UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OCT 6 2003

OFFICE OF
RESEARCH AND DEVELOPMENT

MEMORANDUM

SUBJECT: The 2004 Scientific and Technological Achievement Awards (STAA) Program

FROM: Paul Gilman
Assistant Administrator (8101R)

TO: Assistant Administrators
Associate Administrators
Regional Administrators
ORD Center/Laboratory Directors

I am pleased to issue this year's call for nominations for the 2004 Scientific and Technological Achievement Awards (STAA). STAA is an Agency-wide competition, judged by the Science Advisory Board (SAB), that recognizes outstanding published scientific and technical papers by the Agency's staff. Attached are (1) nomination procedures and guidelines, (2) program schedules, and (3) nomination forms. Official 2004 nomination forms are available for your convenience in Portable Document (PDF) and WordPerfect formats at http://es.epa.gov/ncer/rfa/#STAA. Nomination packages should be sent to Maggie Breville, Peer Review Division, National Center for Environmental Research (NCER), 8725R. All nominations must be received no later than COB February 4, 2004. Should questions arise, please contact Ms. Breville at 202-564-6893.

cc: EPA Science Advisory Board
EPA Program Offices
EPA Regional Offices

Attachments

Attachment 1

SCIENTIFIC AND TECHNOLOGICAL ACHIEVEMENT AWARDS 2004 NOMINATION PROCEDURES AND GUIDELINES

INTRODUCTION

The mission of the United States Environmental Protection Agency (EPA) is to protect public health and safeguard and improve the natural environment - the air, water, and land upon which life depends. Achievement of this mission requires the application of sound science to the assessment of environmental problems and to the evaluation of possible solutions. The Office of Research and Development (ORD) at EPA is committed to providing the best products in high-priority areas of scientific research.

PROGRAM OVERVIEW

The Scientific and Technological Achievement Awards (STAA) program promotes and recognizes scientific and technological achievements by U.S. Environmental Protection Agency (EPA) employees. The STAA program began in 1980 and is sponsored by the Office of Research and Development (ORD). ORD manages the STAA program and provides administrative oversight. EPA's Science Advisory Board (SAB) provides scientific and technological evaluation. While this program is sponsored by ORD and has considerable ORD participation, the intent is to make this competition available Agency-wide.

AWARD CATEGORIES

Nominations may be submitted in eleven (11) categories.

1. Control Systems and Technology (CS): This category includes research on the development, design, testing and deployment of treatment and disposal systems and on the adaptation of existing systems to new uses. The research may include the development of prototypes, model systems, operations and maintenance equipment, pilot systems, or performance evaluations.

2. Ecological Research (ER): This category includes experimental or field research, structure and functions of ecosystems research, interaction of organisms with their ecosystem, and stressors' effects and their interaction on ecosystems.

3. Health Effects Research and Human Health Risk Assessment (HE): This category includes laboratory and epidemiological analytical research for human health risk estimation and studies for improving human health risk assessment.

4. Monitoring and Measurement Methods (MM): This category includes research on developing indicators, monitoring systems, and designs for measuring the exposures of ecosystems to multiple stressors and the resultant response of ecosystems at local, regional, and national scales.

5. Transport and Fate (TF): This category includes research on the mechanisms and moderators of the movement of chemicals within and among environmental media, their transformations, and storage in the environment by chemical, physical, and biological processes. The research may include laboratory or field research and models.

6. Review Articles (RA): A review article may be in any disciplinary area. Review articles should include a **synthesis and a critical analysis** of previous work that lead to a better understanding and provide new insight into a particular discipline.

7. Risk Management and Ecosystem Restoration (RM): This category consists of research that evaluates policy initiatives in ways that develop analysis and information to integrate science, engineering, and social science in support of environmental policy and regulatory decisions (e.g., standards). It includes developing prevention, management, adaptation, and remediation technologies to design, manage, restore, or rehabilitate ecosystems to achieve local, regional, and national goals.

8. Integrated Risk Assessment (IR): This category covers research (observation, experimental, and theoretical) directed towards the goal of integrating human health and ecological risk assessment methods and analysis. It includes processes and modeling research for developing the models to understand, predict, and assess the current and probable future exposure and response of ecosystems to multiple stressors at multiple scales. It also includes risk assessment research for developing and applying assessment methods, indices, and guidelines for quantifying risk to the sustainability and vulnerability of ecosystems from multiple stressors at multiple scales.

9. Social Sciences (SS): This category covers social science research pertaining to EPA's policy formulation and regulatory and enforcement responsibilities. It specifically includes anthropology, psychology, sociology, decision making, economics, and urban and community planning.

10. Environmental Futures (EF): This category includes the search for "targets of opportunity" beyond the normal planning horizon with accompanying higher risk. The EPA's Science Advisory Board Report, 1995 titled: Beyond the Horizon - Using Foresight to Protect the Environmental Future expresses additional areas of interest.

11. Environmental Statistics (ES): This category covers statistical research dealing with analytical and modeling techniques that have general applicability to a range of health and environmental issues or topics. It does not include statistical research that is uniquely applicable to one of the other categories listed above.

AWARD LEVELS

Three levels of monetary awards are available within each research category, with the final award amount for each level determined by ORD based on availability of funds. The fourth means of recognition is a non-monetary Honorable Mention.

1. **Level I ($5,000)** awards are for nominees who have accomplished an exceptionally high-quality research or technological effort. The nomination should recognize the creation or general revision of a scientific or technological principle or procedure, or a highly significant improvement in the value of a

device, activity, program, or service to the public. It must be at least of national significance or have a high impact on a broad area of science/technology. The nomination must have far- reaching consequences and be recognizable as a major scientific/technological achievement within its discipline or field of study.

2. **Level II ($2,500)** awards are for nominees who have accomplished a notably excellent research or technological effort that has qualities and values similar to, but to a lesser degree, than those described under Level I. It must have timely consequences and contribute as an important scientific/technological achievement within its discipline or field of study.

3. **Level III ($1,000)** awards are for nominees who have accomplished an unusually notable research or development effort. The nomination can be for a substantial revision or modification of a scientific/technological principle or procedure, or an important improvement to the value of a device, activity, program, or service to the public. It must relate to a mission or organizational component of EPA, or significantly affect a relevant area of science/technology.

4. **Honorable Mention** is a non-monetary award for nominations which are noteworthy but which do not warrant a Level I, II or III award. Honorable Mention applies to nominations that (1) may not quite reach the level described for a Level III award, (2) show a promising area of research that the SAB subcommittee wants to encourage, or (3) show an area of research that the SAB subcommittee feels is too preliminary to warrant an award recommendation (yet).

All awards are distributed based on the nominees' designated percentage of contribution. Any number of coauthors may share a single award. For example, if there are two eligible EPA authors (eligible to receive monetary awards) and two ineligible authors (ineligible to receive monetary awards) who each contributed 25% on a $2,500 award, the two eligible authors will each receive 25% of $2,500, or $625, in award money. An author's minimum monetary award will be automatically $100.

CRITERIA FOR ELIGIBILITY

All nominations must meet the following criteria:

1. Papers nominated in any earlier STAA competition are not eligible.

2. The nominated publication(s) must have been published in a high-quality **peer reviewed journal**, or (for reviews articles) in a suitable book. A paper should stand on its own merits. Work should be published in journals that are professionally relevant to the field of work.

3. To be an eligible author, a person must have been an EPA employee or a Public Health Service (PHS) employee assigned to EPA when the relevant research was conducted. Although PHS employees working at EPA are considered eligible employees, they may not receive monetary awards.

4. The principal author must have been an EPA employee or a PHS employee assigned to EPA when the relevant research was conducted. A **principal author** of a paper is the primary writer, leader, integrator, and creator of the paper. The principal author is responsible for the quality assurance, quality control, presentation, and defense of everything contained in the paper.

5. The eligible author(s) must have contributed collectively a minimum of 50% toward the publication(s). A **contributing author** is a major substance provider to the research product. A contributing author is responsible for the quality assurance, quality control, and integrity of the input to the paper but does not have primary responsibility for the overall paper. A contributing author may or may not write the paper in part but must be a substantive expert reviewer for the representations made in the paper.

6. Acknowledgments are encouraged for support personnel who contributed to the production of the paper but are not principal or contributing authors. This category does not include monetary awards.

7. Contractors, grantees and their employees, as well as all other persons NOT directly employed by EPA, are not eligible for awards through this program.

8. The nominated paper must have been published within three years prior to the 2004 award program, i.e., after January 1, 2001 .

9. Nominations should identify any related research published previously by the principal author.

10. Nominations should include all papers in a series, providing they are within the time limit.

REQUIRED APPROVALS

Nomination packages may be initiated and prepared by any EPA scientist or engineer (or PHS employee assigned to EPA) at any organizational level, including the publication author(s), but an author cannot serve as a Nominating Official or an Approving Official for their own paper.

Within ORD, the Nominating Official must be the Division Director and the Approving Official must be the Laboratory or Center Director. If the Division Director is an author, the Laboratory or Center Director must be the Nominating Official and the Approving Official is the Deputy Assistant Administrator for Science. If the nomination is from an ORD headquarters office, the Nominating Official must be the Office or Center Director and the Approving Official is the Assistant Administrator or the Deputy Assistant Administrator for Science. If the Office Director is an author, the Nominating and Approving Official must be the Assistant Administrator.

Outside of ORD, the Nominating Official must be at the Division Director level or equivalent and the Approving Official must be at the Office Director level or equivalent. If the Division Director or Office Director is an author, then the office must select appropriate Nominating and Approving Officials.

NOMINATION PROCEDURES

The following procedures must be followed to accurately and completely prepare and submit a STAA nomination package.

1. After the call letter is issued by the Assistant Administrator for Research and Development (AA/ORD), any EPA employee (or PHS employee assigned to EPA) may initiate the preparation of the nomination package. The nomination package consists of the items listed below.

Nomination form

Publication(s)

Supplemental Items (no more than four items when applicable)

2. The nomination form must be filled-in completely and accurately. Directions are included with the nomination form. The **original nomination** form and twenty (20) copies must have the signatures of both the Nominating Official and the Approving Official.

3. The justification questions provide a brief outline of why the achievement deserves recognition. Justification answers should not summarize the paper. Substantial evidence should be presented to support statements describing the scientific merit of the nominated paper or the importance of the applicability of the research.

4. **Twenty copies of the publication(s)** must be attached to the twenty (20) copies of the nomination form. Multiple paper nominations should be indicated on the nomination form and all papers attached in the nomination packages. Publications and supplemental items cannot be returned.

5. **Supplemental material** may be included with the nomination package to provide background information and perspective. There should be no more than four supplemental items; they may include patent documents, other publications relating to the nominated paper's achievement, other papers published from the series not part of the nominations, or selected excerpts or abstracts from other sources relevant to the achievement.

6. **The original and twenty** (20) copies of the nomination package, including 20 copies of the publication(s), must be submitted to the National Center for Environmental Research (NCER) along with a brief cover memorandum transmitting the nomination. The cover memorandum should be signed by the Approving Official. The complete package must be submitted to:

U.S. Environmental Protection Agency
National Center for Environmental Research (8725R)
ATTN: Maggie Breville, Peer Review Division
Ariel Rios Building
1200 Pennsylvania Avenue, NW
Washington, DC 20460

7. All material is due to NCER by COB February 4, 2004. Due to the extensive processing requirements, no extensions will be permitted. If incomplete packages are received, they will be returned to the contact person. Returned material may be resubmitted; however, NCER is not responsible for incomplete packages that are submitted or returned too late to be included in the current year's program.

EVALUATION GUIDELINES

The nomination packages are received by NCER's Peer Review Division (PRD) in ORD. After the nomination packages are screened for completeness by NCER, the packages are forwarded to the SAB. The SAB convenes a subcommittee to review the nominations. Each year, the subcommittee members are selected based on their expertise in the categories of science and technology addressed by the nominated publications. When necessary, the subcommittee obtains additional reviews from experts to ensure the credibility of the review process. The SAB reviews the nomination packages according to the following factors:

1. The extent to which the work reported in the nominated paper resulted in either new or significantly revised knowledge. The accomplishment should represent an important advancement of scientific knowledge or technology relevant to environmental issues.

2. The degree to which the accomplishment is a product of the originality, creativeness, initiative, and problem-solving ability of the researchers, as well as the level of effort required to produce the results.

3. The extent to which environmental protection has been strengthened or improved, whether of local, national, or international importance.

4. The extent of the beneficial impact of the accomplishment and the degree to which the accomplishment has been favorably recognized from outside EPA.

5. The nature and extent of peer review, including stature and quality of the peer-reviewed journal, or the publisher of a book for a review chapter published therein.

> **Note:** Nominations that are submitted to more than one category or to the wrong category will not be disqualified. Nominations that have been incorrectly categorized will be placed in the appropriate category by the SAB.

Attachment 2

SCIENTIFIC AND TECHNOLOGICAL ACHIEVEMENT AWARDS (STAA)
2004 REVIEW SCHEDULE

October 2003	NCER distributes call letter announcing 2004 STAA program
February 4, 2004	Competition closes
March 15, 2004	NCER's contractor completes processing all nominations
April 1, 2004	NCER transmits all nominations to SAB
July 15, 2004	SAB Subcommittee convenes for peer review
September 15, 2004	SAB delivers recommendations to NCER
October 29, 2004	SAB posts results on their web page NCER distributes plaques, certificates, and letters to awardees