr Environmental Research Laboratory
P.O. Box 1198
Ada, OK 74820
(405) 332-8800

CONFIDENTIAL

U.S. Environmental Protection Agency
James G. Library (5PL-16)
120 S. Dearborn Street, Room 1670
Chicago, IL 60604

United States
Environmental Protection
Agency

Center for Environmental Research
Information
Cincinnati OH 45268

Please make all necessary changes on the above label,
detach or copy and return to the address in the upper
left-hand corner

If you do not wish to receive these reports CHECK HERE ,
detach, or copy this cover, and return to the address in the
upper left-hand corner